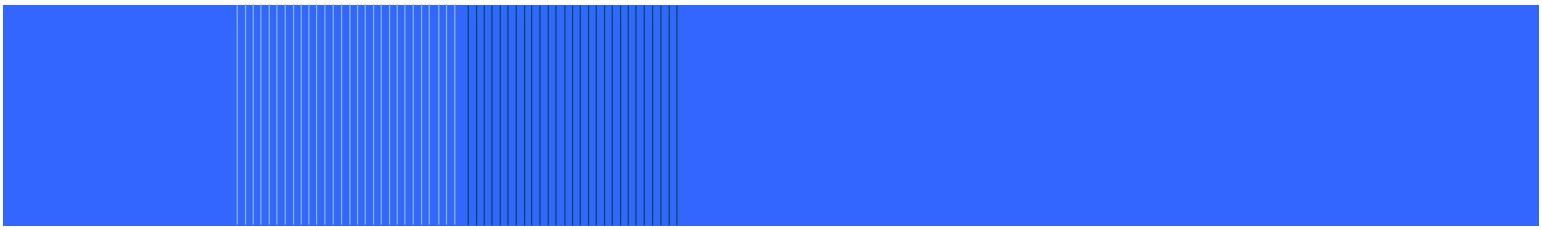
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The State of Minority- and Women-Owned Business Enterprise: Evidence from Maryland

Prepared for the Maryland Department of Transportation



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NERA Economic Consulting is a global firm of experts dedicated to applying economic, finance, and quantitative principles to complex business and legal challenges. For half a century, NERA's economists have been creating strategies, studies, reports, expert testimony, and policy recommendations for government authorities and the world's leading law firms and corporations. We bring academic rigor, objectivity, and real world industry experience to bear on issues arising from competition, regulation, public policy, strategy, finance, and litigation.

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NERA's employment and labor experts advise clients on a wide range of issues both inside and outside the courtroom. We have provided expert testimony on statistical issues both at the class certification phase (on issues of commonality and typicality) and at the liability phase (for class or pattern-and-practice cases). Our experts have extensive experience examining issues of statistical liability in discrimination and other wrongful termination claims. We also provide detailed statistical analyses of workforce composition to identify potential disparities in hiring, layoffs, promotions, pay, and performance assessments and have conducted studies on labor union issues and on affirmative action programs for historically disadvantaged business enterprises.

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Abt SRBI is a New York-based business with a national reputation for excellence in computer assisted telephone interviewing. Abt SRBI provides analysis in the rapidly evolving markets and public policy areas of communications, financial services, utilities, transportation, media, health and business services. The firm was founded in 1981 with the explicit purpose of combining high quality analytic capabilities with in-house control of the research implementation to ensure accurate, timely and actionable research use by decision makers working in rapidly changing environments. Abt SRBI clients include the Eagleton Institute at Rutgers, the Annenburg Institute at the University of Pennsylvania, and the major networks. Abt SRBI has conducted numerous surveys of M/WBEs and non-M/WBEs on behalf of the NERA team. On this Study, Abt SRBI conducted telephone surveys of race and gender misclassification and of mail survey non-response under the supervision of Abt SRBI Project Manager Andrew Evans.

J&D Data Services is a small business enterprise owned by Mr. Joe Deegan and based in Plano, Texas. After a long career with ScanTron, Mr. Deegan started his own business to offer a solid and proven alternative to the time consuming and expensive job of key data entry long associated with mail surveys. The firm helps its clients conserve their surveying resources by designing and delivering survey instruments that can be electronically and automatically scanned upon return and sent directly to electronic format. J&D Data Services has conducted numerous surveys of M/WBEs and non-M/WBEs on behalf of the NERA team. On this assignment they provided printing, postage, mail-out and mail-back service for the subcontract data collection, the mail survey, and the business owner interview invitations.

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Executive Summary

A. Introduction

During the 2006 Session of the Maryland General Assembly, Senate Bill 884 and House Bill 869 reenacted the State of Maryland's Minority Business Enterprise Program ("MBE Program") for five years, until July 1, 2011. These two bills also provided for the State's certification agency, the Maryland Department of Transportation (MDOT), to commission a Study of the MBE Program to ensure compliance with constitutional mandates and programmatic best practices.

MDOT commissioned a team led by NERA Economic Consulting to examine the past and current status of minority-owned business enterprises ("MBEs") and nonminority women-owned business enterprises ("WBEs") in the geographic and product markets for contracting and procurement of the State of Maryland (hereinafter "the State" or "Maryland"). The Study will assist the State in evaluating whether the current MBE Program to assist MBEs and WBEs (collectively referred to herein as "M/WBEs")[1] is still necessary to remedy discrimination, and to narrowly tailor existing and any new measures that may be considered.

The results of NERA's Study (hereinafter the "2011 Study"), provide the evidentiary record necessary for the State's consideration of whether to implement renewed M/WBE policies that comply with the requirements of the courts and to assess the extent to which previous efforts have assisted M/WBEs to participate on a fair basis in the State's contracting and procurement activities.

The 2011 Study finds both statistical and anecdotal evidence of business discrimination against M/WBEs in the State's relevant market area.

B. Legal Standards for Government Affirmative Action Contracting Programs

To be effective, enforceable, and legally defensible, a race- and gender-based program must meet the judicial test of constitutional "strict scrutiny." Strict scrutiny requires a "strong basis in evidence" of the persistence of discrimination, and any remedies adopted must be "narrowly tailored" to address that discrimination. Applying these terms to government affirmative action contracting programs is complex, and cases are quite fact specific. Since 1989, federal appellate and district courts have developed parameters for establishing a state government's compelling interest in remedying discrimination and evaluating whether the remedies adopted to address that discrimination are narrowly tailored. The 2011 Study follows the guidelines recently published by the *National Academy of Sciences*, which our team was proud to develop.[2]

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[1] Under the State's MBE Program, both minority-owned and nonminority women-owned businesses are referred to as "MBEs." *See* Md. Code Ann. State Fin. & Proc., §§ 14-301(f), (i).

[2] Wainwright, J. and C. Holt (2010), *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*, Transportation Research Board of the National Academies, NCHRP Report, Issue No. 644.

Chapter II of the 2011 Study provides a detailed and up-to-date analysis of current constitutional standards and case law and outlines the legal and program development issues Maryland must consider in evaluating its MBE Program and any future initiatives, with emphasis on critical issues and evidentiary concerns.

C. Defining the Relevant Markets

Chapter III describes how the relevant geographic and product markets were defined for this Study. Five years of prime contract and subcontract records were analyzed to determine the geographic radius around the State of Maryland that accounts for at least 75 percent of aggregate contract and subcontract spending. These records were also analyzed to determine those detailed industry categories that collectively account for over 99 percent of contract and subcontract spending in excess of $50,000 in the relevant procurement categories, which were Construction, Architecture-Engineering and Other Construction-Related Professional Services ("AE-CRS"), Maintenance, Information Technology ("IT"), Other Professional and General Services ("Services"), and Commodities, Supplies and Equipment ("CSE").

The State's relevant geographic market area was determined to be the State of Maryland, the State of Delaware, the District of Columbia, and the balance of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area.

The relevant geographic and product markets were then used to focus and frame the quantitative and qualitative analyses in the remainder of the Study.

D. M/WBE Availability in the State's Market Area

Chapter IV estimates the percentage of firms in the State's relevant market area that are owned by minorities and/or women. For each industry category, M/WBE availability is defined as the number of M/WBEs divided by the total number of businesses in the State's contracting market area, weighted by the dollars attributable to each detailed industry category. Determining the total number of businesses in the relevant markets is more straightforward than determining the number of minority-owned or women-owned businesses in those markets. The latter task has three main parts: (1) identifying all listed M/WBEs in the relevant market; (2) verifying the ownership status of listed M/WBEs; and (3) estimating the number of unlisted M/WBEs in the relevant market.

Table A below provides an executive level summary of the current M/WBE availability estimates derived in the Study.

Table A. Overall Current Availability—By Major Procurement Category and Overall

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	M/WBE	Non-M/WBE
CONSTRUCTION (AWARD)	9.69	3.48	5.44	0.39	18.99	13.39	32.39	67.61
CONSTRUCTION (PAID)	8.96	3.43	4.42	0.37	17.17	13.09	30.26	69.74
AE-CRS (AWARD)	10.17	3.86	11.35	0.39	25.78	15.36	41.14	58.86
AE-CRS (PAID)	10.34	3.82	11.19	0.39	25.75	15.59	41.34	58.66
MAINTENANCE (AWARD)	14.26	4.62	5.30	0.28	24.46	16.49	40.94	59.06
MAINTENANCE (PAID	14.86	4.49	5.67	0.29	25.32	17.97	43.29	56.71
IT (AWARD)	13.94	3.86	13.94	0.50	32.25	15.84	48.09	51.91
IT (PAID)	13.34	3.77	13.83	0.48	31.43	15.88	47.31	52.69
SERVICES (AWARD)	12.88	1.95	6.91	0.09	21.83	22.74	44.56	55.44
SERVICES (PAID)	13.10	2.12	7.10	0.09	22.41	21.91	44.32	55.68
CSE (AWARD)	9.39	2.02	9.05	0.93	21.39	17.52	38.91	61.09
CSE (PAID)	9.39	2.02	9.05	0.93	21.39	17.52	38.91	61.09
TOTAL (AWARD)	11.35	2.95	7.27	0.27	21.81	17.76	39.57	60.43
TOTAL (PAID)	11.21	2.96	6.71	0.26	21.14	17.43	38.57	61.43

Source: Table 4.23A.

Notes: (1) “Award” indicates that the availability measures are weighted according to dollars awarded; (2) “Paid” indicates that the availability measures are weighted according to dollars paid; (3) For this study, “Black” or “African American” refers to an individual having origins in any of the Black racial groups of Africa; “Hispanic” refers to an individual of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; “Asian” refers to an individual having origins in the Far East, Southeast Asian, or the Indian subcontinent; “Native American” refers to an individual having origins in any of the original peoples of North America other than Eskimos or Aleuts. Businesses owned by members of these groups are collectively referred to as MBEs.

E. Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

Chapter V demonstrates that current M/WBE availability levels in the State of Maryland market area, as measured in Chapter IV, are substantially lower than those that we would expect to observe if commercial markets operated in a race- and gender-neutral manner and that these levels are statistically significant.[3] In other words, minorities and women are substantially and significantly less likely to own their own businesses as the result of discrimination than would be expected based upon their observable characteristics, including age, education, geographic location, and industry. We find that these groups also suffer substantial and significant earnings disadvantages relative to comparable nonminority males, whether they work as employees or entrepreneurs.

For example, we found that annual average wages for African Americans (both genders) in 2006–2008, were 33 percent lower in the Maryland market area than for nonminority males who were otherwise similar in terms of geographic location, industry, age, and education. These differences are large and statistically significant. Large, adverse, and statistically significant wage disparities were also observed for Hispanics, Asians, Native Americans, persons of mixed race, and nonminority women. These disparities are consistent with the presence of market-wide discrimination. Observed disparities for these groups ranged from a low of -23 percent for Hispanics to a high of -33 percent for African Americans and nonminority women. Similar results were observed when the analysis was restricted to the Construction and AE-CRS sector or to the Goods and Services sector. That is, large, adverse, and statistically significant wage disparities were observed for all minority groups and for nonminority women. All wage and salary disparity analyses were then repeated to test whether observed disparities in the Maryland market area were different enough from elsewhere in the country or the economy to alter any of the basic conclusions regarding wage and salary disparity. They were not.

This analysis demonstrates that minorities and women earn substantially and significantly less than their nonminority male counterparts. Such disparities are symptoms of discrimination in the labor force that, in addition to its direct effect on workers, reduce the future availability of M/WBEs by stifling opportunities for minorities and women to progress through precisely those internal labor markets and occupational hierarchies that are most likely to lead to entrepreneurial opportunities. These disparities reflect more than mere "societal discrimination" because they demonstrate the nexus between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. Other things equal, these reduced entrepreneurial opportunities in turn lead to lower M/WBE availability levels than would be observed in a race- and gender-neutral market area.

Next, we analyzed race and gender disparities in business owner earnings. We observed large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, and nonminority women consistent with the presence of discrimination in these markets. Large, adverse, and statistically significant business owner

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[3] Typically, for a given disparity statistic to be considered "statistically significant" there must be a substantial probability that the value of that statistic is unlikely to be due to chance alone. *See also fn*. 177.

earnings disparities were observed overall as well as in the Construction and AE-CRS sector and in the Goods and Services sector. As with the wage and salary disparity analysis, we enhanced our basic statistical model to test whether minority and female business owners in the Maryland market area differed significantly enough from business owners elsewhere in the U.S. economy to alter any of our basic conclusions regarding disparity. They did not.

As was the case for wage and salary earners, minority and female entrepreneurs earned substantially and significantly less from their efforts than similarly situated nonminority male entrepreneurs. These disparities are a symptom of discrimination in commercial markets that directly and adversely affects M/WBEs. Other things equal, if minorities and women cannot earn remuneration from their entrepreneurial efforts comparable to that of nonminority males, growth rates will slow, business failure rates will increase, and as demonstrated in this Chapter, business formation rates will decrease. Combined, these phenomena result in lower M/WBE availability levels than would otherwise be observed in a race- and gender-neutral market area.

Next, we analyzed race and gender disparities in business formation. As with earnings, in almost every case we observed large, adverse, and statistically significant disparities consistent with the presence of discrimination in these markets in the overall economy, in the Construction and AE-CRS sector, and in the Goods and Services sector.[4] In every instance examined, business formation rates for African Americans, Hispanics, Asians, Native Americans, persons of mixed race, and nonminority women were substantially and statistically significantly lower than the corresponding nonminority male business formation rate.

Finally, as a further check on the statistical findings in this Chapter, we examined evidence from the Census Bureau's *Survey of Business Owners and Self-Employed Persons* (SBO).[5] These data show large, adverse, and statistically significant disparities between M/WBEs' share of overall revenues and their share of overall firms in the U.S. as a whole, and in the Delaware-Maryland-District of Columbia region. The size of the disparities facing minority- and women-owned firms in these three states is striking. For example, although 16.1 percent of all firms in this region are owned by African Americans, they earn less than 3.5 percent of all sales and receipts. African American employer firms are 5.0 percent of the total but earn only 2.8 percent of sales and receipts. Disparities for women and for other minority groups are also very large in the DE-MD-DC region.

F. Statistical Disparities in Credit/Capital Markets

In Chapter VI, we analyzed current and historical data from the Survey of Small Business Finances ("SSBF"), conducted by the Federal Reserve Board and the U.S. Small Business Administration, along with data from nine customized matching mail surveys we have conducted throughout the nation since 1999. This data examines whether discrimination exists in the small business credit market. Credit market discrimination can have an important effect on the likelihood that M/WBEs will succeed. Moreover, discrimination in the credit market might even

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[4] The Construction and CRS sectors were combined for the analyses in Chapter V, as were the Goods and Services sector. Elsewhere in the study they are analyzed separately.

[5] Formerly known as the *Survey of Minority- and Women-Owned Business Enterprises* (SMWOBE).

prevent such businesses from opening in the first place. This analysis has been held by the courts to be probative of a public entity's compelling interest in remedying discrimination. We provide qualitative and quantitative evidence supporting the view that M/WBE firms, particularly African American-owned firms, suffer discrimination in this market.

The results are as follows:

- Minority-owned firms were particularly likely to report that they did not apply for a loan over the preceding three years because they feared the loan would be denied.
- When minority-owned firms did apply for a loan, their requests were substantially more likely to be denied than other groups, even after accounting for differences in factors like size and credit history.
- When minority-owned firms did receive a loan, they paid higher interest rates than comparable nonminority-owned firms.
- Far more minority-owned firms report that credit market conditions are a serious concern than is the case for nonminority-owned firms.
- A greater share of minority-owned firms believed that the availability of credit was the most important issue likely to confront the firm in the near future.
- Judging from the analysis done using data from the SSBF, there is no reason to believe that evidence of discrimination in the market for credit is different in the Maryland market area than in the nation as a whole. The evidence from NERA's own credit surveys in a variety of states and metropolitan areas across the country is entirely consistent with the results from the SSBF.

We conclude that there is evidence of discrimination against M/WBEs in the Maryland market area in the small business credit market. This discrimination is particularly acute for African American-owned firms.

G. M/WBE Public Sector Utilization vs. Availability in the State's Contracting and Procurement Markets, FY 2005–2009

Chapter VII analyzes the extent to which M/WBEs were utilized by the State of Maryland between SFY 2005-2009 and compares this utilization rate to the availability of M/WBEs in the relevant market area.

Table B provides an executive level summary of utilization findings for the 2011 Study by industry category and M/WBE type.

Table B1. M/WBE Utilization at State of Maryland (Dollars Awarded), 2005-2009

M/WBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	4.48	3.78	5.33	4.73	4.49	0.25	4.15
Hispanic	2.16	1.03	1.49	0.25	0.51	0.00	1.27
Asian	1.35	9.37	1.05	8.64	0.90	1.29	1.99
Native American	1.18	0.00	0.00	0.00	0.19	0.00	0.58
MBE	9.18	14.18	7.86	13.63	6.09	1.54	7.98
WBE	14.82	9.73	11.82	3.64	6.55	9.05	10.75
M/WBE	24.00	23.91	19.69	17.27	12.65	10.59	18.73
Non-M/WBE	76.00	76.09	80.31	82.73	87.35	89.41	81.27
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total ($)	*$6,512,849,297*	*$1,268,673,125*	*$594,926,095*	*$267,775,745*	*$5,259,743,333*	*$1,116,779,306*	*$15,020,746,901*

Source: Table 7.1A

Table B2. M/WBE Utilization at State of Maryland (Dollars Paid), 2005-2009

M/WBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	4.36	3.46	4.84	5.68	4.27	0.25	3.92
Hispanic	2.25	0.96	1.41	0.29	0.66	0.00	1.37
Asian	1.56	8.76	1.11	13.79	0.98	1.29	1.99
Native American	1.64	0.00	0.01	0.00	0.19	0.00	0.82
MBE	9.81	13.18	7.36	19.76	6.10	1.54	8.10
WBE	13.65	9.13	8.48	2.59	7.94	9.05	10.67
M/WBE	23.45	22.31	15.84	22.35	14.04	10.60	18.77
Non-M/WBE	76.55	77.69	84.16	77.65	85.96	89.40	81.23
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total ($)	*$5,383,793,078*	*$733,574,918*	*$458,109,202*	*$202,121,434*	*$3,828,160,042*	*$1,116,373,901*	*$11,722,132,575*

Source: Table 7.1B

Next, we compared the State's and its prime contractors' use of M/WBEs to our measure of M/WBE availability levels in the relevant market area. If M/WBE utilization is lower than measured availability in a given category, we report this result as a disparity. Table C provides a top-level summary of our disparity findings for the 2011 Study for Construction, AE-CRS, Maintenance, IT, Services, CSE, and overall contracting.

We find substantial evidence of disparity in the State's contracting and procurement activity, despite the operation of the MBE Program.

Table C. Disparity Results for State of Maryland Contracting, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization (Dollars Awarded)	Availability	Disparity Ratio	
Construction				
African American	4.48	9.69	46.25	****
Hispanic	2.16	3.48	62.11	
Asian	1.35	5.44	24.91	****
Native American	1.18	0.39	302.56	
MBE	9.18	18.99	48.33	****
WBE	14.82	13.39	110.68	
M/WBE	24	32.39	74.11	****
AE-CRS				
African American	3.78	10.17	37.20	****
Hispanic	1.03	3.86	26.63	****
Asian	9.37	11.35	82.52	
Native American	0.00	0.39	0.44	****
MBE	14.18	25.78	55.01	****
WBE	9.73	15.36	63.37	****
M/WBE	23.91	41.14	58.13	****
Maintenance				
African American	5.33	14.26	37.35	****
Hispanic	1.49	4.62	32.31	****
Asian	1.05	5.30	19.72	****
Native American	0.00	0.28	0.00	****
MBE	7.86	24.46	32.16	****
WBE	11.82	16.49	71.72	***
M/WBE	19.69	40.94	48.08	****
IT				
African American	4.73	13.94	33.94	****
Hispanic	0.25	3.86	6.54	****
Asian	8.64	13.94	61.97	****
Native American	0.00	0.50	0.00	****
MBE	13.63	32.25	42.25	****
WBE	3.64	15.84	23.00	****
M/WBE	17.27	48.09	35.91	****
Services				
African American	4.49	12.88	34.89	****
Hispanic	0.51	1.95	26.18	****
Asian	0.90	6.91	13.05	****
Native American	0.19	0.09	211.11	
MBE	6.09	21.83	27.91	****
WBE	6.55	22.74	28.82	****
M/WBE	12.65	44.56	28.37	****

Major Procurement Category / M/WBE Type	Utilization (Dollars Awarded)	Availability	Disparity Ratio	
CSE				
African American	0.25	9.39	2.70	****
Hispanic	0.00	2.02	0.00	****
Asian	1.29	9.05	14.23	****
Native American	0.00	0.93	0.00	****
MBE	1.54	21.39	7.21	****
WBE	9.05	17.52	51.66	****
M/WBE	10.59	38.91	27.22	****
All Procurement				
African American	4.15	11.35	36.57	****
Hispanic	1.27	2.95	42.91	****
Asian	1.99	7.24	27.44	****
Native American	0.58	0.27	214.81	
MBE	7.98	21.81	36.59	****
WBE	10.75	17.76	60.51	****
M/WBE	18.73	39.57	47.33	****

Source: Table 7.14A.

Notes: (1) Utilization and Availability are expressed as percentages; (2) "*" indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). "**" indicates the disparity is significant at a 10% level or better (90% confidence). "***" indicates significance at a 5% level or better (95% confidence). "****" indicates significance at a 1% level or better (99% confidence). *See also* fn. 250.

Finally, Chapter VII compares current levels of M/WBE availability in the Maryland market area with what we would expect to observe in a race- and gender-neutral market area. If there is full parity in the relevant market area, then the expected M/WBE availability rate (that is, the M/WBE availability level that would be observed in a non-discriminatory market area) will be equal to the actual current M/WBE availability rate. If there are adverse disparities facing M/WBEs in the relevant market area, however, as documented in Chapters V, VI, VII, and VIII of this Study, then expected availability will *exceed* actual current availability. Expected availability percentages for the State's overall contracting and by major procurement category are presented below in Table D. Expected availability exceeds actual current availability in every case observed.

Table D. Expected Availability and Actual Current Availability, Overall and By Major Procurement Category

Procurement Category	M/WBE Type	Current Availability	Expected Availability
All	African American	11.35	20.94
	Hispanic	2.95	4.55
	Asian	7.27	8.54
	Native American	0.27	0.34
	MBE	21.81	33.85
	WBE	17.76	22.87
	M/WBE total	39.57	54.50
Construction	African American	9.69	13.70
	Hispanic	3.48	6.80
	Asian	5.44	7.95
	Native American	0.39	0.61
	MBE	18.99	34.41
	WBE	13.39	20.59
	M/WBE total	32.39	51.85
AE-CRS	African American	10.17	14.38
	Hispanic	3.86	7.54
	Asian	11.35	16.59
	Native American	0.39	0.61
	MBE	25.78	46.72
	WBE	15.36	23.62
	M/WBE total	41.14	65.86

Table D. Expected Availability and Actual Current Availability, Overall and By Major Procurement Category, cont'd

Procurement Category	M/WBE Type	Current Availability	Expected Availability
Maintenance	African American	14.26	32.12
	Hispanic	4.62	7.42
	Asian	5.30	6.71
	Native American	0.28	0.36
	MBE	24.46	37.34
	WBE	16.49	20.33
	M/WBE total	40.94	54.90
IT	African American	13.94	31.40
	Hispanic	3.86	6.20
	Asian	13.94	17.65
	Native American	0.50	0.64
	MBE	32.25	49.23
	WBE	15.84	19.52
	M/WBE total	48.09	64.49
Services	African American	12.88	29.02
	Hispanic	1.95	3.13
	Asian	6.91	8.75
	Native American	0.09	0.11
	MBE	21.83	33.32
	WBE	22.74	28.03
	M/WBE total	44.56	59.76
Commodities	African American	9.39	21.15
	Hispanic	2.02	3.24
	Asian	9.05	11.46
	Native American	0.93	1.19
	MBE	21.39	32.65
	WBE	17.52	21.59
	M/WBE total	38.91	52.18

Source: Table 7.53.

H. Anecdotal Evidence

Chapter VIII presents the results of a large scale mail survey we conducted of M/WBEs and non-M/WBEs about their experiences and difficulties in obtaining contracts. The survey quantified and compared anecdotal evidence on the experiences of M/WBEs and non-M/WBEs as a method to examine whether any differences might be due to discrimination.

We found that M/WBEs that have been hired in the past by non-M/WBE prime contractors to work on public sector contracts with M/WBE goals are rarely hired—or even solicited—by these prime contractors to work on projects without M/WBE goals. The relative lack of M/WBE hiring and, moreover, the relative lack of solicitation of M/WBEs in the absence of affirmative efforts by the State of Maryland and other public entities in the Maryland market area shows that business discrimination continues to fetter M/WBE business opportunities in the State's relevant markets.

We found that M/WBEs in the State's market area report suffering business-related discrimination in large numbers and with statistically significantly greater frequency than non-M/WBEs. These differences remain statistically significant when firm size and other "capacity-related" owner characteristics are held constant. We also find that M/WBEs in these markets are more likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it harder for them to conduct their businesses, and less likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it easier for them to conduct their businesses.

Chapter VIII also presents the results from a series of in-depth personal interviews conducted with M/WBE and non-M/WBE business owners in the Maryland market area. Similar to the survey responses, the interviews strongly suggest that M/WBEs continue to suffer discriminatory barriers to full and fair access to State of Maryland, other public sector, and private sector contracts. Participants reported stereotyping, negative perceptions of M/WBE incompetence; subjection to higher performance standards; exclusion from industry networks; discrimination in access to commercial loans; barriers to obtaining public sector prime contracts and subcontracts; and virtual exclusion from private sector opportunities to perform as either prime contractors or subcontractors.

We conclude that the statistical evidence presented in this report is consistent with these anecdotal accounts of contemporary business discrimination.

The results of the surveys and the personal interviews are the types of anecdotal evidence that, especially in conjunction with the Study's extensive statistical evidence, the courts have found to be highly probative of whether, without affirmative interventions, the State of Maryland would be a passive participant in a discriminatory local market area. It is also highly relevant for narrowly tailoring any M/WBE goals for its state-funded contracts.

I. MBE Program Overview and Feedback Interviews

Chapter IX provides an overview of the State's MBE Program and a discussion of the operations of the current efforts. Maryland's MBE Program was first enacted in 1978, and has been revised

repeatedly and regularly. The State commissioned disparity studies from NERA Economic Consulting that were produced in 2001 and 2006 and reauthorized the Program. Over these years, many significant changes have been made to the Program, including imposing limits on the size of eligible firms and caps on the personal net worth of the minority or woman owner; expanding the Program to additional agencies and types of procurements; implementing race- and gender-neutral measures such as the Small Business Reserve Program; and requiring that the legislature review the need for the Program every five years. The current Program sets goals of 25 percent for overall State spending with MBEs, with subgoals of 7 percent for African American-owned firms and 10 percent for women-owned firms.

We interviewed over two hundred business owners throughout the State to solicit their feedback regarding these Programs. Chapter IX presents a summary of our interviews, which covered the following subjects:

- **Program Success and Eligibility**

Overall, MBEs reported that the State's Program was essential to their survival.

There was general support for including racial minorities in the Program. Many non-M/WBEs, however, urged that a limit be placed on the how long a firm may remain in the Program, arguing that after some time period, perhaps 10 years, any discriminatory barriers should have been overcome.

- **MBE Certification**

In general, there were few criticisms about the certification process. There was general agreement that MDOT's certification process is usually rigorous. Several firms, both M/WBEs and non-M/WBEs, expressed concerns about "front" firms, that is, enterprises that were not legitimately woman-owned, managed and controlled. Several participants questioned whether many firms owned by nonminority women were really disadvantaged, or even legitimate.

- **MBE Program Administration**

Goal setting experiences varied from agency to agency, often tied to the industry of the project. Amongst non-M/WBE prime contractors, a major, overriding concern is the belief that the Program's goals were too high. Several expressed concern that some agencies outside of MDOT do not set goals based on the scope of the project but instead apply the State's overall goals regardless of the circumstances. Businesses in industries other than construction found it especially difficult to meet goals. Firms outside the Baltimore area further disliked that urban M/WBEs were used in favor of local non-certified firms. Prime firms in all procurement areas opined that there are not enough qualified M/WBEs to fulfill the goals. Some primes also stated that the quality of M/WBEs' work was often below that of White male-owned firms. Many non-M/WBEs believed that they should not have to subcontract work that they would prefer to perform in house. Non-M/WBE specialty trade contractors were adamant they are actively disadvantaged by the MBE and DBE Programs. Many non-M/WBE general contractors felt that waivers are actively discouraged at many agencies. Several prime vendors stated that they had found it very difficult to replace a non-performing M/WBE. Several non-M/WBEs argued that the Program should be eliminated in its current form and scope.

On the other side, M/WBEs in construction doubted that there was ever a lack of qualified firms to meet the goals. Many participants, M/WBEs and non-M/WBEs alike, mentioned the use of "front" firms or "pass throughs" that perform no commercially useful function, thereby creating the appearance of meeting goals without any actual substantive M/WBE participation. Dozens of M/WBEs stated that more monitoring during contract performance and effective sanctions for non-compliance with M/WBE contractual commitments were needed. Some M/WBEs complained that there is little follow up by the State about whether the M/WBE listed as the subcontractor in fact is used on the project. They claimed that listed firms were often replaced, at the best, by other M/WBEs, and at the worst, by non-M/WBEs or by the contractor's own forces. Others had good experiences with the State's monitoring of prime firms' contract commitments to use M/WBEs.

- **Access to Information**

Smaller and new firms found it very difficult to access information on upcoming opportunities or to contact the appropriate State personnel.

- **Supportive Services Programs**

State outreach activities were lauded as assisting M/WBEs to obtain subcontracts. However, some certified firms felt that the State does not do enough to assist them after they become certified. M/WBE and non-M/WBE firms across all industries repeatedly agreed that one stop shopping for services and information for M/WBEs would help. M/WBEs also mentioned the need to identify to whom to market their services in each agency. Some general contractors recognized that M/WBEs often lack managerial experience, and suggested the State provide more support. Minority and majority firms felt that mentor-protégé initiatives would be helpful.

- **M/WBEs' Efforts to Seek Prime Contracts**

All small firms agreed that the size of many State procurements prevents them from competing. They thought that "unbundling" contracts would help, over and above reserving solicitations selected for inclusion in the Small Business Reserve Program. Many M/WBEs, and a good number of non-M/WBEs, believed that the State sets unreasonably high experience thresholds, bonding requirements (especially for non-construction projects), and insurance minimums. Participants suggested the M/WBEs primes be permitted to count their own participation towards meeting contract goals.

- **Payment**

Payment was a universal problem. Smaller firms, including most M/WBEs, found slow pay to be a major barrier to participating on State contracts as either a prime contractor or a subcontractor. Some M/WBEs found the monthly forms confirming payments to them as subcontractors to be too burdensome when their portion of the project was completed or had yet to start.

- **State Personnel's Roles and Responsibilities**

In general, M/WBEs reported that the MBE Liaisons could be more effective. The Liaisons' lack of involvement in the management of the contract reduces their ability to address Program

issues. The consensus was that the MBE Liaisons need more authority and more tools to resolve problems. Liaisons and agency procurement staff generally agreed with that assessment. The barrier is not a lack of regulatory authority. The MBE provisions of COMAR were generally seen as adequate; it is the implementation that needs to be bolstered. Recent improvements in documenting M/WBE participation and holding successful bidders to their M/WBE commitments should help ensure more integrity and real results for the Program. A lack of good compliance monitoring software further weakened the Liaisons' effectiveness. More outreach for the Small Business Reserve Program was also cited as a critical need. Outside of MDOT, there was concern from State personnel that Liaisons were too far removed from senior management to effectively advocate for M/WBEs. Moreover, MBE staff did not routinely sign off on contract awards, prime contractor payments or contract closeouts. There was also a general belief that many agencies lack the ability to impose sanctions for firms' failure to meet their MBE commitments. Several M/WBEs and non-M/WBEs suggested moving the responsibility for compliance from the agencies to GOMA.

- **Maryland's Race- and Gender-neutral Programs**

M/WBEs had received surety bonding and other assistance through Maryland's Small Business Development Financing Authority and other agencies. Some prime contractors recognized the need for supportive services for M/WBEs. Many participants, both M/WBEs and non-M/WBEs, urged the State to raise the eligibility size limits and expand the types of contracts included in the Small Business Reserve Program. Many owners were unaware of the SBR Program.

J. Recommendations

Based upon our results, we make the following recommendations. First, we suggest that Maryland continue and augment existing race- and gender-neutral remedies. These include:

- Expanding the Small Business Reserve Program
- Increasing Contract "Unbundling"
- Reviewing Surety Bonding, Insurance and Experience Requirements
- Ensuring Prompt Payments
- Ensuring Bidder Non-Discrimination and Fairly Priced Subcontractor Quotations
- Improving Subcontract, Subconsultant, and Supplier Data Collection and Retention Procedures

We further recommend that the State revise and continue its MBE Program. Enhancements should include:

- Increasing Certification Outreach
- Setting Overall, Aspirational M/WBE Goals for Annual Spending

- Improving Contract Specific M/WBE Goal-Setting
- Counting M/WBE Prime Contractor Participation Towards Meeting Contract Goals (if the M/WBE makes Good Faith Efforts and is granted a waiver)
- Counting Lower Tier MBE Utilization
- Soliciting some contracts without M/WBE goals to test outcomes in an "unremediated" market
- Scrutinizing MBEs' Commercially Useful Functions
- Standardizing and Disseminating Good Faith Efforts Policies and Procedures
- Developing Standard Contractual Terms and Conditions for Program Enforcement
- Improving Monitoring of Contract Performance
- Enhancing Program Administration
- Adopting a Statewide Mentor-Protégé Program
- Developing Performance Measures for Program Success
- Periodically Reviewing the Program

K. Conclusion

As summarized above, and based on the detailed findings below, we conclude that there is strong evidence of large, adverse, and frequently statistically significant disparities between minority and female participation in business enterprise activity in the State of Maryland's relevant market area and the actual current availability of those businesses. We further conclude that these disparities cannot be explained solely, or even primarily, by differences between M/WBE and non-M/WBE business populations in factors untainted by discrimination, and that these differences therefore give rise to a strong inference of the continued presence of discrimination in the State's market area.

I. Introduction

To ensure compliance with constitutional mandates and M/WBE best practices, Maryland commissioned NERA Economic Consulting to examine the past and current status of M/WBEs in the State's geographic and product markets for contracting and procurement. The results of the 2011 Study provide the evidentiary record necessary for the State's consideration of whether to implement renewed M/WBE policies that comply with the requirements of the courts and to assess the extent to which previous efforts have assisted M/WBEs to participate on a fair basis in the State's contracting and procurement activity.

The 2011 Study finds statistical evidence of business discrimination against M/WBEs in the private sector of the State of Maryland's market area. These findings are presented in Chapters V and VI. Statistical analyses of the State of Maryland's own contracting, which also document evidence consistent with business discrimination, are contained in Chapters III, IV and VII. As a check on our statistical findings, we surveyed the contracting experiences of M/WBEs and non-M/WBEs in the market area and also conducted a series of in-depth personal interviews with business enterprises throughout the State, both M/WBE and non-M/WBE.

The Study is presented in nine chapters, and is designed to answer the following questions:

Chapter I: Introduction

Chapter II: What are the current constitutional standards and case law governing strict scrutiny review of race- and gender-conscious government efforts in public contracting?

Chapter III: What is the relevant geographic market for Maryland and how is it defined? What are the relevant product markets for Maryland and how are they defined?

Chapter IV: What percentage of all businesses in the State's market area are owned by minorities and/or women? How are these availability estimates constructed?

Chapter V: Do minority and/or female wage and salary earners earn less than similarly situated nonminority males? Do minority and/or female business owners earn less from their businesses than similarly situated nonminority males? Are minorities and/or women in the Maryland market area less likely to be self-employed than similarly situated nonminority males? How do the findings in the Maryland market area differ from the national findings on these questions? How have these findings changed over time?

Chapter VI: Do minorities and/or women face discrimination in the market for commercial capital and credit compared to similarly-situated nonminority males? How, if at all, do findings locally differ from findings nationally?

Chapter VII: To what extent have M/WBEs been utilized by Maryland between state fiscal years 2005-2009, and how does this utilization compare to the availability of M/WBEs in the relevant market area?

Chapter VIII: How many M/WBEs experienced disparate treatment during the study period? What types of discriminatory experiences are most frequently encountered by M/WBEs? How do the experiences of M/WBEs differ from those of similar non-M/WBEs regarding difficulties in obtaining prime contracts and subcontracts?

Chapter IX: What general policies and procedures govern the State's MBE program? What were some of the most frequently encountered comments from M/WBEs and non-M/WBEs concerning the State's contracting affirmative action programs?

Chapter X: What are our recommendations to the State for revised contracting policies and procedures?

In assessing these questions, we present in Chapters III through VIII a series of quantitative and qualitative analyses that compare minority and/or female outcomes to nonminority male outcomes in all of these business-related areas. The Executive Summary, above, provides a brief overview of our key findings and conclusions.

II. Analysis of Legal Standards for Government Affirmative Action Contracting Programs

A. General Overview of Strict Scrutiny

To be effective, enforceable, and legally defensible, a race- and gender-based program must meet the judicial test of constitutional "strict scrutiny." Strict scrutiny requires a current "strong basis in evidence" of the persistence of the effects of discrimination, and any remedies adopted must be "narrowly tailored" to that discrimination.

This area of constitutional law is complex, and cases are quite fact specific. Over the last 22 years, federal appellate and district courts have developed parameters for establishing a state government's compelling interest in remedying discrimination and evaluating whether the remedies adopted to address that discrimination are narrowly tailored. This chapter analyzes the legal and program development issues Maryland should consider in evaluating its M/WBE Program and future initiatives.

1. *City of Richmond v. J.A. Croson*

City of Richmond v. J.A. Croson Co.[6] established the constitutional contours of permissible race-based public contracting programs. Reversing long established law, the Supreme Court for the first time extended the highest level of judicial examination from measures designed to limit the rights and opportunities of minorities to legislation that benefits historic victims of discrimination. Strict scrutiny requires that a government entity prove both its "compelling interest" in remedying identified discrimination, as supported by a "strong basis in evidence," and that the measures adopted to remedy that discrimination are "narrowly tailored" to that evidence. However benign the government's motive, race is always so suspect a classification that its use must pass the highest constitutional test of "strict scrutiny."

The Court struck down the City of Richmond's Minority Business Enterprise ("MBE") Plan that required prime contractors awarded City construction contracts to subcontract at least 30 percent of the project to MBEs. A business located anywhere in the country which was at least 51 percent owned and controlled by "Black, Spanish-speaking, Oriental, Indian, Eskimo, or Aleut" citizens was eligible to participate. The Plan was adopted after a public hearing at which no direct evidence was presented that the City had discriminated on the basis of race in awarding contracts or that its prime contractors had discriminated against minority subcontractors. The only evidence before the City Council was: (a) Richmond's population was 50 percent Black, yet less than one percent of its prime construction contracts had been awarded to minority businesses; (b) local contractors' associations were virtually all White; (c) the City Attorney's opinion that the Plan was constitutional; and (d) general statements describing widespread racial discrimination in the local, Virginia, and national construction industries.

[6] 488 U.S. 469 (1989).

In affirming the court of appeals' determination that the Plan was unconstitutional, Justice O'Connor's plurality opinion rejected the extreme positions that local governments either have *carte blanche* to enact race-based legislation or must prove their own illegal conduct in order to take affirmative steps to remedy discrimination:

> [A] state or local subdivision…has the authority to eradicate the effects of private discrimination within its own legislative jurisdiction.… [Richmond] can use its spending powers to remedy private discrimination, if it identifies that discrimination with the particularity required by the Fourteenth Amendment.… [I]f the City could show that it had essentially become a "passive participant" in a system of racial exclusion…[it] could take affirmative steps to dismantle such a system. It is beyond dispute that any public entity, state or federal, has a compelling interest in assuring that public dollars, drawn from the tax contributions of all citizens, do not serve to finance the evil of private prejudice.[7]

According to the plurality opinion, strict scrutiny of race-based remedies is required to determine whether racial classifications are in fact motivated by either notions of racial inferiority or blatant racial politics. This highest level of judicial review "smokes out" illegitimate uses of race by assuring that the legislative body is pursuing a goal important enough to warrant use of a highly suspect tool.[8] It further ensures that the means chosen "fit" this compelling goal so closely that there is little or no possibility that the motive for the classification was illegitimate racial prejudice or stereotype. The Court made clear that strict scrutiny seeks to expose racial stigma; racial classifications are said to create racial hostility if they are based on notions of racial inferiority.[9]

Race is so suspect a basis for government action that more than "societal" discrimination is required to restrain racial stereotyping or pandering. The Court provided no definition of "societal" discrimination or any guidance about how to recognize the ongoing realities of history and culture in evaluating race-conscious programs. The Court simply asserted that

> [w]hile there is no doubt that the sorry history of both private and public discrimination in this country has contributed to a lack of opportunities for black entrepreneurs, this observation, standing alone, cannot justify a rigid racial quota in the awarding of public contracts in Richmond, Virginia…. [A]n amorphous claim that there has been past discrimination in a particular industry cannot justify the use of an unyielding racial quota. It is sheer speculation how many minority firms there would be in Richmond absent past societal discrimination.[10]

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[7] *Id*. at 491-92.

[8] *See also Grutter v. Bollinger*, 539 U.S. 306, 327 (2003) ("Not every decision influenced by race is equally objectionable, and strict scrutiny is designed to provide a framework for carefully examining the importance and the sincerity of the reasons advanced by the governmental decision maker for the use of race in that particular context.").

[9] 488 U.S. at 493.

[10] *Id*. at 499.

Richmond's evidence was found to be lacking in every respect. The City could not rely upon the disparity between its utilization of MBE prime contractors and Richmond's minority population because not all minority persons would be qualified to perform construction projects; general population representation is irrelevant. No data were presented about the availability of MBEs in either the relevant marketplace or their utilization as subcontractors on City projects. According to Justice O'Connor, the extremely low MBE membership in local contractors' associations could be explained by "societal" discrimination or perhaps Blacks'[11] lack of interest in participating as business owners in the construction industry. To be relevant, the City would have to demonstrate statistical disparities between eligible MBEs and actual membership in trade or professional groups. Further, Richmond presented no evidence concerning enforcement of its own anti-discrimination ordinance. Finally, Richmond could not rely upon Congress' determination that there has been nationwide discrimination in the construction industry. Congress recognized that the scope of the problem varies from market to market, and in any event it was exercising its powers under Section Five of the Fourteenth Amendment, whereas a local government is further constrained by the Amendment's Equal Protection Clause.[12]

> In the case at hand, the City has not ascertained how many minority enterprises are present in the local construction market nor the level of their participation in City construction projects. The City points to no evidence that qualified minority contractors have been passed over for City contracts or subcontracts, either as a group or in any individual case. Under such circumstances, it is simply impossible to say that the City has demonstrated "a strong basis in evidence for its conclusion that remedial action was necessary."[13]

The foregoing analysis was applied only to Blacks. The Court then emphasized that there was "absolutely no evidence" against other minorities. "The random inclusion of racial groups that, as a practical matter, may have never suffered from discrimination in the construction industry in Richmond, suggests that perhaps the City's purpose was not in fact to remedy past discrimination."[14]

Having found that Richmond had not presented sufficient evidence in support of its compelling interest in remedying discrimination— the first prong of strict scrutiny— the Court went on to make two observations about the narrowness of the remedy— the second prong of strict scrutiny. First, Richmond had not considered race-neutral means to increase MBE participation. Second, the 30 percent quota had no basis in evidence, and was applied regardless of whether the

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[11] "Black" is the term used in the Richmond program. Maryland law uses the term "African American". *See* Md. Code Ann., State Fin. & Proc. § 14-301(i).

[12] 488 U.S. at 504; *but see Adarand v. Peña,* 515 U.S. 200 (1995) ("*Adarand III*") (applying strict scrutiny to Congressional race-conscious contracting measures).

[13] 488 U.S. at 510.

[14] *Id*.

individual MBE had suffered discrimination.[15] Further, Justice O'Connor rejected the argument that individualized consideration of Plan eligibility is too administratively burdensome.

Apparently recognizing that the opinion might be misconstrued to categorically eliminate all race-conscious contracting efforts, Justice O'Connor closed with these admonitions:

> Nothing we say today precludes a state or local entity from taking action to rectify the effects of identified discrimination within its jurisdiction. If the City of Richmond had evidence before it that non-minority contractors were systematically excluding minority businesses from subcontracting opportunities, it could take action to end the discriminatory exclusion. Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise. Under such circumstances, the City could act to dismantle the closed business system by taking appropriate measures against those who discriminate based on race or other illegitimate criteria. In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion.…Moreover, evidence of a pattern of individual discriminatory acts can, if supported by appropriate statistical proof, lend support to a local government's determination that broader remedial relief is justified.[16]

The Fourth Circuit recently reiterated this point.

> Although imposing a substantial burden, strict scrutiny is not automatically "fatal in fact." [Citation omitted] After all, "[t]he unhappy persistence of both the practice and the lingering effects of racial discrimination against minority groups in this country is an unfortunate reality, and government is not disqualified from acting in response to it." [Citations omitted] In so acting, a governmental entity must demonstrate it had a compelling interest in "remedying the effects of past or present racial discrimination."[17]

2. Strict Scrutiny as Applied to Federal Enactments

In *Adarand v. Peña*,[18] the Court again overruled long settled law and extended the analysis of strict scrutiny under the Due Process Clause of the Fourteenth Amendment to federal enactments. Just as in the local government context, when evaluating federal legislation and regulations, "[f]ederal racial classifications, like those of a State, must serve a compelling governmental interest, and must be narrowly tailored to further that interest."[19]

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[15] *See Grutter*, 539 U.S. at 336-337 (quotas are not permitted; race must be used in a flexible, non-mechanical way).

[16] 488 U.S. at 509 (citations omitted).

[17] *H.B. Rowe Co. v. Tippett*, 615 F.3d 233, 241 (4th Cir. 2010).

[18] 515 U.S. 200 (1995) (*Adarand III*).

[19] *Id*. at 235.

> The strict scrutiny test involves two questions. The first is whether the interest cited by the government as its reason for injecting the consideration of race into the application of law is sufficiently compelling to overcome the suspicion that racial characteristics ought to be irrelevant so far as treatment by the government is concerned. The second is whether the government has narrowly tailored its use of race, so that race-based classifications are applied only to the extent absolutely required to reach the proffered interest. The strict scrutiny test is thus a recognition that while classifications based on race may be appropriate in certain limited legislative endeavors, such enactments must be carefully justified and meticulously applied so that race is determinative of the outcome in only the very narrow circumstances to which it is truly relevant.[20]

a. U.S. Department of Transportation's Disadvantaged Business Enterprise Program

To comply with *Adarand*, Congress reviewed and revised the Disadvantaged Business Enterprise (DBE) Program statute[21] and implementing regulations[22] for federal-aid contracts in the transportation industry. These regulations govern the DBE Program administered by the Maryland Department of Transportation for its federal-aid contracts. To date, every court that has considered the issue has found the regulations to be constitutional on their face.[23] While binding strictly only upon the DBE Program, these cases provide important guidance to Maryland about the types of evidence necessary to establish its compelling interest in adopting affirmative action contracting programs and how to narrowly tailor those programs. For example, the Fourth Circuit noted with approval that North Carolina's M/WBE program for state-funded contracts largely mirrored Part 26.[24]

Congress had strong evidence of widespread race discrimination in the construction industry.[25] Relevant evidence before Congress included:

- Disparities between the earnings of minority-owned firms and similarly situated nonminority-owned firms;

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[20] *Adarand Constructors, Inc. v. Peña*, 965 F. Supp. 1556, 1569-1570 (D. Colo. 1997), *rev'd*, 228 F.3d 1147 (2000) ("*Adarand IV"*); *see also Adarand III*, 515 U.S. at 227.

[21] Transportation Equity Act for the 21st Century (TEA-21), Pub. L. No. 105-178 (b)(1), 112 Stat. 107, 113.

[22] 49 C.F.R. Part 26 and 49 C.F.R. Part 23.

[23] *See, e.g., Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147 (10th Cir. 2000) ("*Adarand VII*"), *cert. granted then dismissed as improvidently granted*, 532 U.S. 941, 534 U.S. 103 (2001); *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7th Cir. 2007) ("*Northern Contracting III"*).

[24] *Rowe*, 615 F.3d at 236.

[25] *See Western States Paving Co., Inc. v. Washington Department of Transportation,* 407 F.3d 983, 993 (9th Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006) ("In light of the substantial body of statistical and anecdotal material considered at the time of TEA-21's enactment, Congress had a strong basis in evidence for concluding that- in at least some parts of the country- discrimination within the transportation contracting industry hinders minorities' ability to compete for federally funded contracts.").

- Disparities in commercial loan denial rates between African American business owners compared to similarly situated non-minority business owners;

- The large and rapid decline in minorities' participation in the construction industry when affirmative action programs were struck down or abandoned; and

- Various types of overt and institutional discrimination by prime contractors, trade unions, business networks, suppliers and sureties against minority contractors.[26]

The Eighth Circuit Court of Appeals took a "hard look" at the evidence Congress considered, and concluded that the legislature had

> spent decades compiling evidence of race discrimination in government highway contracting, of barriers to the formation of minority-owned construction businesses, and of barriers to entry. In rebuttal, [the plaintiffs] presented evidence that the data were susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.[27]

Next, the court held that the regulations are facially narrowly tailored, as was the State of Minnesota's application of those regulations. Unlike the prior DBE program, Part 26 provides that:

- The overall goal must be based upon demonstrable evidence of the number of DBEs ready, willing, and able to participate on the recipient's federally assisted contracts.

- The goal may be adjusted to reflect the availability of DBEs but for the effects of the DBE Program and of discrimination.

- The recipient must meet the maximum feasible portion of the goal through race-neutral measures as well as estimate that portion of the goal it predicts will be met through such measures.

- The use of quotas and set-asides is limited to only those situations where there is no other remedy.

- The goals are to be adjusted during the year to remain narrowly tailored.

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[26] *See id.*, 407 F.3d at 992-93.

[27] *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation,* 345 F.3d. 964, 970 (8th Cir. 2003), *cert. denied*, 541 U.S. 1041 (2004); *see also Adarand VII*, 228 F.3d at 1175 (Plaintiff has not met its ultimate burden "of introducing credible, particularized evidence to rebut the government's initial showing of the existence of a compelling interest in remedying the nationwide effects of past and present discrimination in the federal construction procurement subcontracting market.").

- Absent bad faith administration of the Program, a recipient cannot be penalized for not meeting its goal.

- The presumption of social disadvantage for racial and ethnic minorities and women is rebuttable.

- Exemptions and waivers from any or all Program requirements are available.[28]

These elements have led the courts to conclude that the DBE Program is narrowly tailored on its face.[29] First, the regulations place strong emphasis on the use of race-neutral means to achieve minority and women participation. Relying upon *Grutter v. Bollinger*, the Eighth Circuit held that while "[n]arrow tailoring does not require the exhaustion of every conceivable race-neutral alternative … it does require serious, good faith consideration of workable race-neutral alternatives."[30]

The DBE Program is also flexible. Eligibility is limited to small firms owned by persons whose net worth is less than $750,000. There are built-in Program time limits, and a recipient may terminate the Program if it meets its annual overall goal through race-neutral means for two consecutive years. Moreover, the authorizing legislation is subject to Congressional reauthorization, ensuring periodic public debate.[31]

Next, the courts have held that the goals are tied to the relevant labor market. "Though the underlying estimates may be inexact, the exercise requires the States to focus on establishing realistic goals for DBE participation in the relevant contracting markets. This stands in stark contrast to the program struck down in *Croson*."[32]

Finally, Congress has taken significant steps to minimize the race-conscious nature of the Program. "[W]ealthy minority owners and wealthy minority-owned firms are excluded, and certification is available to persons who are not presumptively [socially] disadvantaged but can demonstrate actual social and economic disadvantage. Thus, race is made relevant in the program, but it is not a determinative factor."[33]

DBE programs based upon a methodology similar to that for this Study for Maryland, including the availability analysis and the examination of disparities in the business formation rates and business earnings of minorities and women compared to similarly situated nonminority males, have been held to be narrowly tailored in their application of Part 26. The Minnesota Department of Transportation (Mn/DOT) relied upon a Study conducted by NERA and Colette Holt & Associates ("CHA") to set its DBE goal. The Eighth Circuit opined that while plaintiff

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[28] *Sherbrooke*, 345 F.3d. at 971-72.

[29] *See also Western States*, 407 F3d at 995

[30] *Sherbrooke*, 345 F.3d at 972.

[31] *See, e.g., id*. at 972.

[32] *Id.*; *see also Western States*, 407 F.3d at 994.

[33] *Sherbrooke*, 345 F.3d at 973.

"presented evidence attacking the reliability of NERA's data, it failed to establish that better data was [sic] available or that Mn/DOT was otherwise unreasonable in undertaking this thorough analysis and in relying on its results." The precipitous drop in DBE participation in 1999, when no race-conscious methods were employed, supported Mn/DOT's conclusion that a substantial portion of its 2001 overall goal could not be met with race-neutral measures, and there was no evidence that Mn/DOT failed to adjust its use of race-conscious and race-neutral methods as the year progressed, as the DOT regulations require.[34]

Likewise, the Seventh Circuit Court of Appeals affirmed the district court's trial verdict that the Illinois Department of Transportation's application of Part 26 was narrowly tailored based in large part upon the report and expert trial testimony of NERA and CHA.[35] IDOT had a compelling interest in remedying discrimination in the marketplace for federally-funded highway contracts, and its Federal Fiscal Year 2005 DBE Plan was narrowly tailored to that interest and in conformance with the DBE Program regulations.

To determine whether IDOT met its constitutional and regulatory burdens, the court reviewed the evidence of discrimination against minority and women construction firms in the Illinois area. IDOT had commissioned a NERA Availability Study to meet Part 26's requirements. Similar to this Study for Maryland, the IDOT Study included a custom census of the availability of DBEs in IDOT's marketplace, weighted by the location of IDOT's contractors and the types of goods and services IDOT procures. NERA estimated that DBEs comprised 22.77 percent of IDOT's available firms.[36] The IDOT Study next examined whether and to what extent there are disparities between the rates at which DBEs form businesses relative to similarly situated non-minority men, and the relative earnings of those businesses. If disparities are large and statistically significant, then the inference of discrimination can be made. Controlling for numerous variables such as the owner's age, education, and the like, the Study found that in a race- and gender-neutral marketplace the availability of DBEs would be approximately 20.8 percent higher, for an estimate of DBE availability "but for" discrimination of 27.51 percent.

In addition to the IDOT Study by NERA, the court also relied upon:

- A NERA Availability Study conducted for Metra, the Chicago-area commuter rail agency;

- Expert reports relied upon by an earlier trial court in finding that the City of Chicago had a compelling interest in its M/WBE program for construction contracts;[37]

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[34] *Id*.

[35] *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7th Cir. 2007) (7th Cir. 2007) ("*Northern Contracting III")*. Ms. Holt authored IDOT's DBE goal submission, and she and Dr. Wainwright testified as IDOT's expert witnesses at the trial.

[36] This baseline figure of DBE availability is the "step 1" estimate U.S. DOT grant recipients must make pursuant to 49 CFR §26.45.

[37] *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp. 2d 725 (N.D. Ill. 2003).

- Expert reports and anecdotal testimony presented to the Chicago City Council in support of the City's revised M/WBE Procurement Program ordinance in 2004;
- Anecdotal evidence gathered at IDOT's public hearings on the DBE program;
- Data on DBE involvement in construction projects in markets without DBE goals; and
- Data on utilization of DBEs on contracts without goals, including IDOT's "zero goal" experiment and the Illinois State Toll Highway Authority's voluntary DBE program.[38]

Based upon this record, the court of appeals agreed with the trial court's judgment that the Program was narrowly tailored. IDOT's plan was based upon sufficient proof of discrimination such that race-neutral measures alone would be inadequate to assure that DBEs operate on a "level playing field" for government contracts.

> IDOT also presented evidence that discrimination in the bonding, insurance, and financing markets erected barriers to DBE formation and prosperity. Such discrimination inhibits the ability of DBEs to bid on prime contracts, thus allowing the discrimination to indirectly seep into the award of prime contracts, which are otherwise awarded on a race- and gender-neutral basis. This indirect discrimination is sufficient to establish a compelling governmental interest in a DBE program.[39]

Most recently, the district court in a challenge to New Jersey Transit's (NJT) DBE program, applied *Sherbrooke, Northern Contracting* and *Western States* to dismiss plaintiff's argument that New Jersey must independently establish its compelling interest in implementing the federal regulations as a "red herring."[40] It held that a recipient's constitutional duty under Part 26 is to narrowly tailor its program; a recipient "does not need to justify establishing its DBE program, as it has already been justified by the [federal] legislators."[41] After a bench trial, the court held that NJT's program is narrowly tailored. NJT established the effects of past discrimination through a disparity index, which revealed a pattern of discrimination against DBEs. NJT then followed the three step goal setting process required by Part 26. That the plaintiff's expert would have preferred another method was insufficient to meet the burden of persuasion. NJT's program met all the factors for narrow tailoring, including that the burden on non-DBE subcontractors was minimal.[42]

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[38] *Northern Contracting III,* 473 F.3d at 719.

[39] *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2005 U.S. Dist. LEXIS 19868, at *82 (Sept. 8, 2005) ("*Northern Contracting II"*).

[40] *GEOD Corp. v. New Jersey Transit Corp.*, 678 F.Supp. 276, 282 (D. N.J 2009).

[41] *Id*.

[42] *GEOD Corp v. New Jersey Transit Corp*, Civil Action No. 2:04-cv-2425, slip op. at 20 (N.D. N.J. Oct. 19, 2010).

b. U.S. Department of Defense's Small Disadvantaged Business Program

In 2008, the Federal Circuit Court of Appeals struck down the Department of Defense (DOD) program for Small Disadvantaged Businesses (SDBs) in *Rothe Development Corporation v. U.S. Department of Defense*.[43]

In *Rothe VII*[44], the appeals court held that the DOD program violated strict scrutiny because Congress did not have a "strong basis in evidence" upon which to conclude that DOD was a passive participant in racial discrimination in relevant markets across the country. The six local disparity studies upon which DOD primarily relied for evidence of discrimination did not meet the compelling interest requirement, and its other statistical and anecdotal evidence did not rise to meet the heavy constitutional burden.

Of particular relevance to this report for Maryland, the primary focus of the court's analysis was the six disparity studies. The court reaffirmed that such studies are relevant to the compelling interest analysis.[45] It then rejected Rothe's argument that data more than five years old must be discarded, stating "We decline to adopt such a *per se* rule here.… [The government] should be able to rely on the most recently available data so long as that data is reasonably up-to-date."[46]

In the absence of expert testimony about accepted econometric models of discrimination, the court was troubled by the failure of five of the studies to account for size differences and "qualifications" of the minority firms in the denominator of the disparity analysis, or as the court labeled it, "relative capacity."[47] The court was concerned about the studies' inclusion of possibly "unqualified" minority firms and the failure to account for whether a firm can perform more than one project at a time in two of the studies.[48] In the court's view, the combination of these perceived deficits rendered the studies insufficiently probative to meet Congress' burden.

The appellate court ignored the analyses in the cases upholding the USDOT Disadvantaged Business Enterprise Program and the City of Denver's local affirmative action contracting program where the fallacy of "capacity" was debunked, all of which were cited extensively by

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[43] 545 F.3d 1023 (Fed. Cir. 2008) ("*Rothe VII*"). The program set an overall annual goal of five percent for DOD contracting with SDBs and authorized various race-conscious measures to meet the goal, including a 10 percent bid preference to SDBs. We note that the jurisdiction of the Court of Appeals for the Federal Circuit is limited to the jurisdiction described in 28 U.S.C. §§ 1292 (c) and (d) and 1295. Pursuant to 28 U.S.C. § 1295(a)(2), jurisdiction in *Rothe* was based upon the plaintiff's claim under the Tucker Act, 28 U.S.C. § 1346(a)(2), which governs contract claims against the United States.

[44] This opinion was the latest iteration of an 11-year-old challenge by a firm owned by a White female to DOD's award of a contract to an Asian American–owned business despite the fact that plaintiff was the lowest bidder.

[45] *Rothe*, 545 F.3d at 1037-1038.

[46] *Id*. at 1038-1039.

[47] 545 F.3d at 1042.

[48] *Ibid.*

the district court. It relied instead on a report from the USCCR, which adopts the views of anti-affirmative action writers, including those of Rothe's consultant.[49]

However, the court was careful to limit the reach of its review to the facts of the case:

> To be clear, we do *not* hold that the defects in the availability and capacity analyses in these six disparity studies render the studies wholly unreliable for any purpose. Where the calculated disparity ratios are low enough, we do not foreclose the possibility that an inference of discrimination might still be permissible for *some* of the minority groups in *some* of the studied industries in *some* of the jurisdictions. And we recognize that a minority owned firm's capacity and qualifications may themselves be affected by discrimination. But we hold that the defects we have noted detract dramatically from the probative value of these six studies, and, in conjunction with their limited geographic coverage, render the studies insufficient to form the statistical core of the "strong basis in evidence" required to uphold the statute.[50]

The Federal Circuit concludes its analysis of compelling interest by "stress[ing] that [its] holding is grounded in the particular terms of evidence offered by DOD and relied on by the district court in this case, and should not be construed as stating blanket rules, for example, about the reliability of disparity studies."[51]

Given the holding that Congress lacked a strong basis in evidence for the DOD program, the court did not rule on whether its provisions were narrowly tailored. The court did note, however, its prior rulings that the program is flexible, limited in duration, and not unduly burdensome to third parties, and that the program has tended to narrow the reach of its remedies over time.[52]

3. Gender-Conscious Programs

Whether affirmative action procurement programs that benefit women are subject to the lesser constitutional standard of "intermediate scrutiny" has yet to be settled by the Supreme Court.[53] Most courts, including the Fourth Circuit, have applied intermediate scrutiny to remedial programs for women,[54] and then upheld or struck down the WBE program under that standard.[55]

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[49] USCCR, *Disparity Studies as Evidence of Discrimination in Federal Contracting* (May 2006): 79.

[50] 545 F.3d at 1045.

[51] *Id*. at 1049.

[52] *Id*. at 1049.

[53] *Cf. United States v. Virginia*, 518 U.S. 515 (1996) (applying standard of "exceedingly persuasive justification" in striking down Virginia Military Institute's males only admissions policy).

[54] *See, e.g., Rowe*, 615 F.3d at 242; *see also Associated Utility Contractors of Maryland, Inc. v. Mayor and City Council of Baltimore et al*, 83 F.Supp.2d 613, 620 (D. Md. 2000) ("*Baltimore I*").

[55] *W.H. Scott Construction Co., Inc. v. City of Jackson*, 199 F.3d 206, 215 n.9 (5th Cir. 1999); *Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Engineering Contractors* ("*Engineering Contractors II*"), 122 F.3d 895, 907-910 (11th Cir. 1997); *Concrete Works, Inc. v. City and County of Denver ("Concrete Works II")*, 36 F.3d 1513, 1519 (10th Cir. 1994); *Contractors Association of Eastern Pennsylvania v. City of*

The Fourth Circuit recently applied intermediate scrutiny in striking down the inclusion of White women in North Carolina's program for State-funded highway subcontracts. While gender-conscious measures may rest on "something less" than the "strong basis in evidence" needed for race-conscious relief, the program must still be based on an "evidence-informed analysis" rather than stereotypes or assumptions.[56] The State's disparity study established that women were substantially overutilized on its subcontracts, and such utilization was statistically significant. While it was probative that the value of the subcontracts won by women was only one-third that of white males and that the utilization of WBEs declined significantly during the Program's suspension, this evidence did not overcome the statistical results. The private sector evidence presented by the Study did not cure this deficiency because no test for statistical significance was performed.[57] Nor did the Study present anecdotal evidence indicating the extent to which WBEs competing on public sector contracts also sought work on private sector contracts or that they faced discrimination in the private sector; to the contrary, "the anecdotal evidence indicates that most women subcontractors in North Carolina do not experience discrimination."[58]

4. Burdens of Production and Proof

In cases challenging the constitutionality of race- or gender-conscious procurement measures, the defendant has the initial burden of producing evidence to support the program. The plaintiff must then proffer evidence to rebut the government's case, and bears the ultimate burden of production and persuasion that the affirmative action program is unconstitutional.[59] The Fourth Circuit has held that "[w]hen a plaintiff alleges…that a statute violates the Equal Protection Clause, not only as applied, but also on its face, the plaintiff bears a heavy burden."[60] Facial challenges are particularly disfavored.[61] There is no need of formal legislative findings,[62] nor "an ultimate judicial finding of discrimination before [a local government] can take affirmative steps to eradicate discrimination."[63] When the statistical information is sufficient to support the inference of discrimination, the plaintiff must prove that the statistics are flawed.[64] "[M]ere speculation that the state's evidence is insufficient or methodologically flawed does not suffice

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Philadelphia ("Philadelphia II"), 6 F.3d 990, 1009 (3rd Cir, 1993); *Coral Construction Co. v. King County*, 941 F.2d 910, 930-931 (9th Cir. 1991); *Associated Utility Contractors of Maryland, Inc. v. Baltimore*, 83 F.Supp 2d 613 (D. Md. 2000) (*"Baltimore I"*); *but see Brunet v. City of Columbus*, 1 F.3d 390, 404 (6th Cir. 1993) (applying strict scrutiny).

[56] *Rowe*, 615 F.3d at 242.

[57] This is not the case with the private sector evidence in this study for Maryland. *See* Chapters V, VI, and VIII, *infra*.

[58] *Rowe*, 615 F.3d. at 256.

[59] *Adarand VII*, 228 F.3d at 1166; *Scott*, 199 F.3d at 219.

[60] *Rowe*, 615 F.3d at 242.

[61] *Id*.

[62] *Webster v. Fulton County, Georgia*, 51 F.Supp2d 1354, 1364 (N.D. Ga. 1999), *aff'd,* 218 F.3d 1267 (2000), *cert. denied*, 532 U.S. 942 (2001).

[63] *Concrete Works II*, 36 F.3d at 1522.

[64] *Engineering Contractors II*, 122 F.3d at 916; *Coral Construction,* 941 F.2d at 921.

to rebut a state's showing."[65] A plaintiff cannot rest upon general criticisms of studies or other evidence; it must carry the case that the government's proof is inadequate to meet strict scrutiny, rendering the legislation or governmental program illegal.[66] "Simply testifying that other methods of analyses existed, is insufficient to invalidate those analyses relied upon by [the agency]."[67]

The determination whether a plaintiff has met this burden is a question of law, subject to *de novo* review.[68]

B. Maryland's Compelling Interest in Remedying Identified Discrimination in Its Contracting Marketplaces

Much of the discussion in the case law has revolved around what type of evidence is sufficiently "strong" to establish the continuing existence and effects of economic discrimination against minorities resulting in diminished opportunities to do business with the government. Proof of the disparate impacts of economic factors on M/WBEs and the disparate treatment of such firms by actors critical to success is necessary to meet strict scrutiny. Discrimination must be shown using statistics and economic models to examine the effects of systems or markets on different groups, as well as by evidence of personal experiences with discriminatory conduct, policies or systems.[69] Specific evidence of discrimination or its absence may be direct or circumstantial, and should include economic factors and opportunities in the private sector affecting the success of M/WBEs.[70]

1. Definition of Maryland Market Area

Croson counsels that a state government may only remedy discrimination within its own contracting market area. Richmond was specifically faulted for including minority contractors from across the country in its program.[71] Therefore, this Study employs long established

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[65] *Rowe*, 615 F.3d at 242.

[66] *Adarand VII*, 228 F.3d at 1166; *Engineering Contractors II*, 122 F.3d at 916; *Contractors Association of Eastern Pennsylvania v. City of Philadelphia ("Philadelphia III")*, 91 F.3d 586, 597 (3rd Cir. 1996); *Concrete Works II*, 36 F.3d at 1522 1523; *Webster*, 51 F. Supp. 2d at 1364; *see also Wygant v. Jackson Board of Education*, 476 U.S. 267, 277-278 (1986).

[67] *GEOD Corp v. New Jersey Transit Corp*, Civil Action No. 2:04-cv-2425, slip op. at 20 (D. N.J. Oct. 19, 2010).

[68] *Rowe*, 615 F.3d at 241, fn. 5 ("Like many of our sister circuits, we will review *de novo*, rather than for clear error, the district court's ultimate determination that the underlying facts demonstrate a "strong basis in evidence."); *see*, *e.g.*, *Concrete Works of Colorado, Inc. v. City and County of Denver,* 321 F.3d 950, 958, *cert. denied*, 540 U.S. 1027 (2003) (10th Cir. 2003) ("*Concrete Works IV")*; *Adarand VII*, 228 F.3d at 1161; *Associated General Contractors of Ohio v. Drabik*, 214 F.3d 730, 734 (6th Cir. 2000); *Scott*, 199 F.3d at 211; *but see Engineering Contractors II*, 122 F.3d at 917 (meeting constitutional test is a question of fact, subject only to appellate review for abuse of discretion).

[69] *Adarand VII*, 228 F.3d at 1166 ("statistical and anecdotal evidence are appropriate").

[70] *Id*.

[71] 488 U.S. at 508.

economic principles to empirically establish the geographic and industry dimensions of the State's contracting marketplace in order to ensure that the evidence is narrowly tailored.[72]

2. Examining Disparities between M/WBE Availability and Utilization

Next, statistical examination of the availability of minorities and women to participate in Maryland's projects and the history of utilizing M/WBEs as prime contractors and utilizing M/WBEs as subcontractors by the State and its prime contractors is required. Simple disparities between Maryland's overall minority population and the State's and its prime contractors' utilization of minority- and women-owned firms are not enough.[73] The primary inquiry is whether there are statistically significant disparities between the availability of M/WBEs and the utilization of such firms.

> Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise.…In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion.[74]

This is known as the "disparity index" or "disparity ratio." This index is calculated by dividing the utilization of M/WBEs by the availability of M/WBEs. Courts have looked to disparity indices in determining whether *Croson's* evidentiary foundation is satisfied.[75] An index less than 100 percent indicates that a given group is being utilized less than would be expected based on its availability; this is often called a "substantive" or "large" disparity. A "disparity index lower than 80 percent [is] an indication of discrimination."[76]

The most recent example is *H.B. Rowe Co., Inc. v. Tippett*, where the Fourth Circuit specifically recognized the "utility of the disparity index" in upholding the North Carolina Department of Transportation's ("NCDOT") M/WBE program for State-funded highway subcontracts.[77] The State's Study calculated a disparity index for each racial group and for women, by comparing NCDOT's utilization of MBEs and WBEs to their availability on a vendor listing. There were large disparities for all groups except White women, who were "overutilized". The statistical significance of those results was tested by conducting a standard deviation analysis through the use of t-tests, which describes the probability that the disparity, while substantive, is the result of

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[72] *Concrete Works II*, 36 F.3d at 1520 (to confine data to strict geographic boundaries would ignore "economic reality").

[73] *Croson*, 488 U.S. at 501-02; *Drabik*, 214 F.3d at 736.

[74] *Croson*, 488 U.S. at 509*; see Webster*, 51 F.Supp.2d at 1363, 1375.

[75] *Scott*, 199 F.3d at 218; *Concrete Works II*, 36 F.3d at 1526-1527; *O'Donnell Construction Co., Inc, v. District of Columbia*, 963 F.2d 420, 426 (D.C. Cir. 1992); *Cone Corp. v. Hillsborough County*, 908 F.2d 908, 916 (11th Cir. 1990), *cert. denied*, 498 U.S. 983 (1990).

[76] *H.B Rowe Co., Inc v. Tippett*, 615 F.3d 233, 243(4th Cir. 2010).

[77] *Id*. at 243-44.

pure chance. The t-test results demonstrated that the underutilization of African-American-owned firms was statistically significant at the 95 percent confidence level and the underutilization of Native-American-owned firms was statistically significant at the 85 percent confidence level. The t-values for Hispanics and Asians demonstrated significance at the 60 percent confidence level. To corroborate the disparity data, the Study conducted a regression analysis to study the influence of certain business characteristics, as established by a telephone survey. This analysis revealed that minority and women ownership universally had a negative effect on revenue, with the largest negative effect being ownership by African American. On average, non-minority male subcontractors won more valuable awards than MBEs and WBEs. The Study concluded that disparities in firm revenue were not the result of capacity-related or managerial characteristics alone.[78] These statistical results were key to the holding that portions of the North Carolina program met the compelling interest prong of strict scrutiny.

Further, in upholding Denver's M/WBE Program, the Tenth Circuit noted that strong evidence supporting Denver's determination that remedial action was necessary need not have been based upon "irrefutable or definitive" proof of discrimination. Statistical evidence creating inferences of discriminatory motivations was sufficient and therefore evidence of marketplace discrimination was properly used to meet strict scrutiny. Thus, Maryland need not prove that the statistical inferences of discrimination are "correct." Rather, it is the plaintiff who must prove by a preponderance of the evidence that such proof does not support those inferences.[79]

It is also the case that if M/WBEs are overutilized under the State's program, that does not end the inquiry. This is critical for a government like the State of Maryland, which has implemented a program for many years. Where the government has been implementing affirmative action remedies, M/WBE utilization reflects those efforts; it does not necessarily signal the end of discrimination. For example, the Tenth Circuit held that Denver's overutilization of M/WBEs on City projects with goals went only to the weight of the evidence because it reflected the effects of a remedial program. Denver presented evidence that goals and non-goals projects were similar in purpose and scope and that the same pool of contractors worked on both types. "Particularly persuasive" was evidence that M/WBE participation declined significantly when the program was amended in 1989. "The utilization of M/WBEs on City projects has been affected by the affirmative action programs that have been in place in one form or another since 1977. Thus, the non-goals data is [sic] the better indicator of discrimination in public contracting" and supports the position that discrimination was present before the enactment of the ordinances.[80]

3. Unremediated Markets Data

It is also useful to measure M/WBE participation in the absence of affirmative action goals, if such evidence is available. Evidence of race and gender discrimination in relevant

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[78] *Id*, at 245-46.

[79] *Concrete Works IV"* at 970-71.

[80] *Id*. at 987-988.

"unremediated"[81] markets provides an important indicator of what level of actual M/WBE participation can be expected in the absence of government mandated affirmative efforts to contract with M/WBEs.[82] If M/WBE utilization is below availability in unremediated markets, an inference of discrimination may be supportable. The virtual disappearance of M/WBE participation after programs have been enjoined or abandoned strongly indicates substantial barriers to minority subcontractors, "raising the specter of racial discrimination."[83] The results of non-goals contracts can help to demonstrate that, but for the interposition of remedial affirmative action measures, discrimination would lead to disparities in government contracting. The "dramatic decline in the use of M/WBEs when an affirmative action program is terminated, and the paucity of use of such firms when no affirmative action program was ever initiated," has been held to be proof of the government's compelling interest in employing race- and gender-conscious measures.[84] Evidence of unremediated markets "sharpens the picture of local market conditions for MBEs and WBEs."[85]

The Fourth Circuit applied these principles in upholding the M/WBE program in *Rowe*. The court took note of the drastic drop in the participation of these groups as a result of the suspension of the North Carolina program. "[T]he very significant decline in utilization of minority and women subcontractors– nearly 38 percent– surely provides a basis for a fact finder to infer that discrimination played some role in prime contractors' reduced utilization of these groups during the suspension.… Such an inference is particularly compelling for minority-owned businesses because, even during the 2004 study period, prime contractors continued to underutilize them on state-funded road projects." [86]

4. Anecdotal Evidence

Anecdotal evidence of experiences with discrimination in contracting opportunities is relevant because it goes to the question of whether observed statistical disparities are due to discrimination and not to some other non-discriminatory cause or causes.[87] As observed by the Supreme Court, anecdotal evidence presented in a pattern or practice discrimination case can be persuasive because it "brought the cold [statistics] convincingly to life."[88] Testimony about discrimination by prime contractors, unions, bonding companies, suppliers, and lenders has been found relevant regarding barriers both to minority subcontractors' business formation and to their

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[81] "Unremediated market" means "markets that do not have race- or gender-conscious subcontracting goals in place to remedy discrimination." *Northern Contracting II*, at *36.

[82] *See, e.g., Western States*, 407 F.3d at 992 (Congress properly considered evidence of the "significant drop in racial minorities' participation in the construction industry" after state and local governments removed affirmative action provisions).

[83] *Adarand VII*, 228 F.3d at 1174.

[84] *Builders Association v. Chicago*, 298 F. Supp.2d at 737; *see also Concrete Works IV*, 321 F.3d at 985.

[85] *Concrete Works II*, 36 F.3d at 1529.

[86] *Rowe*, 615 F.3d at 247-48.

[87] *Webster*, 51 F.Supp.2d at 1363, 1379.

[88] *International Brotherhood of Teamsters v. United States*, 431 U.S. 324, 399 (1977).

success on governmental projects.[89] "As [the Fourth Circuit's] precedents make clear, anecdotal evidence simply supplements statistical evidence of discrimination."[90] While anecdotal evidence is insufficient standing alone, "[p]ersonal accounts of actual discrimination or the effects of discriminatory practices may, however, vividly complement empirical evidence. Moreover, anecdotal evidence of a [government's] institutional practices that exacerbate discriminatory market conditions are [sic] often particularly probative."[91] "[W]e do not set out a categorical rule that every case must rise or fall entirely on the sufficiency of the numbers. To the contrary, anecdotal evidence might make the pivotal difference in some cases; indeed, in an exceptional case, we do not rule out the possibility that evidence not reinforced by statistical evidence, as such, will be enough."[92]

The Fourth Circuit found anecdotal evidence from a telephone survey, personal interviews and focus groups to be relevant and probative of whether North Carolina met its burden in *Rowe*. A telephone survey conducted by the consultant resulted in strong evidence of discriminatory treatment of both African American and Native American firms including: discriminatory "good old boy networks;" double standards applied to both qualifications and performance; changes in bids when not required to use minority firms; and dropping minority subcontractors after winning contracts. Focus group and interview results confirmed these findings. As the court summarized:

> The surveys in the 2004 study exposed an informal, racially exclusive network that systemically disadvantaged minority subcontractors. The State could conclude with good reason that such networks exert a chronic and pernicious influence on the marketplace that calls for remedial action.… [M]ajorities of African American and Native American respondents agreed that prime contractors have higher standards for minority subcontractors, view minority subcontractors as being less competent than nonminority businesses, change their bidding practices when not required to hire minority subcontractors, and drop minority subcontractors after winning contracts. Together, these responses suggest strongly that the underutilization of African American and Native American subcontractors is more than a mere byproduct of misguided yet color-blind cronyism. Rather, they indicate that racial discrimination is a critical factor underlying the gross statistical disparities presented in the 2004 study.[93]

The *Rowe* court specifically rejected the notion that anecdotal testimony must be "verified" or corroborated, as befits the role of evidence in legislative decision-making as opposed to judicial proceedings. "Plaintiff offers no rationale as to why a fact finder could not rely on the State's "unverified" anecdotal data. Indeed, a fact finder could very well conclude that anecdotal evidence need not– indeed cannot– be verified because it 'is nothing more than a witness' narrative of an incident told from the witness' perspective and including the witness'

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[89] *Adarand VII*, 228 F.3d at 1168-1172.

[90] *Rowe*, 615 F.3d at 248.

[91] *Concrete Works II*, 36 F.3d at 1520.

[92] *Engineering Contractors II*, 122 F.3d at 926.

[93] *Rowe*, 615 F.3d at 251.

perception.'"[94] Likewise, the Tenth Circuit held that "Denver was not required to present corroborating evidence and [plaintiff] was free to present its own witnesses to either refute the incidents described by Denver's witnesses or to relate their own perceptions on discrimination in the Denver construction industry."[95]

C. Narrowly Tailoring a Minority-Owned and Women-Owned Business Enterprise Procurement Program for the State of Maryland

The law has evolved to provide guidance on narrow tailoring in the contracting context. The cases make clear that states should consider all of the following factors:

- The efficacy of race-neutral remedies at overcoming identified discrimination;
- The relationship of numerical benchmarks for government spending to the availability of M/WBEs and to subcontracting goal setting procedures;
- The flexibility of the program requirements, including the provision for good faith efforts to meet goals and contract specific goal setting procedures;
- The congruence between the remedies adopted and the beneficiaries of those remedies;
- Any adverse impact of the relief on third parties; and
- The duration of the program.[96]

The Fourth Circuit has "identified the following factors as relevant in evaluating whether a state statute is narrowly tailored:

> (1) the necessity of the policy and the efficacy of alternative race neutral policies; (2) the planned duration of the policy; (3) the relationship between the numerical goal and the percentage of minority group members in the relevant population; (4) the flexibility of the policy, including the provision of waivers if the goal cannot be met; and (5) the burden of the policy on innocent third parties."[97]

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[94] *Id.* at 249.

[95] *Concrete Works IV*, 321 F.3d at 989.

[96] *See, e.g., United States v. Paradise*, 480 U.S. 149, 171 (1987); *Sherbrooke*, 345 F.3d at 971-972; *Drabik*, 214 F.3d at 737-738.

[97] *Rowe*, 615 F.3d at 252.

1. Race- and Gender-Neutral Remedies

Race- and gender-neutral approaches have become a necessary component of a defensible and effective M/WBE program.[98] Such measures include unbundling of contracts into smaller units, providing technical support, and addressing issues of financing, bonding, and insurance important to all small and emerging businesses.[99] In *Rowe*, the court observed that North Carolina "has undertaken most of the race-neutral alternatives identified" in 49 C.F.R. Part 26.[100] The court specifically noted North Carolina's Small Business Enterprise Program for contracts less than $500,000 and supportive services initiatives for M/WBEs (*e.g.*, assistance with accounting, taxes, marketing, bidding, etc.) as permissible approaches.[101] Other measures include addressing difficulty in accessing procurement opportunities, restrictive bid specifications, excessive experience requirements, and overly burdensome insurance and/or bonding requirements without resort to using race or gender in decision-making. Further, governments have a duty to ferret out and punish discrimination against minorities and women by their contractors, staff, lenders, bonding companies or others.[102] At a minimum, entities must track the utilization of M/WBE firms as a measure of their success in the bidding process, including as subcontractors.[103]

However, strict scrutiny does not require that every race-neutral approach must be implemented and then proven ineffective before race-conscious remedies may be utilized.[104] While an entity must give good faith consideration to race-neutral alternatives, "strict scrutiny does not require exhaustion of every possible such alternative…however irrational, costly, unreasonable, and unlikely to succeed such alternative might be…. [s]ome degree of practicality is subsumed in the exhaustion requirement."[105]

If disparities persist even in the presence of race-neutral remedies, a race-conscious approach is justified. "Despite [North Carolina's] race-neutral efforts, the 2004 study demonstrated that disparities continue to exist in the utilization of African American and Native American subcontractors in state-funded highway construction subcontracting. These persistent disparities indicate the necessity of a race-conscious remedy."[106]

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[98] *Croson*, 488 U.S. at 507 (Richmond considered no alternatives to race-based quota); *Drabik*, 214 F.3d at 738; *Philadelphia III*, 91 F.3d at 609 (City's failure to consider race-neutral alternatives was particularly telling); *Webster*, 51 F.Supp.2d at 1380 (for over 20 years County never seriously considered race-neutral remedies).

[99] *See* 49 C.F.R. § 26.51.

[100] *Rowe*, 615 F.3d at 252 (emphasis in the original).

[101] *Id*.

[102] *Croson*, 488 U.S. at 503 n.3; *Webster*, 51 F.Supp.2d at 1380.

[103] *See, e.g.*, *Virdi v. DeKalb County School District*, 2005 U.S. App. LEXIS 11203 at n.8 (11th Cir. June 13, 2005).

[104] *Grutter*, 529 U.S. at 339; *cf. Rowe*, 615 F.3d at 252.

[105] *Coral Construction*, 941 F.2d at 923.

[106] *Rowe*, 615 F.3d at 252-253.

2. Goal Setting

Numerical goals or benchmarks for M/WBE participation must be substantially related to their availability in the relevant market. It is settled case law that contract specific goals should reflect the particular scopes of work of the contract, not reiterate annual aggregate targets. For example, in the second challenge to Baltimore's M/WBE Program by the Associated Utility Contractors, the court specifically noted that the 2000 ordinance, in contrast to an earlier program struck down as unconstitutional, specifically requires that goals be set on a contract-by-contract and craft-by-craft basis.[107] Likewise, the Fourth Circuit has held that a program that ties its goals to the availability of M/WBEs can be narrowly tailored.

> The State has also demonstrated that the Program's participation goals are related to the percentage of minority subcontractors in the relevant markets in the State. [Citation omitted] The Department has taken concrete steps to ensure that these goals accurately reflect the availability of minority-owned businesses "on a project-by-project basis."… [T]his goal-setting process does not mechanically require minority participation.[108]

One unanswered question is whether goals or benchmarks for overall agency contracting may be set higher than estimates of actual current availability. To freeze the goals at current head counts would set the results of discrimination — depressed M/WBE availability — as the marker of the elimination of discrimination. It therefore should be reasonable for the government to seek to attempt to level the racial and gender playing field by setting targets somewhat higher than current headcount. For example, 49 C.F.R. Part 26[109] requires recipients to determine the availability of DBEs in their marketplaces absent the presence of discrimination, that is, "but for" discrimination.[110] In upholding the DBE regulations, the Tenth Circuit stated that

> because Congress has evidence that the effects of past discrimination have excluded minorities from the construction industry and that the number of available minority subcontractors reflects that discrimination, the *existing* percentage of minority-owned businesses is not necessarily an absolute cap on the percentage that a remedial program might legitimately seek to achieve. Absolute proportionality to overall demographics is an unreasonable goal. However, *Croson* does not prohibit setting an aspirational goal above the current percentage of minority-owned businesses that is substantially below the percentage of minority persons in the population as a whole. This aspirational goal is reasonably construed as narrowly tailored to remedy past discrimination that has resulted in homogenous ownership within the industry. It is reasonable to conclude that allocating more than 95% of all federal contracts to enterprises owned by non-minority persons, or more than 90% of federal transportation contracts to enterprises owned by non-minority

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[107] *Associated Utility Contractors of Maryland, Inc. v. Mayor and City Council of Baltimore*, 218 F.Supp.2d 749, 751-52 (D. Md. 2002) (*"Baltimore II"*).

[108] *Rowe*, 615 F.3d at 253.

[109] 49 C.F.R. Part 26 governs Maryland's receipt of U.S. Department of Transportation funds.

[110] 49 C.F.R. § 26.45.

> males, is in and of itself a form of passive participation in discrimination that Congress is entitled to seek to avoid. *See Croson*, 488 U.S. at 492 (Op. of O'Connor, J.).[111]

At least one court has recognized that goal setting is not an absolute science. In holding the DBE regulations to be narrowly tailored, the Eighth Circuit noted that "[t]hough the underlying estimates may be inexact, the exercise requires the States to focus on establishing realistic goals for DBE participation in the relevant contracting markets. This stands in stark contrast to the program struck down in *Croson.*"[112]

Goals can be set at various levels of particularity and participation. The entity may set an overall, aspirational goal for its annual, aggregate spending. Specific projects must be subject to subcontracting goals based upon availability of M/WBEs to perform the anticipated scopes of subcontracting. "[P]articipation goals are related to the percentage of minority subcontractors in the relevant markets in the State."[113] Not only is this legally mandated,[114] but this approach also reduces the need to conduct good faith efforts reviews as well as the temptation to create "front" companies and sham participation to meet unreasonable contract goals.

3. Flexibility of Goals and Requirements

It is imperative that remedies not operate as fixed quotas. An M/WBE program must provide for contract awards to firms who fail to meet the subcontracting goals but make good faith efforts to do so. Further, firms who meet the goals cannot be favored over those who made good faith efforts. In *Croson*, the Court refers approvingly to the contract-by-contract waivers used in the USDOT's DBE program.[115] This feature has been central to the holding that the DBE program is narrowly tailored.[116]

The flexibility of North Carolina's M/WBE program was a key factor in the court's holding that it met the narrow tailoring requirement.

> [T]he flexibility of the statutory scheme is also a significant indicator of narrow tailoring. The Program contemplates a waiver of project-specific goals when prime contractors make good faith efforts to meet those goals. [Citation omitted] Good faith efforts essentially require only that the prime contractor solicit and consider bids from minorities. The State does not require or expect the prime contractor to accept any bid from an unqualified bidder, or any bid that is not the lowest bid. Moreover, prime

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[111] *Adarand VII*, 228 F.3d at 1181 (emphasis in the original).

[112] *Sherbrooke,* 345 F.3d at 972.

[113] *Rowe*, 615 F.3d at 253.

[114] *See Sherbrooke*, 345 F.3d at 972; *Coral Construction*, 941 F.2d at 924.

[115] 488 U.S. at 508; *see also Adarand VII*, 228 F.3d at 1181.

[116] *See*, *e.g.*, *Sherbrooke*, 345 F.3d at 972.

contractors can bank any excess minority participation for use against future goals over the following two years.[117]

4. Program Over-inclusiveness and Under-inclusiveness

The over- or under-inclusiveness of those persons to be included in any program is an additional consideration, and goes to whether the remedies truly target the evil identified.[118] The "fit" between the problem and the remedy manifests in three ways: which groups to include, how to define those groups, and which persons will be eligible to be included within those groups.

The groups to include must be based upon the evidence.[119] The "random inclusion" of ethnic or racial groups that may never have experienced discrimination in the entity's marketplace may indicate impermissible "racial politics."[120] Similarly, the Seventh Circuit, in striking down Cook County's program, remarked that a "state or local government that has discriminated just against blacks may not by way of remedy discriminate in favor of blacks and Asian-Americans and women."[121] However, at least one court has held some quantum of evidence of discrimination for each group is sufficient; *Croson* does not require that each group included in the ordinance suffer equally from discrimination.[122]

Therefore, remedies should be limited to those firms that have suffered actual harm. The Fourth Circuit has stated that goals should be set only for those groups shown to have suffered discrimination in the market area; a program that limits relief to the racial or ethnic groups that have suffered discrimination in the agency's market area and have been adversely affected in their ability to obtain agency contracts will meet this element of narrow tailoring.[123] Similarly, the DBE Program's rebuttable presumptions of social and economic disadvantage have been central to the courts' holdings that it is narrowly tailored,[124] and anyone can challenge the disadvantaged status of any firm.[125]

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[117] *Rowe*, 615 F.3d at 253-254.

[118] *See Association for Fairness in Business, Inc. v. New Jersey*, 82 F.Supp.2d 353, 360 (D.N.J. 2000).

[119] *Philadelphia II*, 6 F.3d at 1007-1008 (strict scrutiny requires data for each minority group; data was insufficient to include Hispanics, Asians or Pacific Islanders or Native Americans).

[120] *Webster*, 51 F.Supp.2d at 1380–1381.

[121] *BAGC v. Cook County*, 256 F.3d 642, 646 (7th Cir. 2001).

[122] *Concrete Work IV*, 321 F.3d at 971.

[123] *Rowe*, 615 F.3d at 254 ("[T]he statute contemplates participation goals only for those groups shown to have suffered discrimination. As such, North Carolina's statute differs from measures that have failed narrow tailoring for overinclusiveness.").

[124] *Sherbrooke*, 345 F.3d at 973; *see also Grutter*, 539 U.S. at 341; *Adarand VII*, 228 F.3d at 1183-1184 (personal net worth limit is element of narrow tailoring); *cf. Associated General Contractors v. City of New Haven*, 791 F.Supp. 941, 948 (D. Conn. 1992), *vacated on other grounds,* 41 F.3d 62 (2nd Cir. 1992) (definition of "disadvantage" was vague and unrelated to goal).

[125] 49 C.F.R. §26.87.

The level of specificity at which to define beneficiaries is a policy question. Approaches range from a single M/WBE or DBE goal that includes all racial and ethnic minorities and nonminority women,[126] to separate goals for each minority group and women.[127] We note, however, that Ohio's Program was specifically faulted for lumping together all "minorities," with the court questioning the legitimacy of forcing African American contractors to share relief with recent Asian immigrants.[128]

5. Sharing of the Burden by Third Parties

Failure to make "neutral" changes to contracting and procurement policies and procedures that disadvantage M/WBEs and other small businesses may result in a finding that the program unduly burdens non-M/WBEs.[129] However, "innocent" parties can be made to share some of the burden of the remedy for eradicating racial discrimination.[130] Burdens must be proven, and cannot constitute mere speculation by a plaintiff.[131] "Implementation of the race-conscious contracting goals for which TEA-21 provides will inevitably result in bids submitted by non-DBE firms being rejected in favor of higher bids from DBEs. Although this places a very real burden on non-DBE firms, this fact alone does not invalidate TEA-21. If it did, all affirmative action programs would be unconstitutional because of the burden upon non-minorities."[132]

6. Duration and Review of Programs

"Narrow tailoring also implies some sensitivity to the possibility that a program might someday have satisfied its purposes."[133] The USDOT DBE Program's periodic review by Congress has been repeatedly held to provide adequate durational limits.[134] "[T]wo facts [were] particularly compelling in establishing that [North Carolina's M/WBE program] was narrowly tailored: the

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[126] *See* 49 C.F.R. §26.45(h) (overall goal must not be subdivided into group-specific goals).

[127] *See Engineering Contractors II*, 122 F.3d at 900 (separate goals for Blacks, Hispanics and women).

[128] *Drabik*, 214 F.3d at 737; *see also Western States*, 407 F.3d at 998 ("We have previously expressed similar concerns about the haphazard inclusion of minority groups in affirmative action program ostensibly designed to remedy the effects of discrimination.").

[129] *See Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Dade County* ("*Engineering Contractors I*"), 943 F.Supp. 1546, 1581-1582 (S.D. Fla. 1996) (County chose not to change its procurement system).

[130] *Concrete Works IV*, 321 F.3d at 973; *Wygant*, 476 U.S. at 280-281; *Adarand VII*, 228 F.3 at 1183 ("While there appears to be no serious burden on prime contractors, who are obviously compensated for any additional burden occasioned by the employment of DBE subcontractors, at the margin, some non-DBE subcontractors such as *Adarand* will be deprived of business opportunities"); *cf. Northern Contracting II*, at *5 ("Plaintiff has presented little evidence that is [sic] has suffered anything more than minimal revenue losses due to the program.").

[131] *Rowe*, 615 F.3d at 254 (prime bidder had no need for additional employees to perform program compliance and need not subcontract work it can self-perform).

[132] *Western States*, 407 F.3d at 995.

[133] *Drabik*, 214 F.3d at 737.

[134] *See Western States*, 407 F.3d at 995.

statute's provisions (1) setting a specific expiration date and (2) requiring a new disparity study every 5 years."[135]

Conversely, it was the unlimited duration and lack or review that led to the City of Augusta, Georgia's DBE program's being enjoined,[136] as well as one factor in the court's holding that the City of Chicago's M/WBE Program was no longer narrowly tailored.[137]

D. Table of Authorities

1. Cases

Associated General Contractors, Inc. v. Coalition for Economic Equity, 950 F.2d 1401 (9th Cir. 1991).

Adarand Constructors, Inc. v. Peña, 515 U.S. 200 (1995) ("*Adarand III*").

Adarand Constructors, Inc. v. Peña, 965 F. Supp. 1556 (D. Colo. 1997), *rev'd*, 228 F.3d 1147 (2000) (*"Adarand IV*").

Adarand Constructors, Inc. v. Slater, 228 F.3d 1147 (10th Cir. 2000), *cert. granted then dismissed as improvidently granted*, 532 U.S. 941, 534 U.S. 103 (2001) ("*Adarand VII*").

Associated General Contractors of Ohio v. Drabik, 214 F.3d 730 (6th Cir. 2000).

Association for Fairness in Business, Inc. v. New Jersey, 82 F.Supp.2d 353 (D. N.J. 2000).

Associated General Contractors of Connecticut v. City of New Haven, 791 F.Supp. 941 (D. Conn. 1992).

Associated Utility Contractors of Maryland, Inc. v. Mayor and City Council of Baltimore et al, 83 F.Supp.2d 613 (D. Md. 2000) (*"Baltimore I*").

Associated Utility Contractors of Maryland, Inc. v. Mayor and City Council of Baltimore, 218 F.Supp.2d 749 (D. Md. 2002) (*"Baltimore II*").

Association for Fairness in Business, Inc. v. New Jersey, 82 F.Supp.2d 353 (D. N.J. 2000).

Brunet v. City of Columbus, 1 F.3d 390 (6th Cir. 1993).

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[135] *Rowe*, 615 F.3d at 253.

[136] *Thompson Building Wrecking Co., Inc. v. City of Augusta, Georgia*, 2007 U.S. Dist. Lexis 27127 (S.D. Ga. 2007) at *22-23.

[137] *BAGC v. Chicago*, 298 F.Supp.2d at 739; *see also Webster*, 51 F. Supp. 2d at 1382 (one of Fulton County's telling disqualifiers was that it had been implementing a "quota" program since 1979 with no contemplation of program expiration); *see also Virdi*, at *18 ("unlimited duration of the [District's] racial goals also demonstrates a lack of narrow tailoring.… While the District's effort to avoid unintentional discrimination should certainly be ongoing, its reliance on racial classifications should not.").

Builders Association of Greater Chicago v. City of Chicago, 298 F. Supp.2d 725 (N.D. Ill. 2003).

Builders Association of Greater Chicago v. County of Cook, 256 F.3d 642 (7th Cir. 2001).

City of Richmond v. J.A. Croson Co., 488 U.S. 469 (1989).

Concrete Works of Colorado, Inc. v. City and County of Denver, 36 F.3d 1513 (10th Cir. 2003) ("*Concrete Works II*").

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Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Dade County, 943 F.Supp. 1546 (S.D. Fla. 1996) ("*Engineering Contractors I*").

Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County, 122 F.3d 895 (11th Cir. 1997) ("*Engineering Contractors II*").

GEOD Corp. v. New Jersey Transit Corp., 2009 U.S. Dist. Lexis 74120 (D. N. J. Aug. 20, 2009).

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H. B. Rowe Co. v. Tippett, 615 F.3d 233 (4th Cir. 2010).

International Brotherhood of Teamsters v. United States, 431 U.S. 324, 399 (1977).

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United States v. Paradise, 480 U.S. 149 (1987).

United States v. Virginia, 518 U.S. 515 (1996).

Virdi v. DeKalb County School District, 2005 U.S. App. LEXIS 11203 (11th Cir. 2005).

W.H. Scott Construction Co., Inc. v. City of Jackson, 199 F.3d 206 (5th Cir. 1999).

Webster v. Fulton County, Georgia, 51 F.Supp.2d 1354 (N.D. Ga. 1999).

Western States Paving Co., Inc. v. Washington Department of Transportation, 407 F.3d 983 (9th Cir. 2005), *cert. denied*,126 S.Ct. 1332 (2006).

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2. Statutes

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3. Regulations

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4. Reports

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III. Defining the Relevant Markets

A. Preparing the Master Contract/Subcontract Database

The U.S. Supreme Court in *Croson* indicated that the U.S. Congress' *national* findings of minority business discrimination in construction and related industries were not specific enough, or "narrowly tailored" enough, standing alone, to support an MBE program in the City of Richmond. The first step in our evaluation of M/WBE availability and participation for the State of Maryland must therefore be to define the relevant market area for its Construction, Construction-related Professional Services, Services, and Commodities procurements. Markets have both a geographic and a product, or industry, dimension, both of which are considered.[138] For this Study, we define the State's market area based on its own historical contracting and subcontracting records. We define the geographic market dimension by calculating from zip code data where the majority of the State's contractors and subcontractors are located.

Narrow tailoring also applies to product markets. The extent of disparity may differ from industry to industry just as among geographic locations.[139] Documenting the specific industries that comprise the State's contracting activities and the relative importance of each to contract and subcontract spending is important. A careful product market definition allows for (1) implementation of more narrowly tailored availability estimation methods, (2) contract-level goal-setting, and (3) overall M/WBE availability estimates and annual goals that are a weighted average of underlying industry-level availability estimates, rather than a simple average. The weights used are the proportion of dollars spent within each industry and allow the overall availability measure to be influenced more heavily by availability in those industries where more contracting dollars are spent, and less heavily by availability in those industries where relatively few contracting dollars are spent.

We define the product market dimension by estimating which North American Industrial Classification System (NAICS) codes best describe each identifiable contractor, subcontractor, subconsultant, or supplier in those records.[140] In both cases, the definitions are weighted according to how many dollars were spent with firms from each zip code or NAICS code, respectively, so that locations and industries, respectively, receiving relatively more contracting dollars receive relatively more weight in the estimation of M/WBE availability. Once the geographic and industry parameters of the State's market area have been defined, we can restrict our subsequent analyses to business enterprises and other phenomena within this market area. Restricting our analyses in this manner narrowly tailors our findings to the State's specific market area and contracting circumstances.

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[138] *See*, for example, Areeda, P., L. Kaplow, and A. Edlin (2004).

[139] *See* Wainwright (2000), documenting that, in general, the similarities in the amount of discrimination present in different industries and geographic locations significantly outweighs the differences.

[140] Executive Office of the President, Office of Management and Budget, *North American Industrial Classification system: United States, 2007,* Lanham, MD: Bernan, 2007.

1. State of Maryland Contracting and Procurement

With assistance from the Maryland Department of Transportation, NERA collected contract and purchase order data for the State's Construction; Architecture-Engineering and Other Construction-Related Professional Services ("AE-CRS");[141] Maintenance; Information Technology ("IT"); Services; and Commodities, Supplies, and Equipment ("CSE") contracts that were active between July 1, 2004 and June 30, 2009.[142] Thus, the study period covers State Fiscal Years (SFY) 2005-2009. The six major procurement categories were assigned based on the State's own prime contract data for the study period.

For each contract or purchase order from the study period, we obtained available data from the State including the prime contractor name, address, and telephone number; contract or purchase description; contract or purchase order number; contractor race/ethnicity and gender; contract award or purchase date; total contracted dollar amount; total paid amount; and the state agency or institution of higher education entering into the contract. For subcontractors, we worked with the State to obtain all missing subcontractor information from the relevant prime contractors or vendors. Information collected included subcontractor name and address, subcontractor gender and ethnicity, description of work performed, final award amount, and final amount paid.

We restricted our analysis to State of Maryland contracts and purchase orders of $25,000 or more.[143] During the study period, there were 20,425 such contracts or purchase orders, distributed among the six major procurement categories as follows:

Table 3.A. Distribution of State Prime Contracts and Purchase Orders by Procurement Category

Procurement Category	Number of Contracts	Percentage	Cumulative Percentage
Construction	3,705	18.14	18.14
AE-CRS	1,285	6.29	24.43
Maintenance	2,320	11.36	35.79
IT	916	4.48	40.27
Services	5,307	25.98	66.26
CSE	6,892	33.74	100.00
TOTAL	20,425	100.00	

From Table 3.A, we see that of the 20,425 prime contracts in the study universe, approximately 18 percent were for Construction, 6 percent were for AE-CRS, 11 percent were for Maintenance, 4 percent were for IT, 26 percent were for Services, and 34 percent were for CSE.[144]

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[141] Construction-related professional services includes engineering services, architectural services, construction management services, testing services, environmental consulting services, and other construction-related consulting services.

[142] Thus, the study also includes some contracts that were initiated prior to July 2004 and were still active as of that time.

[143] $25,000 is the Category III Small Procurement threshold pursuant to COMAR 21.05.07.04.

Contracts for CSE typically do not have subcontracting opportunities. Nor is it common to see subcontracting activity on contracts valued at less than $50,000.

[144] The percentages for Maintenance and IT are slightly lower than actual, and those for Services and Goods are slightly higher, due to idiosyncrasies in the contract data provided by the University of Maryland at College Park (UMCP). Unlike the data from the other agencies in the scope of the study, the UMCP data did not include the standard "work category" field from which the major procurement category assignments were made. Major procurement categories were therefore assigned manually by the study team. However, it was generally not possible to distinguish IT or Maintenance contracts from other CSE or Services contracts.

Table 3.B. Distribution of State Prime Contracts and Purchase Orders by Procurement Category and Subcontracting Opportunities

Procurement Category	In the Sample Universe		Total
	No	Yes	
CONSTRUCTION	566	3,139	3,705
	15.28	84.72	100.00
	5.11	33.61	18.14
AE-CRS	218	1,067	1,285
	16.96	83.04	100.00
	1.97	11.42	6.29
MAINTENANCE	742	1,578	2,320
	31.98	68.02	100.00
	6.69	16.90	11.36
IT	585	331	916
	63.86	36.14	100.00
	5.28	3.54	4.48
SERVICES	2,082	3,225	5,307
	39.23	60.77	100.00
	18.78	34.53	25.98
CSE	6,892	0	6,892
	100.00	0.00	100.00
	62.17	0.00	33.74
TOTAL	11,085	9,340	20,425
	54.27	45.73	100.00
	100.00	100.00	100.00

The State has not maintained the records of subcontracting activity during the study period sufficient for the disparity study assessment, particularly in the case of non-M/WBE subcontractors, subconsultants, and suppliers. It was therefore necessary to select a statistically representative sample of the State's prime contracts and purchase orders in the procurement categories of Construction, AE-CRS, Maintenance, IT, and Services to obtain this missing information. Contracts for CSE and contracts valued at under $50,000 were not included in the subcontracting data collection sample since they typically do not have subcontracting opportunities.[145] The distribution of prime contracts and purchase orders into those with and without subcontracting opportunities appears above in Table 3.B.[146]

[145] Additionally, a small number of contracts with foreign firms were excluded from the sample along with a small number of contracts (almost all from University of Maryland College Park) for which a major procurement category could not initially be assigned.

[146] The first row of figures within each major procurement category are the numbers of contracts. The second row contains the row percentages. For example, in Construction, 84.72 percent of contracts were in the sample universe and 15.28 percent were not. The third row contains the column percentages. For example, of the records

The table above shows that 9,340 of the 20,425 State contracts and purchase orders during the study period had subcontracting opportunities. In other words, these contracts and purchase orders were "In the Sample Universe." The remaining 11,085 contracts and purchase orders, the large majority of which were for CSE, were not in the sample universe. This does not mean these contracts were not studied, only that no subcontracting information had to be collected from the prime contractors and vendors for these contracts and purchase orders.

The 9,340 contracts and purchase orders in the sample universe had a total awarded value, according to State records, of $17.61B, and it was from this group of contracts and purchase orders that we drew our sample. We sampled the largest contracts and purchase orders with certainty, and sampled smaller contracts and purchase orders randomly with replacement[147] across state agencies and institutions of higher education. The sample drawn included 2,332 of the 9,340 contracts and purchase orders in the sample universe, or 25 percent of the total; and accounted for $14.48B of $17.61B dollars, or 82 percent of the total.

A comparably sized sample of Commodities contracts, small contracts, and other contracts with a low likelihood of subcontracting activity was created from the remaining 11,085 contracts and purchase orders and included in the final file for analysis. These 11,085 contracts and purchase orders had a total awarded value of $2.02B. Our sample from this group included 2,869 contracts, or 26 percent of the total; and $1.55B, or 77 percent of the total.[148]

The following procurement agencies were represented in the Study:[149]

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in the sample universe, 33.61 percent are in Construction, 11.42 percent are in AE-CRS, 16.90 percent are in Maintenance, 3.54 percent are in IT, 34.53 percent are in Services, and 0.00 percent are in CSE.

[147] "With replacement" means that it is possible for a given purchase order to be included in the sample more than once. In the present context, sampling with replacement has certain desirable statistical properties that sampling without replacement lacks. Thirty-one contracts were included twice, Two contracts were included three times, and one contract was included four times, raising the effective sample size from 2,294 to 2,332.

[148] This sample was drawn with replacement as well. Of 2,687 contracts in the sample 137 were included twice, 18 were included three times, and 3 were included 4 times, bringing the effective sample size to 2,869.

[149] A complete list of State Procurement Agencies subject to State Finance and Procurement Article 14-301 *et seq*, Annotated Code of Maryland, appears below in Appendix B.

Table 3.C. Agencies and Sub-Agencies Included in the Study

Bowie State University
Department of Budget & Management
Coppin State University
Maryland State Department of Education
Maryland Environmental Service
Frostburg State University
Department of General Services
Department of Health & Mental Hygiene
Department of Human Resources
Department of Information Technology
Department of Juvenile Services
Maryland State Lottery Agency
Morgan State University
Department of Maryland State Police
The Department of Public Safety & Correctional Services
Public School Construction Program
Salisbury University
The Maryland Stadium Authority
Towson University
Maryland Department of Transportation – Maryland Aviation Administration
Maryland Department of Transportation – Motor Vehicle Administration
Maryland Department of Transportation – The Secretary's Office
Maryland Department of Transportation – Maryland Port Administration
Maryland Department of Transportation – State Highway Administration
Maryland Department of Transportation – Maryland Transit Administration
Maryland Department of Transportation – Maryland Transportation Authority
University of Baltimore
University of Maryland, Baltimore
University of Maryland, Baltimore County
University of Maryland, College Park
University of Maryland, Eastern Shore
University of Maryland, University College

After an intensive data collection effort and with the assistance of numerous State personnel at the represented agencies, we were ultimately able to obtain the associated subcontract information for 1,864 prime contracts, or 80 percent of all prime contracts sampled, and 19,122 associated subcontracts. The total dollar value of the 1,864 prime contracts, according to State records, was $12.83B, or 85 percent of all dollars in the sample. Dollar values reported by prime contractors did not always match State records exactly. According to prime-reported amounts, the total dollar value of the 1,864 prime contracts was $13.93B. In order to achieve consistency with the subcontract dollar values we collected, we will use prime reported dollar amounts for the remainder of the analyses in this report.

These percentages are sufficiently large to be well representative of the entire universe of contracts and subcontracts being examined for this Study. As mentioned above, we included an additional 2,869 contracts and purchase orders worth $1.54B to represent CSE contracts and contracts under $50,000.

Therefore, the full sample of contracts and subcontracts for the Study contains 4,733 contracts and purchase orders and 19,122 associated subcontracts, with an awarded dollar value of

$15.45B. Upon final inspection, however, 47 of these contracts were deemed unusable and were removed from the sample, leaving 4,686 contracts and purchase orders and 19,056 associated subcontracts, with an awarded dollar value of $15.02B. Two primary reasons caused a contract to be removed as unusable: (1) no work was actually ordered on the contract during the study period or (2) the prime contractor was another public sector entity.

Together, as shown below in Tables 3.1 and 3.2, these 4,686 prime contracts and 19,056 associated subcontracts comprise the Master Contract/Subcontract Database compiled for this Study. Table 3.1 shows total number of prime contracts, subcontracts, and contract dollars awarded during the entire study period, by major procurement category. Table 3.2 shows the total number of prime contracts awarded during each year of the study period and total dollar awards associated with those contracts, by major procurement category. Table 3.3 shows the distribution of contracting and subcontracting activity among the State procurement agencies included in the Study.

B. Geographic Market Definition for Contracting and Procurement

To determine the geographic dimension of the State's contracting and procurement markets, we used the Master Contract/Subcontract Database, as described in the previous section, to obtain the zip codes and thereby the county and state for each contractor and subcontractor identified in our sample. Using this location information, we then calculated the percentage of Maryland contract and subcontract dollars awarded to businesses by state and county during the study period.

As discussed above, the geographic market area is defined as that region which accounts for at least 75 percent of overall contracting and procurement spending by a given government entity. Contractors located within the States of Maryland, Delaware or within the balance of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area (MSA) account for the vast majority of contracting and procurement expenditures by Maryland and its prime contractors during the study period.

As shown in Table 3.4, the overall share of expenditures inside this market area is 86.3 percent of dollars awarded and 82.4 percent of dollars paid. The share is highest for awarded dollars in Services (89.1 percent) and for paid dollars in Construction (86.1 percent). The share is lowest in CSE, both for awarded dollars and paid dollars (62.6 percent for both). For purposes of this Study, we therefore define the primary geographic market area to be the State of Maryland, the State of Delaware, the District of Columbia, and the balance of the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA.[150]

[150] Outside of Maryland and District of Columbia, the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA includes Arlington County, VA; Clarke County, VA; Fairfax County, VA; Fauquier County, VA; Loudoun County, VA; Prince William County, VA; Spotsylvania County, VA; Stafford County, VA; Warren County, VA; Alexandria City, VA; Fairfax City, VA; Falls Church City, VA; Fredericksburg City, VA; Manassas City, VA; Manassas Park City, VA; and Jefferson County, WV.

Within the market area, the geographic distribution of contract and procurement dollars across all procurement categories is shown in the following table.

Table 3.D. Distribution of Prime Contract and Subcontract Award Dollars by State and County, SFY 2005-2009

STATE	COUNTY	AMOUNT	PERCENT	CUMULATIVE PERCENT
MD	Baltimore City	$2,571,571,740	19.81	19.81
MD	Montgomery	$2,520,078,243	19.42	39.23
MD	Baltimore	$2,125,084,341	16.37	55.60
MD	Prince Georges	$1,264,929,842	9.75	65.35
MD	Anne Arundel	$873,424,158	6.73	72.07
MD	Howard	$854,486,747	6.58	78.66
VA	Fairfax	$499,218,591	3.85	82.50
MD	Frederick	$440,764,411	3.40	85.90
MD	Harford	$427,745,209	3.30	89.19
DE	New Castle	$181,852,811	1.40	90.60
MD	Carroll	$148,342,107	1.14	91.74
MD	Wicomico	$124,540,000	0.96	92.70
DC	District of Columbia	$107,822,971	0.83	93.53
MD	Allegany	$98,502,408	0.76	94.29
DE	Kent	$87,090,861	0.67	94.96
MD	Charles	$76,549,670	0.59	95.55
MD	Washington	$72,058,833	0.56	96.10
DE	Sussex	$70,847,267	0.55	96.65
MD	Kent	$58,817,113	0.45	97.10
VA	Arlington	$56,506,454	0.44	97.54
MD	Calvert	$52,148,502	0.40	97.94
VA	Prince William	$50,907,094	0.39	98.33
VA	Loudoun	$44,088,579	0.34	98.67
MD	Garrett	$27,156,848	0.21	98.88
MD	Worcester	$18,276,335	0.14	99.02
Balance (18 counties)		$126,991,848	0.08	100.00

Outside the market area, areas with a significant amount of spending activity included:[151]

CONSTRUCTION

Mecklenburg County, NC
York County, PA
Richmond City, VA
Allegheny County, PA
Montgomery County, PA
New Haven County, CT
Chesapeake City, VA
Lancaster County, PA
Washington County, PA
Frederick County, VA
Chester County, PA and
Chesterfield County, VA

AE-CRS

New York County, NY
Philadelphia County, PA
Mercer County, NJ
Hamilton County, OH
Middlesex County, MA
Cumberland County, PA
Allegheny County, PA and
Montgomery County, PA

MAINTENANCE

Dallas County, TX
Chester County, PA
Allegheny County, PA
York County, PA
Henrico County, VA
Mecklenburg County, NC
Lancaster County, PA and
Cook County, IL

IT

Philadelphia County, PA and
Fulton County, GA

SERVICES

St. Louis County, MO
Montgomery County, PA
Dallas County, TX
Fulton County, GA
Middlesex County, MA
Allegheny County, PA
Cook County, IL
Denver County, CO and
King County, WA

[151] We define "significant" here, somewhat arbitrarily, as counties or countries that accounted for more than approximately 0.25% of total spending among three or more vendors.

CSE

Canada
Burlington County, NJ
Cook County, IL
Middlesex County, MA
Allegheny County, PA
Essex County, NJ
Milwaukee County, WI
Fulton County, GA
Dallas County, TX
Philadelphia County, PA and
Los Angeles County, CA.

C. Product Market Definition for Contracting and Procurement

Using the major procurement categories for each prime contract and the primary NAICS codes assigned by NERA to each prime contractor and subcontractor in the Master Contract/Subcontract Database, we identified the most important Industry Sub-sectors within each contracting and procurement category, as measured by total dollars awarded.[152]

The relevant NAICS codes and their associated dollar weights appear below in Tables 3.5 through 3.10 for Construction, AE-CRS, Maintenance, IT, Services, and CSE, respectively. These six major procurement categories were assigned based on the State's prime contract data for the study period. It is clear from these six tables that, although numerous Industry Sub-sectors play a role in the State's contracting activities, actual contracting and subcontracting opportunities are not distributed evenly among them. The distribution of contract and subcontract dollars is, in fact, highly skewed.

In Construction, for example, we see from Table 3.5 that four Industry Sub-sectors account for almost four-fifths of all contract and subcontract dollars, six Sub-sectors account for 90 percent, and the remaining 10 percent is distributed among 55 additional Industry Sub-sectors. In AE-CRS (Table 3.6), we see an even more concentrated pattern—one Industry Sub-sector (NAICS 541) accounts for almost 95 percent of all contract and subcontract dollars. In Maintenance (Table 3.7), seven Industry sub-sectors together account for almost four-fifths of all contract and subcontract dollars and 13 sub-sectors together account for 90 percent. In IT (Table 3.8), two Industry sub-sectors account for four-fifths of all contract and subcontract dollars and four collectively account for 90 percent. In Services (Table 3.9), seven Industry Sub-sectors collectively account for four-fifths of all contract and subcontract dollars and 11 Sub-sectors together account for 90 percent. In Commodities (Table 3.10), five Sub-sectors account for four-fifths of all contract and subcontract dollars and eight Sub-sectors together account for 90 percent.

Each Industry Sub-sector (three-digit NAICS) identified in Tables 3.5 through 3.10 consists of several more detailed Industry Groups (four-digit NAICS) and Industries (five-digit and six-digit NAICS). Overall, State of Maryland contract and subcontract awards occur in 77 NAICS Industry Sub-sectors, 232 NAICS Industry Groups, and 530 NAICS Industries.

In Construction, State of Maryland contracting and subcontracting occurs across 61 NAICS Industry Sub-sectors, 155 NAICS Industry Groups, and 316 NAICS Industries.

In AE-CRS, State of Maryland contracting and subcontracting occurs across 51 NAICS Industry Sub-sectors, 94 NAICS Industry Groups, and 153 NAICS Industries.

In Maintenance, State of Maryland contracting and subcontracting occurs across 46 NAICS Industry Sub-sectors, 109 NAICS Industry Groups, and 195 NAICS Industries.

In IT, State of Maryland contracting and subcontracting occurs across 24 NAICS Industry Sub-sectors, 45 NAICS Industry Groups, and 62 NAICS Industries.

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[152] Calculations were also made using dollars actually paid (as opposed to dollars awarded) as the measure. The results, not shown here, were very similar.

In Services, State of Maryland contracting and subcontracting occurs across 72 NAICS Industry Sub-sectors, 184 NAICS Industry Groups, and 357 NAICS Industries.

In CSE, State of Maryland contracting and subcontracting occurs across 48 NAICS Industry Sub-sectors, 112 NAICS Industry Groups, and 184 NAICS Industries.

The resulting percentage weights from these NAICS Industries are used in Chapter IV to calculate average M/WBE availability figures for Construction, AE-CRS, Maintenance, IT, Services, and CSE.[153]

Now that the geographic and industry parameters of the State's contracting and procurement market area have been established, we will restrict our subsequent analyses, in Chapter IV and beyond, to business enterprises and other phenomena within this specific market area in order to narrowly tailor our findings to the State's specific contracting circumstances.

[153] After re-normalizing the percentage weights to sum to 100.

D. Tables

Table 3.1. Summary of Master Contract/Subcontract Database: Prime Contracts and Subcontracts by Procurement Category, 2005-2009

CONTRACT CATEGORY	NUMBER OF AWARDED CONTRACTS	NUMBER OF PAID CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
CONSTRUCTION			6,512,849,297	4,742,705,292
Prime Contracts	930	914	3,020,842,607	1,963,952,853
Subcontracts	10,400	9,976	3,492,006,690	2,778,752,439
AE-CRS			1,268,673,125	640,270,266
Prime Contracts	606	589	845,646,539	444,076,785
Subcontracts	2,010	1,867	423,026,586	196,193,481
MAINTENANCE			594,926,095	439,859,821
Prime Contracts	485	460	496,132,743	353,277,944
Subcontracts	826	719	98,793,352	86,581,877
IT			267,775,745	182,739,025
Prime Contracts	228	223	234,642,446	155,394,231
Subcontracts	126	104	33,133,299	27,344,794
SERVICES			5,259,743,333	2,738,216,578
Prime Contracts	1,177	1,152	4,633,160,982	2,217,034,693
Subcontracts	5,694	5,455	626,582,351	521,181,885
CSE			1,116,779,306	1,116,373,901
Prime Contracts	1,260	1,260	1,116,779,306	1,116,373,901
Subcontracts	0	0	0	0
GRAND TOTAL			15,020,746,901	9,860,164,883
Prime Contracts	4,686	4,598	10,347,204,623	6,250,110,407
Subcontracts	19,056	18,121	4,673,542,278	3,610,054,476

Source: NERA calculations from Master Contract/Subcontract Database. Note: Prime Contract dollar amounts are net of subcontract amounts.

Table 3.2. Summary of Master Contract/Subcontract Database: Prime Contracts by State Fiscal Year of Award

PROCUREMENT CATEGORY & YEAR OF AWARD	NUMBER OF AWARDED PRIME CONTRACTS	NUMBER OF PAID PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
CONSTRUCTION				
2005	181	181	846,035,831	805,135,726
2006	236	235	1,262,191,643	1,009,533,320
2007	239	239	1,687,059,271	1,548,100,368
2008	221	213	1,897,902,454	1,244,774,760
2009	53	46	819,660,102	135,161,116
TOTAL	930	914	6,512,849,301	4,742,705,290
AE-CRS				
2005	103	101	448,825,920	207,823,425
2006	110	108	171,373,874	117,195,988
2007	184	180	373,578,405	220,767,324
2008	134	129	151,700,276	55,365,215
2009	75	71	123,194,649	39,118,314
TOTAL	606	589	1,268,673,124	640,270,266
MAINTENANCE				
2005	74	74	133,158,542	117,970,239
2006	113	113	122,753,110	126,278,022
2007	131	129	134,766,451	97,600,642
2008	106	95	141,197,552	79,367,641
2009	61	49	63,050,440	18,643,277
TOTAL	485	460	594,926,095	439,859,821

Table 3.2. Summary of Master Contract/Subcontract Database: Prime Contracts by State Fiscal Year of Award, Cont'd

PROCUREMENT CATEGORY & YEAR OF AWARD	NUMBER OF AWARDED PRIME CONTRACTS	NUMBER OF PAID PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
IT				
2005	34	34	25,276,912	24,679,955
2006	31	30	66,910,075	52,531,559
2007	40	39	106,195,952	53,982,020
2008	73	71	37,400,230	25,223,470
2009	50	49	31,992,576	26,322,021
TOTAL	228	223	267,775,745	182,739,025
SERVICES				
2005	234	232	1,802,614,839	1,447,983,604
2006	247	243	478,600,918	257,841,965
2007	274	267	1,887,430,874	332,826,858
2008	272	265	664,635,644	419,983,431
2009	150	145	426,461,056	279,580,719
TOTAL	1,177	1,152	5,259,743,331	2,738,216,577
CSE				
2005	211	211	266,607,465	266,202,060
2006	277	277	203,833,351	203,833,351
2007	322	322	220,304,846	220,304,846
2008	287	287	247,331,704	247,331,704
2009	163	163	178,701,940	178,701,940
TOTAL	1,260	1,260	1,116,779,306	1,116,373,901
GRAND TOTAL				
2005	837	833	3,522,519,509	2,869,795,009
2006	1,014	1,006	2,305,662,971	1,767,214,205
2007	1,190	1,176	4,409,335,799	2,473,582,058
2008	1,093	1,060	3,140,167,860	2,072,046,221
2009	552	523	1,643,060,763	677,527,387
TOTAL	4,686	4,598	15,020,746,902	9,860,164,880

Source: See Table 3.1.

Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency

PROCUREMENT AGENCY	NUMBER OF AWARDED PRIME CONTRACTS	NUMBER OF PAID PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
CONSTRUCTION	930	914	6,545,121,352	4,775,120,676
BOWIE STATE UNIVERSITY	2	2	488,076	488,076
COPPIN STATE COLLEGE	5	5	1,678,914	1,678,914
DEPT OF EDUCATION	6	6	1,006,292	1,012,292
DEPT OF GENERAL SERVICES	30	28	269,665,483	186,919,546
DEPT OF HEALTH & MENTAL HYG.	9	9	440,924	440,924
DEPT OF JUVENILE SERVICES	1	1	30,000	30,000
DEPT OF PUBLIC SAFETY	24	24	147,458,971	147,236,923
FROSTBURG STATE UNIVERSITY	4	4	971,782	971,782
MD. ENVIRONMENTAL SERVICE	17	17	73,655,850	72,643,431
MARYLAND STADIUM AUTHORITY	7	7	111,874,356	106,912,868
MARYLAND STATE POLICE	1	1	28,599	28,599
MDOT-MD AVIATION ADMIN.	18	18	146,627,925	137,940,405
MDOT-MD PORT ADMINISTRATION	22	22	150,625,142	148,197,961
MDOT-MD STATE HIGHWAY ADMIN.	176	167	2,798,100,819	1,444,270,830
MDOT-MD TRANSIT ADMIN.	19	17	130,703,368	98,683,931
MDOT-MD TRANSPORTATION AUTH.	28	27	479,830,308	229,567,571
MDOT-MD MOTOR VEHICLE ADMIN.	4	4	17,777,383	16,307,948
MORGAN STATE UNIVERSITY	11	11	44,648,647	43,548,821
PUBLIC SCHOOL CONSTR. PROGRAM	318	316	1,631,910,010	1,641,138,837
SALISBURY STATE UNIVERSITY	7	7	382,541	408,353
TOWSON STATE UNIVERSITY	19	19	8,250,976	8,220,107
U OF MD BALTIMORE	91	91	249,743,456	216,865,655
U OF MD BALTIMORE COUNTY	13	13	4,427,178	4,534,901
U OF MD COLLEGE PARK	88	88	241,570,329	233,704,743
U OF MD EASTERN SHORE	6	6	705,160	705,160
UNIVERSITY OF BALTIMORE	4	4	246,808	246,714

Source: See Table 3.1.

Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, cont'd

PROCUREMENT AGENCY	NUMBER OF AWARDED PRIME CONTRACTS	NUMBER OF PAID PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
AE-CRS	606	589	1,268,673,126	640,270,267
BOWIE STATE UNIVERSITY	3	3	164,537	164,537
COPPIN STATE COLLEGE	7	7	395,691	329,780
DEPT OF EDUCATION	3	3	89,023	89,023
DEPT OF GENERAL SERVICES	97	93	22,882,984	16,477,008
DEPT OF HEALTH & MENTAL HYG.	7	7	712,315	712,315
DEPT OF JUVENILE SERVICES	1	1	25,000	25,000
DEPT OF PUBLIC SAFETY	31	30	25,538,321	24,205,528
FROSTBURG STATE UNIVERSITY	7	7	680,586	647,611
MARYLAND ENVIRON.AL SERVICE	52	51	24,101,067	19,340,901
MARYLAND STADIUM AUTHORITY	17	17	11,253,905	10,353,529
MDOT-MD AVIATION ADMIN.	24	23	116,216,425	62,058,726
MDOT-MD PORT ADMINISTRATION	15	15	39,553,627	27,557,066
MDOT-MD STATE HIGHWAY ADMIN.	146	142	584,695,286	193,895,924
MDOT-MD TRANSIT ADMIN.	30	28	178,271,741	78,357,873
MDOT-MD TRANSPORTATION AUTH.	18	17	157,068,207	119,903,707
MDOT-MD MOTOR VEHICLE ADMIN.	3	3	86,988	86,988
MORGAN STATE UNIVERSITY	3	2	1,395,946	1,083,781
PUBLIC SCHOOL CONSTR. PROGRAM	7	7	685,305	661,147
SALISBURY STATE UNIVERSITY	12	12	769,123	767,826
TOWSON STATE UNIVERSITY	17	17	1,515,898	1,512,514
U OF MD BALTIMORE	25	25	41,797,865	39,183,687
U OF MD BALTIMORE COUNTY	3	3	121,763	121,763
U OF MD COLLEGE PARK	66	64	58,858,031	40,952,897
U OF MD EASTERN SHORE	5	5	180,573	180,573
U OF MD UNIVERSITY COLLEGE	1	1	251,000	251,000
UNIVERSITY OF BALTIMORE	6	6	1,361,918	1,349,562

Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, cont'd

PROCUREMENT AGENCY	NUMBER OF AWARDED PRIME CONTRACTS	NUMBER OF PAID PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
MAINTENANCE	485	460	594,955,926	439,889,652
BOWIE STATE UNIVERSITY	8	8	278,340	278,340
COPPIN STATE COLLEGE	1	1	27,000	27,000
DEPT OF EDUCATION	2	2	549,519	549,519
DEPT OF GENERAL SERVICES	95	88	81,464,130	64,492,250
DEPT OF HEALTH & MENTAL HYG.	8	8	297,609	219,080
DEPT OF JUVENILE SERVICES	9	9	597,706	589,137
DEPT OF PUBLIC SAFETY	11	11	346,699	346,699
MARYLAND ENVIRON.AL SERVICE	2	1	282,985	51,027
MARYLAND STADIUM AUTHORITY	4	4	4,014,642	3,225,947
MARYLAND STATE POLICE	81	81	8,416,549	8,416,549
MDOT-MD AVIATION ADMIN.	18	15	155,678,879	93,139,873
MDOT-MD PORT ADMINISTRATION	5	5	1,578,726	1,558,726
MDOT-MD STATE HIGHWAY ADMIN.	124	112	218,437,685	145,589,903
MDOT-MD TRANSIT ADMIN.	18	18	69,909,940	64,747,088
MDOT-MD TRANSPORTATION AUTH.	14	14	1,439,894	1,296,060
MDOT-MD MOTOR VEHICLE ADMIN.	17	16	5,547,375	2,264,953
MDOT-THE SECRETARY'S OFFICE	1	0	1,638,278	0
MORGAN STATE UNIVERSITY	8	8	596,461	580,402
SALISBURY STATE UNIVERSITY	13	13	1,826,907	1,826,907
TOWSON STATE UNIVERSITY	18	18	20,107,327	20,669,672
U OF MD BALTIMORE	15	15	3,559,290	3,559,290
U OF MD BALTIMORE COUNTY	5	5	534,650	500,185
U OF MD COLLEGE PARK	3	3	610,164	610,164
U OF MD UNIVERSITY COLLEGE	1	1	17,056,426	25,192,136
UNIVERSITY OF BALTIMORE	4	4	128,914	128,914

Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, cont'd

PROCUREMENT AGENCY	NUMBER OF AWARDED PRIME CONTRACTS	NUMBER OF PAID PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
IT	228	223	267,827,676	182,790,956
DEPT OF EDUCATION	25	24	6,574,425	2,355,160
DEPT OF GENERAL SERVICES	1	1	2,014,056	2,014,056
DEPT OF HEALTH & MENTAL HYG.	15	15	6,044,635	3,870,863
DEPT OF HUMAN RESOURCES	2	2	16,305,132	16,305,132
DEPT OF INFO. TECHNOLOGY	12	12	43,189,334	19,258,294
DEPT OF JUVENILE SERVICES	13	13	1,838,145	1,838,145
DEPT OF PUBLIC SAFETY	9	9	8,464,742	8,464,742
FROSTBURG STATE UNIVERSITY	6	6	1,408,126	969,917
MARYLAND STADIUM AUTHORITY	2	2	82,399	82,399
MARYLAND STATE POLICE	3	3	111,377	111,377
MDOT-MD PORT ADMINISTRATION	1	1	49,338	49,338
MDOT-MD STATE HIGHWAY ADMIN.	15	14	56,994,821	25,175,125
MDOT-MD TRANSIT ADMIN.	13	12	21,241,881	13,013,933
MDOT-MD MOTOR VEHICLE ADMIN.	8	8	16,656,567	15,835,959
MDOT-THE SECRETARY'S OFFICE	18	16	45,620,079	32,198,104
MORGAN STATE UNIVERSITY	2	2	372,621	372,621
SALISBURY STATE UNIVERSITY	2	2	164,256	164,256
TOWSON STATE UNIVERSITY	8	8	838,388	823,588
U OF MD BALTIMORE COUNTY	19	19	9,088,002	9,088,002
U OF MD COLLEGE PARK	20	20	11,488,849	11,084,326
U OF MD EASTERN SHORE	10	10	1,247,020	1,490,714
U OF MD UNIVERSITY COLLEGE	24	24	17,981,552	18,172,974

Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, cont'd

PROCUREMENT AGENCY	NUMBER OF AWARDED PRIME CONTRACTS	NUMBER OF PAID PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
SERVICES	1,177	1,152	5,222,685,979	2,701,002,374
BOWIE STATE UNIVERSITY	25	25	14,590,405	14,581,293
COPPIN STATE COLLEGE	22	22	7,450,186	7,463,428
DEPT OF BUDGET & MANAGEMENT	24	23	2,499,022,907	931,944,815
DEPT OF EDUCATION	106	103	359,350,025	106,597,776
DEPT OF GENERAL SERVICES	8	7	9,350,383	5,477,283
DEPT OF HEALTH & MENTAL HYG.	152	147	444,619,248	312,994,635
DEPT OF HUMAN RESOURCES	66	61	202,091,511	157,755,431
DEPT OF INFO. TECHNOLOGY	2	2	650,000	379,822
DEPT OF JUVENILE SERVICES	108	107	32,136,209	27,303,973
DEPT OF PUBLIC SAFETY	41	41	292,222,199	271,596,955
FROSTBURG STATE UNIVERSITY	6	6	1,146,166	1,146,166
LOTTERY AGENCY	15	14	184,674,274	59,825,069
MD. ENVIRONMENTAL SERVICE	30	30	10,911,031	9,353,404
MARYLAND STADIUM AUTHORITY	9	9	13,742,429	13,334,234
MARYLAND STATE POLICE	34	34	43,343,440	40,380,926
MDOT-MD AVIATION ADMIN.	20	19	150,481,244	86,123,564
MDOT-MD PORT ADMINISTRATION	18	16	39,978,614	12,006,120
MDOT-MD STATE HIGHWAY ADMIN.	33	33	60,166,414	12,259,463
MDOT-MD TRANSIT ADMIN.	53	51	514,970,126	335,334,741
MDOT-MD TRANSPORTATION AUTH.	5	5	26,410,694	22,134,273
MDOT-MD MOTOR VEHICLE ADMIN.	29	26	69,324,003	41,303,151
MDOT-THE SECRETARY'S OFFICE	6	6	12,901,180	9,757,406
MORGAN STATE UNIVERSITY	10	10	2,077,293	1,981,006
PUBLIC SCHOOL CONSTR. PROGRAM	6	6	73,135,928	71,658,174
SALISBURY STATE UNIVERSITY	12	12	7,995,700	6,181,111
TOWSON STATE UNIVERSITY	30	30	11,904,073	12,083,046
U OF MD BALTIMORE	97	97	64,677,828	59,074,639
U OF MD BALTIMORE COUNTY	49	49	22,715,740	21,888,083
U OF MD COLLEGE PARK	114	114	33,410,951	32,560,081
U OF MD EASTERN SHORE	8	8	347,160	347,160
U OF MD UNIVERSITY COLLEGE	5	5	47,386,562	46,800,113
UNIVERSITY OF BALTIMORE	34	34	6,559,410	6,589,237

Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, cont'd

PROCUREMENT AGENCY	NUMBER OF AWARDED PRIME CONTRACTS	NUMBER OF PAID PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
CSE	1,260	1,260	1,121,217,234	1,120,825,346
BOWIE STATE UNIVERSITY	33	33	4,873,264	4,873,264
COPPIN STATE COLLEGE	3	3	959,420	959,420
DEPT OF EDUCATION	141	141	8,258,486	8,258,486
DEPT OF GENERAL SERVICES	81	81	203,958,346	203,958,346
DEPT OF HEALTH & MENTAL HYG.	112	112	18,415,089	18,415,089
DEPT OF JUVENILE SERVICES	18	18	1,149,141	1,149,141
DEPT OF PUBLIC SAFETY	4	4	132,408,448	132,408,448
FROSTBURG STATE UNIVERSITY	4	4	462,547	462,547
MARYLAND ENVIRON.AL SERVICE	80	80	36,189,437	36,189,437
MARYLAND STATE POLICE	97	97	5,924,758	5,924,758
MDOT-MD AVIATION ADMIN.	15	15	22,281,691	22,281,691
MDOT-MD PORT ADMINISTRATION	2	2	3,148,800	3,148,800
MDOT-MD STATE HIGHWAY ADMIN.	3	3	4,599,560	4,599,560
MDOT-MD TRANSIT ADMIN.	44	44	266,255,412	266,255,412
MDOT-MD TRANSPORTATION AUTH.	1	1	888,210	888,210
MDOT-MD MOTOR VEHICLE ADMIN.	5	5	8,023,623	8,023,623
MORGAN STATE UNIVERSITY	12	12	5,608,943	5,608,943
PUBLIC SCHOOL CONSTR. PROGRAM	9	9	3,038,896	3,038,896
SALISBURY STATE UNIVERSITY	32	32	9,844,321	9,844,321
TOWSON STATE UNIVERSITY	36	36	34,016,295	33,610,890
U OF MD BALTIMORE	175	175	79,295,747	79,295,747
U OF MD BALTIMORE COUNTY	48	48	39,015,889	39,015,889
U OF MD COLLEGE PARK	227	227	208,279,618	208,279,618
U OF MD EASTERN SHORE	43	43	8,783,370	8,783,370
U OF MD UNIVERSITY COLLEGE	15	15	2,914,045	2,914,045
UNIVERSITY OF BALTIMORE	20	20	8,185,950	8,185,950

Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts by State Agency, cont'd

PROCUREMENT AGENCY	NUMBER OF AWARDED PRIME CONTRACTS	NUMBER OF PAID PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
OVERALL	4,686	4,598	15,020,481,293	9,859,899,270
BOWIE STATE UNIVERSITY	71	71	20,394,622	20,385,510
COPPIN STATE COLLEGE	38	38	10,511,211	10,458,542
DEPT OF BUDGET & MANAGEMENT	24	23	2,499,022,907	931,944,815
DEPT OF EDUCATION	283	279	375,827,770	118,862,256
DEPT OF GENERAL SERVICES	312	298	589,335,382	479,338,489
DEPT OF HEALTH & MENTAL HYG.	303	298	470,529,820	336,652,906
DEPT OF HUMAN RESOURCES	68	63	218,396,643	174,060,563
DEPT OF INFO. TECHNOLOGY	14	14	43,839,334	19,638,116
DEPT OF JUVENILE SERVICES	150	149	35,776,201	30,935,396
DEPT OF PUBLIC SAFETY	120	119	606,439,380	584,259,295
FROSTBURG STATE UNIVERSITY	27	27	4,669,207	4,198,023
LOTTERY AGENCY	15	14	184,674,274	59,825,069
MARYLAND ENVIRON.AL SERVICE	181	179	145,140,370	137,578,200
MARYLAND STADIUM AUTHORITY	39	39	140,967,731	133,908,977
MARYLAND STATE POLICE	216	216	57,824,723	54,862,209
MDOT-MD AVIATION ADMIN.	95	90	591,286,164	401,544,259
MDOT-MD PORT ADMINISTRATION	63	61	234,934,247	192,518,011
MDOT-MD STATE HIGHWAY ADMIN.	497	471	3,722,994,585	1,825,790,805
MDOT-MD TRANSIT ADMIN.	177	170	1,181,352,468	856,392,978
MDOT-MD TRANSPORTATION AUTH.	66	64	665,637,313	373,789,821
MDOT-MD MOTOR VEHICLE ADMIN.	66	62	117,415,939	83,822,622
MDOT-THE SECRETARY'S OFFICE	25	22	60,159,537	41,955,510
MORGAN STATE UNIVERSITY	46	45	54,699,911	53,175,574
PUBLIC SCHOOL CONSTR. PROGRAM	340	338	1,708,770,139	1,716,497,054
SALISBURY STATE UNIVERSITY	78	78	20,982,848	19,192,774
TOWSON STATE UNIVERSITY	128	128	76,632,957	76,919,817
U OF MD BALTIMORE	403	403	439,074,186	397,979,018
U OF MD BALTIMORE COUNTY	137	137	75,903,222	75,148,823
U OF MD COLLEGE PARK	518	516	554,217,942	527,191,829
U OF MD EASTERN SHORE	72	72	11,263,283	11,506,977
U OF MD UNIVERSITY COLLEGE	46	46	85,589,585	93,330,268
UNIVERSITY OF BALTIMORE	68	68	16,483,000	16,500,377

Table 3.4. Distribution of State Contracting and Procurement Dollars by Geographic Location

Location	Construc-tion (%)	AE-CRS (%)	Mainten-ance (%)	IT (%)	Services (%)	CSE (%)	Overall (%)
	Awarded Dollars						
Inside Maryland Market Area	88.4	85.0	87.0	84.6	89.1	62.6	86.3
Outside Maryland Market Area	11.6	15.0	13.0	15.4	10.9	37.4	13.7
Inside State of Maryland	80.0	81.5	75.7	73.8	85.4	40.4	78.8
Outside State of Maryland	20.0	18.5	24.3	26.2	14.6	59.6	21.2
	Paid Dollars						
Inside Maryland Market Area	86.1	85.0	84.8	80.5	83.3	62.6	82.4
Outside Maryland Market Area	13.9	15.0	15.2	19.5	16.7	37.4	17.6
Inside State of Maryland	77.9	81.1	70.2	68.3	80.3	40.4	74.0
Outside State of Maryland	22.1	18.9	29.8	31.7	19.7	59.6	26.0

Source: See Table 3.1.

Table 3.5. Distribution of Contract and Subcontract Dollars Awarded by Industry Sub-sector: Construction

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
238	Specialty Trade Contractors	28.79	28.79
237	Heavy and Civil Engineering Construction	28.46	57.25
236	Construction of Buildings	14.42	71.67
541	Professional, Scientific, and Technical Services	8.17	79.84
332	Fabricated Metal Product Manufacturing	6.45	86.29
423	Merchant Wholesalers, Durable Goods	3.57	89.86
327	Nonmetallic Mineral Product Manufacturing	2.71	92.58
561	Administrative and Support Services	1.83	94.40
484	Truck Transportation	0.93	95.34
444	Building Material and Garden Equipment and Supplies Dealers	0.39	95.73
532	Rental and Leasing Services	0.38	96.12
811	Repair and Maintenance	0.36	96.47
424	Merchant Wholesalers, Nondurable Goods	0.29	96.76
321	Wood Product Manufacturing	0.29	97.05
335	Electrical Equipment, Appliance, and Component Manufacturing	0.27	97.32
339	Miscellaneous Manufacturing	0.25	97.57
531	Real Estate	0.21	97.78
522	Credit Intermediation and Related Activities	0.21	97.99
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	0.20	98.19
442	Furniture and Home Furnishings Stores	0.18	98.36
324	Petroleum and Coal Products Manufacturing	0.17	98.54
518	Data Processing, Hosting and Related Services	0.16	98.70
212	Mining (except Oil and Gas)	0.14	98.84
562	Waste Management and Remediation Services	0.12	98.96
488	Support Activities for Transportation	0.12	99.08
	Balance of industries (36 industries)	0.92	100.00
	TOTAL - $6,512,849,297		

Source: See Table 3.1.

Table 3.6. Distribution of Contract and Subcontract Dollars Awarded by Industry Sub-sector: AE-CRS

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
541	Professional, Scientific, and Technical Services	94.45	94.45
238	Specialty Trade Contractors	1.93	96.38
561	Administrative and Support Services	0.91	97.29
221	Utilities	0.68	97.97
237	Heavy and Civil Engineering Construction	0.59	98.57
236	Construction of Buildings	0.34	98.91
334	Computer and Electronic Product Manufacturing	0.24	99.14
	Balance of industries (44 industries)	0.86	100.00
	TOTAL - $1,268,673,125		

Source: See Table 3.1.

Table 3.7. Distribution of Contract and Subcontract Dollars Awarded by Industry Sub-sector: Maintenance

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
561	Administrative and Support Services	27.29	27.29
238	Specialty Trade Contractors	17.58	44.86
237	Heavy and Civil Engineering Construction	13.27	58.13
541	Professional, Scientific, and Technical Services	7.04	65.17
236	Construction of Buildings	5.24	70.41
811	Repair and Maintenance	5.05	75.46
485	Transit and Ground Passenger Transportation	4.08	79.54
336	Transportation Equipment Manufacturing	2.71	82.25
221	Utilities	2.43	84.67
423	Merchant Wholesalers, Durable Goods	1.78	86.45
454	Nonstore Retailers	1.53	87.98
488	Support Activities for Transportation	1.34	89.32
562	Waste Management and Remediation Services	1.28	90.59
624	Social Assistance	1.26	91.86
339	Miscellaneous Manufacturing	1.23	93.09
334	Computer and Electronic Product Manufacturing	1.03	94.12
621	Ambulatory Health Care Services	0.96	95.08
484	Truck Transportation	0.96	96.04
333	Machinery Manufacturing	0.95	96.99
335	Electrical Equipment, Appliance, and Component Manufacturing	0.74	97.73
447	Gasoline Stations	0.46	98.19
812	Personal and Laundry Services	0.25	98.44
531	Real Estate	0.23	98.66
453	Miscellaneous Store Retailers	0.22	98.88
327	Nonmetallic Mineral Product Manufacturing	0.19	99.07
	Balance of industries (21 industries)	0.93	100.00
	TOTAL - $594,926,095		

Source: See Table 3.1.

Table 3.8. Distribution of Contract and Subcontract Dollars Awarded by Industry Sub-sector: IT

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
541	Professional, Scientific, and Technical Services	63.67	63.67
517	Telecommunications	17.81	81.48
334	Computer and Electronic Product Manufacturing	4.94	86.43
511	Publishing Industries (except Internet)	4.18	90.61
423	Merchant Wholesalers, Durable Goods	4.07	94.68
443	Electronics and Appliance Stores	4.00	98.68
561	Administrative and Support Services	0.30	98.97
238	Specialty Trade Contractors	0.28	99.25
	Balance of industries (16 industries)	0.75	100.00
	TOTAL - $267,775,245		

Source: See Table 3.1.

Table 3.9. Distribution of Contract and Subcontract Dollars Awarded by Industry Sub-sector: Services

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
524	Insurance Carriers and Related Activities	43.47	43.47
541	Professional, Scientific, and Technical Services	11.15	54.62
621	Ambulatory Health Care Services	7.65	62.27
485	Transit and Ground Passenger Transportation	7.32	69.60
561	Administrative and Support Services	4.28	73.88
334	Computer and Electronic Product Manufacturing	4.09	77.97
482	Rail Transportation	3.04	81.01
624	Social Assistance	2.83	83.84
623	Nursing and Residential Care Facilities	2.49	86.33
522	Credit Intermediation and Related Activities	1.87	88.20
611	Educational Services	1.75	89.95
323	Printing and Related Support Activities	1.70	91.64
532	Rental and Leasing Services	1.19	92.83
622	Hospitals	0.83	93.66
423	Merchant Wholesalers, Durable Goods	0.81	94.47
238	Specialty Trade Contractors	0.64	95.10
221	Utilities	0.60	95.70
722	Food Services and Drinking Places	0.45	96.15
517	Telecommunications	0.44	96.59
424	Merchant Wholesalers, Nondurable Goods	0.40	96.99
339	Miscellaneous Manufacturing	0.31	97.30
812	Personal and Laundry Services	0.30	97.60
531	Real Estate	0.30	97.90
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	0.24	98.14
713	Amusement, Gambling, and Recreation Industries	0.19	98.33
519	Other Information Services	0.16	98.49
518	Data Processing, Hosting and Related Services	0.13	98.62
453	Miscellaneous Store Retailers	0.13	98.75
811	Repair and Maintenance	0.11	98.86
322	Paper Manufacturing	0.11	98.98

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
488	Support Activities for Transportation	0.11	99.08
	Balance of industries (41 industries)	0.92	100.00
	TOTAL - $5,259,743,333		

Source: See Table 3.1.

Table 3.10. Distribution of Contract and Subcontract Dollars Awarded by Industry Sub-sector: CSE

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
221	Utilities	23.15	23.15
336	Transportation Equipment Manufacturing	20.13	43.29
424	Merchant Wholesalers, Nondurable Goods	16.11	59.40
423	Merchant Wholesalers, Durable Goods	15.20	74.60
722	Food Services and Drinking Places	6.90	81.51
334	Computer and Electronic Product Manufacturing	3.83	85.33
441	Motor Vehicle and Parts Dealers	3.21	88.55
325	Chemical Manufacturing	1.34	89.89
541	Professional, Scientific, and Technical Services	1.22	91.11
323	Printing and Related Support Activities	0.92	92.03
333	Machinery Manufacturing	0.86	92.90
454	Nonstore Retailers	0.69	93.59
532	Rental and Leasing Services	0.57	94.16
811	Repair and Maintenance	0.54	94.70
448	Clothing and Clothing Accessories Stores	0.53	95.22
453	Miscellaneous Store Retailers	0.50	95.72
488	Support Activities for Transportation	0.49	96.21
511	Publishing Industries (except Internet)	0.45	96.67
339	Miscellaneous Manufacturing	0.43	97.10
443	Electronics and Appliance Stores	0.40	97.49
561	Administrative and Support Services	0.38	97.87
331	Primary Metal Manufacturing	0.34	98.21
451	Sporting Goods, Hobby, Book, and Music Stores	0.26	98.48
332	Fabricated Metal Product Manufacturing	0.18	98.66
337	Furniture and Related Product Manufacturing	0.15	98.81
442	Furniture and Home Furnishings Stores	0.14	98.95
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	0.14	99.08
	Balance of industries (20 industries)	0.08	100.00
	TOTAL - $1,116,779,306		

Source: See Table 3.1.

IV. M/WBE Availability in Maryland's Market Area

A. Identifying Businesses in the Relevant Markets

M/WBE availability is defined as the number of M/WBEs divided by the total number of businesses in the State's contracting market area—what we will refer to as the Baseline Business Universe—weighted by the dollars attributable to each detailed industry category.[154] Determining the total number of businesses in the relevant markets, however, is more straightforward than determining the number of minority- or women-owned businesses in those markets. The latter task has three main parts: (1) identify all listed M/WBEs in the relevant market; (2) verify the ownership status of listed M/WBEs; and (3) estimate the number of unlisted M/WBEs in the relevant market. This section describes how these tasks were accomplished for the State of Maryland.

It is important to note that NERA's availability analysis is free from variables tainted by discrimination. Our approach recognizes that discrimination may impact many of the variables that contribute to a firm's success in obtaining work as a prime or a subcontractor. "Capacity" factors such as firm size, time in business, qualifications, and experience are all adversely affected by discrimination if it is present in the market area. Despite the obvious relationship, some commentators argue that disparities should only be assessed between firms with similar "capacities."[155] However, most courts in our view have properly refused to make the results of discrimination the benchmarks for non-discrimination.[156] They have acknowledged that M/WBEs may be smaller, newer, and otherwise less competitive than non-M/WBEs because of the very discrimination sought to be remedied by race-conscious contracting programs. Racial and gender differences in these "capacity" factors are the *outcomes* of discrimination and it is therefore inappropriate as a matter of economics and statistics to use them as "control" variables in a disparity study.[157]

1. Estimate the Total Number of Businesses in the Market

We used data supplied by Dun & Bradstreet's Hoovers subsidiary to determine the total number of businesses operating in the relevant geographic and product markets (these markets were

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[154] To yield a percentage, the resulting figure is multiplied by 100.

[155] *See, e.g.,* La Noue (2006). Most of La Noue's expert report in *Gross Seed Company v. Nebraska Department of Roads*, No. 02-3016 (D. Neb. 2002), including his views on "capacity," was rejected by the court on the basis that it was legal opinion and not expert analysis. According to the court, "[legal analysis] is an issue solely for the Court and not for the presentation of expert testimony…." (*see* Defendants-Appellees' Brief, *Gross Seed Company v. Nebraska Department of Roads*, on appeal to the Eight Circuit Court of Appeals).

[156] *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 981, 983 (10th Cir. 2003), *cert. denied*, 124 S.Ct. 556 (2003) (emphasis in the originals) ("MWBE construction firms are generally smaller and less experienced *because* of discrimination.… Additionally, we do not read *Croson* to require disparity studies that measure whether construction firms are able to perform a *particular contract*.")

[157] *Concrete Works*, 321 F.3d at 981 (emphasis in the original). *See also*, Wainwright and Holt (2010, Appendix B) "Understanding Capacity."

discussed in the previous section). Dun & Bradstreet produces the most comprehensive publicly available database of businesses in the U.S. This database contains over 15 million records and is updated continuously. Each record in Dun & Bradstreet represents a business or business establishment and includes the business name, address, telephone number, NAICS code, SIC code, business type, DUNS Number (a unique number assigned to each establishment by Dun & Bradstreet) and other descriptive information. Dun & Bradstreet gathers and verifies information from many different sources. These sources include, among others, annual management interviews, payment experiences, bank account information, filings for suits, liens, judgments and bankruptcies, news items, the U. S. Postal Service, utility and telephone service, business registrations, corporate charters, Uniform Commercial Code filings, and records of the Small Business Administration and other governmental agencies.

We used the Dun & Bradstreet database to identify the total number of businesses in each six-digit NAICS code to which we had anticipated assigning a product market weight. Table 4.1 shows the number of businesses identified in each NAICS sub-sector within the Construction category, along with the associated industry weight according to dollars expended. Comparable data for AE-CRS, Maintenance, IT, Services, and CSE appears in Tables 4.2-4.6, respectively.

Although numerous industries play a role in the State's Baseline Business Universe, contracting and subcontracting opportunities are not distributed evenly among them. The distribution of contract expenditures is, in fact, highly skewed, as documented above in Chapter III.

2. Identify Listed M/WBEs

While extensive, Dun & Bradstreet does not sufficiently identify all businesses owned by minorities or women. Although many such businesses *are* correctly identified in Dun & Bradstreet, experience has demonstrated that many are also missed. For this reason, several additional steps were required to identify the appropriate percentage of M/WBEs in the relevant market.

First, NERA completed an intensive regional search for information on minority-owned and woman-owned businesses in Maryland and surrounding states. Beyond the information already in Dun & Bradstreet/Hoover's, NERA collected lists of M/WBEs from other public and private entities. Specifically, directories were included from: Maryland Department of Transportation, American Minority Contractors & Businesses Association, Anne Arundel County, Baltimore County Chamber of Commerce, Business Research Services, Calvert County Minority Business Alliance, Carroll County, Charles County, City of Baltimore, Delaware DOT, Diversity Business.com, Diversity Information Resources, Frederick County Department of Human Relations, Garrett County, Governor's Commission on Asian Pacific American Affairs, Hagerstown/Washington Economic Development Commission, Howard County, Maryland Governor's Office of Minority Affairs, Maryland R*STARS Database, Maryland Washington Minority Contractors Association, Maryland-National Capital Park & Planning Commission, Metro Washington, Metropolitan Washington Airports Authority, U.S. Department of Commerce Minority Business Development Agency, Minority Business Network, Montgomery County, National Association of Women in Construction, National Center for American Indian Enterprise Development, Richmond International Airport, Small Business Administration

Dynamic Small Business Search, Tri-County Council of Southern Maryland, UIDA Business Services, Virginia Department of Minority Business Enterprise, West Virginia Department of Transportation, and Women's Business Enterprise National Council.[158]

The M/WBEs identified in this manner are referred to as "listed" M/WBEs. Table 4.7 shows the number of listed M/WBEs identified in each NAICS sub-sector within the Construction category, along with the associated industry weight according to dollars expended—the same industry weight as used in corresponding Table 4.1. Comparable data for AE-CRS, Maintenance, IT, Services, and CSE appear in Tables 4.8-4.12, respectively.

If the listed M/WBEs identified in the Tables 4.7-4.12 are in fact *all* M/WBEs and are the *only* M/WBEs among all the businesses identified in Tables 4.1-4.6, then an estimate of "listed" M/WBE availability is simply the number of listed M/WBEs (taken from Tables 4.7–4.12, respectively) divided by the total number of businesses in the relevant market (taken from Tables 4.1-4.6, respectively). However, as we shall see below, neither of these two conditions holds true in practice and this is therefore *not* an appropriate method for measuring M/WBE availability.

There are two reasons for this. First, it is likely that some of the M/WBEs listed in the Tables 4.7-4.12 are not actually minority-owned or woman-owned. Second, it is likely that there are additional "unlisted" M/WBEs among all the businesses included in Tables 4.1-4.6. Such businesses may not appear in any of the directories we gathered and are therefore not included as M/WBEs in Tables 4.7-4.12. Additional steps are required to test these two conditions and to arrive at a more accurate representation of M/WBE availability within the Baseline Business Universe. We discuss these steps in Sections 3.A and 3.B below.

3. Verify Listed M/WBEs and Estimate Unlisted M/WBEs

It is likely that information on M/WBEs from Dun & Bradstreet and other M/WBE directories is not correct in all instances. Phenomena such as ownership changes, associate status, mentor status, recording errors, or even misrepresentation will lead to businesses being listed as M/WBEs in a particular directory even though they may actually be owned by nonminority males. Other things equal, this type of error would cause our availability estimate to be biased upward from the actual availability number.

The second likelihood that must be addressed is that not all M/WBE businesses are necessarily listed—either in Dun & Bradstreet or in any of the other directories we collected. Such firms may appear to be non-M/WBEs when, in fact, they are not. Such phenomena as geographic relocation, ownership changes, directory compilation errors, fear of discrimination, and limitations in M/WBE outreach could all lead to M/WBEs being unlisted. Other things equal,

[158] We also obtained information from certain entities that was duplicative of either Dun & Bradstreet or one or more of the other sources listed above. These entities are listed below in Appendix A. We were unable to obtain relevant lists or directories from a number of entities. The reasons for this include: (1) the entity did not have a list or the entity's list did not include race and sex information; (2) the entity was unresponsive to repeated attempts at contacts; or, (3) the entity simply declined to provide us the list. These entities, as well, are listed in Appendix A.

this type of error would cause our availability estimate to be biased downward from the actual availability number.

In our experience, we have found that both types of bias are not uncommon. For this Study, we corrected for the effect of these biases using statistical sampling procedures. We surveyed a large, stratified random sample of 8,500 establishments drawn from the Baseline Business Universe and measured how often they were misclassified (or unclassified) by race and/or gender.[159]

Strata were defined according to NAICS sub-sectors code and listed M/WBE status.[160] In the phone survey, up to 10 attempts were made to reach each business and speak with an appropriate respondent. Attempts were scheduled for a mix of day and evening, weekdays and weekends, and appointments were scheduled for callbacks when necessary. Of the 8,500 firms in our sample, 4,590 (54.0%) were listed M/WBEs and 3,910 (46.0%) were unclassified by race or gender. Of these 8,500 firms, however, 674 were excluded as "unable to contact." Exclusions resulted primarily from firms that were no longer in business.[161] Of the remaining 7,826 firms, 4,265 (54.5%) were listed M/WBEs and the remaining 3,561 establishments (45.5%) were unclassified.

The first part of the survey tested whether our sample of listed M/WBEs was correctly classified by race and/or gender. The second part of the survey tested whether the unclassified firms could all be properly classified as non-M/WBEs. Both elements of the survey are described in more detail below.

a. Survey of Listed M/WBEs

We selected a stratified random sample of 4,590 listed M/WBEs to verify the race and gender status of their owner(s). Of these, 325 (7.1%) were excluded as "unable to contact." Of the 4,265 remaining establishments, we obtained complete interviews from 1,979, for a response rate of 46.4 percent.

Of the 1,979 establishments interviewed, 256 (12.9 percent) were owned by nonminority males. Misclassification was observed in every NAICS stratum, ranging from a high of 40.0 percent in NAICS 11 and 22 (Agriculture and Utilities, Group A) to a low of 5.5 percent in NAICS 8 (Other Services, Group B) as shown in Table 4.13. As shown in Table 4.14, misclassification

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[159] A similar method was employed by the Federal Reserve Board to deal with similar problems in designing and implementing the National Surveys of Small Business Finances for 1993 and 1998. *See* Catherine Haggerty, Karen Grigorian, Rachel Harter and John D. Wolken. "The 1998 Survey of Small Business Finances: Sampling and Level of Effort Associated with Gaining Cooperation from Minority-Owned Business," *Proceedings of the Second International Conference on Establishment Surveys,* Buffalo, NY, June 17-21, 2000.

[160] Eighteen separate industry strata were created based on NAICS code and on whether a particular NAICS code was among those NAICS codes accounting for the top 90 percent of state contract and subcontract spending or not. All 18 strata were then split according to listed M/WBE status to create a total of 36 strata. Generally, listed M/WBEs were sampled at a higher rate than unclassified establishments.

[161] A Fisher's Exact Test to check if putative M/WBEs were more likely to be affected by this than non-M/WBEs was not statistically significant.

varied by putative race and gender as well.[162] It was highest among putative Native American firms, followed by Hispanics, nonminority women, Asians, and finally African Americans.[163]

The race and gender status of the listed M/WBEs responding to the survey was changed, if necessary, according to the survey results. For example, if a business originally listed as a nonminority female-owned was actually nonminority male-owned, then that business was counted as nonminority male-owned for purposes of calculating M/WBE availability. But what about the remaining putatively nonminority female-owned establishments that we did not interview? For these businesses, we estimate the race and gender of their ownership based on the amount of misclassification we observed among the nonminority female-owned firms that we did interview. In this example, our interviews show that 71.8 percent of these firms are indeed actually nonminority female-owned, 16.6 percent are actually nonminority male-owned, and 11.6 percent are actually minority-owned (see Table 4.14). Therefore, we assign each of the remaining putative nonminority female firms a 71.8 percent probability of actually being nonminority female-owned, a 16.6 percent probability of actually being nonminority male-owned, and a 11.6 percent probability of being minority-owned. We repeated this procedure within each sample stratum and for all putative race and gender categories.

b. Survey of Unclassified Businesses

In a manner exactly analogous to our survey of listed M/WBEs, in the second part of our survey we examined unclassified businesses, *i.e.* any business that was not originally identified as an M/WBE, either in Dun & Bradstreet/Hoovers or in one or more of the other directories, and that would otherwise appear to be a non-M/WBE.

We selected a stratified random sample of 3,910 unclassified businesses from the Baseline Business Universe to verify the race and gender status of their owner(s). Of these, 349 (8.9%) were excluded as "unable to contact." Of the 3,561 remaining establishments, we obtained 1,437 complete interviews, for a response rate of 40.4 percent.

Of the 1,437 establishments interviewed, 1,059 (73.7%) were owned by nonminority males, 166 (11.6%) by nonminority females, and 212 (14.8%) by minorities, as shown in Table 4.16. A similar phenomenon was observed within each industry stratum, as shown in Table 4.15.

As with the survey of listed M/WBEs, the race and gender status of unclassified businesses was changed, if necessary, according to the survey results. For example, if an interviewed business that was originally unclassified indicated that it was actually nonminority male-owned, then that business was counted as nonminority male-owned for purposes of the M/WBE availability

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[162] By "putative," we mean the race and gender that we initially assigned to each firm based on the information provided by the State, by Dun & Bradstreet/Hoovers, by our master M/WBE directory, or from other sources.

[163] For this study, "Black" or "African American" refers to an individual having origins in any of the Black racial groups of Africa; "Hispanic" refers to an individual of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; "Asian" refers to an individual having origins in the Far East, Southeast Asian, or the Indian subcontinent; "Native American" refers to an individual having origins in any of the original peoples of North America other than Eskimos or Aleuts.

calculation. If it indicated it was nonminority female-owned, it was counted as nonminority female, and so on. For unclassified businesses that were not interviewed, we assigned probability values (probability actually nonminority male-owned, probability actually nonminority female-owned, probability actually African American-owned, etc.) based on the interview responses. We again carried out the probability assignment procedure within each stratum.

Clearly, a large majority of unclassified businesses in the Baseline Business Universe (73.7 percent overall) are nonminority male-owned. Nevertheless, this means that 26.3 percent were *not* nonminority male-owned. Among the latter, the largest group was nonminority female-owned, with descending size shares accounted for by African American-owned, Asian-owned, Hispanic-owned, and finally Native American-owned. Table 4.16 shows the unclassified business survey results by race and gender.

4. Understanding "Capacity"

As noted in the beginning of this chapter, some observers, primarily opponents of efforts to address discrimination in contracting, have argued that, in order to be accurate, availability estimates must be adjusted for "capacity." These assertions are rarely accompanied by specific suggestions about how such adjustments could be made consistent with professional social science standards. This Study does adjust for certain appropriate characteristics of firms related to capacity (such as industry affiliation, geographic location, owner labor market experience, and educational attainment), however, we are careful not adjust for capacity factors that are themselves likely to be influenced by discrimination. In our view, all of the "capacity" indicators recommended by program opponents (*e.g.* firm age, revenues, number of employees, largest contract received, bonding limits) are subject to the impact of discrimination.

Further, the reality is that large, adverse statistical disparities between minority-owned or women-owned businesses and nonminority male-owned businesses have been documented in numerous research studies and reports since *Croson*.[164] Business outcomes, however, can be influenced by multiple factors, and it is important that disparity studies examine the likelihood of whether discrimination is an important contributing factor to observed disparities.

Moreover, terms such as "capacity," "qualifications," and "ability" are not well defined in any statistical sense. Does "capacity" mean revenue level, employment size, bonding limits, or number of contracts bid or awarded? Does "qualified" or "able" mean possession of a business license, certain amounts of training, types of work experience, or the number of contracts a firm can perform at a given moment? What mix of business attributes properly reflects "capacity"? Does the meaning of such terms differ from industry to industry, locality to locality, or through time? Where and how might such data be reliably gathered? Even if capacity is well-defined and adequate data are gathered, when measuring the existence of discrimination, the statistical method used should not improperly limit the availability measure by incorporating factors that are themselves impacted by discrimination, such as firm age, revenues, bonding limits, or numbers of employees.

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[164] Enchautegui, et al. (1996).

Consider an extreme example where discrimination has prevented the emergence of any minority owned firms. Suppose that racial discrimination was ingrained in a state's construction market. As a result, few minority construction employees are given the opportunity to gain managerial experience in the business; minorities who do end up starting construction firms are denied the opportunity to work as subcontractors for nonminority prime contractors; and nonminority prime contractors place pressure on unions not to work with minority firms and on bonding companies and banks to prevent minority owned construction firms from securing bonding and capital. In this example, discrimination has prevented the emergence of a minority highway construction industry with "capacity." Those M/WBEs that exist at all will be smaller and less experienced and have lower revenues, bonding limits, and employees– that is, "capacity"– because of discrimination than firms that have benefited from the exclusionary system.

Using revenue as the measure of qualifications illustrates the point. If M/WBEs are subject to marketplace discrimination, their revenues will be smaller than nonminority, male-owned businesses because they will be less successful at obtaining work. Revenue measures the extent to which a firm has succeeded in the marketplace, perhaps in spite of discrimination—it does not measure the ability to succeed in the absence of discrimination and should not be used to evaluate the effects of discrimination.

Therefore, focusing on the "capacity" of businesses in terms of employment, revenue, bonding limits, number of trucks, and so forth is simply wrong as a matter of economics because it can obscure the existence of discrimination. A truly "effective" discriminatory system would lead to a finding of no "capacity," and under the "capacity" approach, a finding of no discrimination. Excluding firms from an availability measure based on their "capacity" in a discriminatory market merely affirms the results of discrimination rather than ameliorating them. A capacity requirement could preclude the State from doing anything to rectify its passive participation through public dollars in a clearly discriminatory system. The capacity argument fails to acknowledge that discrimination has obstructed the emergence of "qualified, willing, and able" minority firms. Without such firms, there can be no statistical disparity.

Further, in dynamic business environments, and especially in the construction sector, such "qualifications" or "capacity" can be obtained relatively easily. It is well known that small construction companies can expand rapidly as needs arise by hiring workers and renting equipment, and many general contractors subcontract the majority of a project. Firms grow quickly when demand increases and shrink quickly when demand decreases. Subcontracting is one important source of this elasticity, as has been noted by several academic studies.[165] Other industry sectors, especially in this era of Internet commerce and independent contractors, can also quickly grow or shrink in response to demand.

Finally, even where "capacity"-type factors have been controlled for in statistical analyses, results consistent with business discrimination are still typically observed. For example, large and statistically significant differences in commercial loan denial rates between minority and nonminority firms are evident throughout the country, even when detailed balance sheet and

[165] Bourdon and Levitt (1980); *see also* Eccles (1981); *and* Gould (1980).

creditworthiness measures are held constant.[166] Similarly, economists using decennial census data have demonstrated that statistically significant disparities in business formation and business owner earnings between minorities and non-minorities remain even after controlling for a host of additional relevant factors, including educational achievement, labor market experience, marital status, disability status, veteran status, interest and dividend income, labor market attachment, industry, geographic location, and local labor market variables such as the unemployment rate, population growth rate, government employment rate, or per capita income.[167]

To summarize, the statistical analysis of the availability of minority firms compared to nonminority firms to examine the existence and effects of discrimination in disparity studies should not adjust for inappropriate "capacity" factors because:

- "Capacity" has been ill-defined; and reliable data for measurement are generally unavailable;
- Small firms, particularly in the construction industry, are highly elastic with regard to ability to perform;
- Many disparity studies have shown that even when "capacity" and "qualifications"-type factors are held constant in statistical analyses, evidence of disparate impact against DBE and M/WBE firms persists; and
- Most important, identifiable indicators of "capacity" are themselves impacted by discrimination.

B. Estimates of M/WBE Availability by Detailed Race, Gender, and Industry

Tables 4.17-4.22 present detailed estimates of M/WBE availability in the State of Maryland's market area by race, gender, M/WBE status, and detailed NAICS industry. These estimates have been statistically corrected to adjust for misclassification and non-classification bias in the Baseline Business Universe as described above. Summary level estimates are weighted averages with weights based on industry-level contracting and procurement award dollars, as described in Chapter III, Section C.

Table 4.17 provides estimated M/WBE availability for all industries in the Construction procurement category during the study period. Overall, M/WBE availability in Construction is estimated at 32.39 percent.

Table 4.18 provides estimated M/WBE availability for all industries in the AE-CRS procurement category during the study period. Overall, M/WBE availability in AE-CRS is estimated at 41.14 percent.

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[166] *See* Wainwright (2008).

[167] Wainwright (2000).

Table 4.19 provides estimated M/WBE availability for all industries in the Maintenance procurement category during the study period. Overall, M/WBE availability in Maintenance is estimated at 40.94 percent.

Table 4.20 provides estimated M/WBE availability for all industries in the IT procurement category during the study period. Overall, M/WBE availability in IT is estimated at 48.09 percent.

Table 4.21 provides estimated M/WBE availability for all industries in the Services procurement category during the study period. Overall, M/WBE availability in Services is estimated at 44.56 percent.

Table 4.22 provides estimated M/WBE availability for all industries in the CSE procurement category during the study period. Overall, M/WBE availability in CSE is estimated at 38.91 percent.

Finally, Table 4.23A shows that overall M/WBE availability in the State's relevant market area is 39.57 percent. Non-M/WBE availability is 60.43 percent. Overall, among M/WBEs, availability of African American-owned businesses is 11.35 percent, availability of Hispanic-owned businesses is 2.95 percent, availability of Asian-owned businesses is 7.27 percent, availability of Native American-owned businesses is 0.27 percent, and availability of nonminority female-owned businesses is 17.76 percent. Table 4.23B shows similar availability results using paid dollars as the weights.

C. Tables

Table 4.1. Construction—Number of Businesses and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
2373	Highway, Street, and Bridge Construction	872	26.27	26.27
2382	Building Equipment Contractors	9,373	14.01	40.28
2362	Nonresidential Building Construction	3,007	13.87	54.15
2381	Foundation, Structure, and Building Exterior Contractors	5,046	8.68	62.82
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	306	4.32	67.14
5413	Architectural, Engineering, and Related Services	9,528	4.31	71.45
2383	Building Finishing Contractors	5,931	3.14	74.6
2389	Other Specialty Trade Contractors	5,383	2.96	77.55
5415	Computer Systems Design and Related Services	12,903	2.74	80.29
3273	Cement and Concrete Product Manufacturing	265	2.58	82.87
3323	Architectural and Structural Metals Manufacturing	507	2.01	84.88
2371	Utility System Construction	531	1.71	86.6
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	246	1.11	87.71
5614	Business Support Services	17,040	0.93	88.64
4233	Lumber and Other Construction Materials Merchant Wholesalers	1,496	0.63	89.27
5416	Management, Scientific, and Technical Consulting Services	31,059	0.63	89.9
2361	Residential Building Construction	16,765	0.55	90.46
4236	Electrical and Electronic Goods Merchant Wholesalers	1,329	0.55	91
4842	Specialized Freight Trucking	855	0.54	91.55
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	2,676	0.51	92.05
2379	Other Heavy and Civil Engineering Construction	118	0.46	92.51
5418	Advertising, Public Relations, and Related Services	891	0.41	92.92
4841	General Freight Trucking	3,643	0.39	93.31
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	2,217	0.34	93.66
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	860	0.33	93.98
5617	Services to Buildings and Dwellings	11,251	0.3	94.28
3219	Other Wood Product Manufacturing	325	0.29	94.57
4441	Building Material and Supplies Dealers	2,169	0.26	94.83
3399	Other Miscellaneous Manufacturing	1,237	0.25	95.08
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	895	0.24	95.32
5613	Employment Services	2,505	0.22	95.55
5222	Nondepository Credit Intermediation	389	0.21	95.75
5312	Offices of Real Estate Agents and Brokers	10,717	0.21	95.96
8139	Business, Professional, Labor, Political, and Similar Organizations	3,582	0.2	96.16
8114	Personal and Household Goods Repair and Maintenance	3,000	0.18	96.34
3241	Petroleum and Coal Products Manufacturing	102	0.17	96.51
5182	Data Processing, Hosting, and Related Services	1,340	0.16	96.67
3359	Other Electrical Equipment and Component Manufacturing	101	0.16	96.83

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
4242	Drugs and Druggists' Sundries Merchant Wholesalers	312	0.15	96.98
5616	Investigation and Security Services	3,269	0.14	97.12
2123	Nonmetallic Mineral Mining and Quarrying	85	0.14	97.26
4442	Lawn and Garden Equipment and Supplies Stores	576	0.13	97.39
4422	Home Furnishings Stores	2,046	0.13	97.52
4239	Miscellaneous Durable Goods Merchant Wholesalers	1,517	0.13	97.64
5612	Facilities Support Services	311	0.12	97.77
3271	Clay Product and Refractory Manufacturing	20	0.12	97.89
3351	Electric Lighting Equipment Manufacturing	65	0.1	97.99
1151	Support Activities for Crop Production	74	0.1	98.1
5619	Other Support Services	1,147	0.1	98.2
4247	Petroleum and Petroleum Products Merchant Wholesalers	315	0.1	98.3
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	0.1	98.4
4889	Other Support Activities for Transportation	1,164	0.09	98.49
3329	Other Fabricated Metal Product Manufacturing	105	0.09	98.58
3372	Office Furniture (including Fixtures) Manufacturing	79	0.09	98.67
3311	Iron and Steel Mills and Ferroalloy Manufacturing	53	0.08	98.75
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	84	0.08	98.83
5629	Remediation and Other Waste Management Services	545	0.07	98.9
5121	Motion Picture and Video Industries	1,833	0.07	98.96
4232	Furniture and Home Furnishing Merchant Wholesalers	897	0.06	99.03
4539	Other Miscellaneous Store Retailers	3,201	0.06	99.09
8111	Automotive Repair and Maintenance	6,073	0.05	99.14
4421	Furniture Stores	1,423	0.05	99.19
5321	Automotive Equipment Rental and Leasing	417	0.05	99.24
5622	Waste Treatment and Disposal	300	0.05	99.29
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	1,668	0.04	99.33
5417	Scientific Research and Development Services	3,568	0.03	99.36
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	1,833	0.03	99.39
4431	Electronics and Appliance Stores	1,685	0.03	99.42
3231	Printing and Related Support Activities	1,740	0.03	99.45
8112	Electronic and Precision Equipment Repair and Maintenance	960	0.03	99.48
3312	Steel Product Manufacturing from Purchased Steel	18	0.03	99.5
3342	Communications Equipment Manufacturing	343	0.03	99.53
4883	Support Activities for Water Transportation	84	0.02	99.55
5414	Specialized Design Services	3,982	0.02	99.58
2372	Land Subdivision	1,480	0.02	99.6
3326	Spring and Wire Product Manufacturing	31	0.02	99.62
3344	Semiconductor and Other Electronic Component Manufacturing	202	0.02	99.65
5419	Other Professional, Scientific, and Technical Services	5,667	0.02	99.67
4471	Gasoline Stations	1,925	0.02	99.69
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	373	0.02	99.71

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
4543	Direct Selling Establishments	794	0.02	99.73
5171	Wired Telecommunications Carriers	124	0.02	99.75
4532	Office Supplies, Stationery, and Gift Stores	386	0.02	99.76
6213	Offices of Other Health Practitioners	467	0.02	99.78
8129	Other Personal Services	9,147	0.02	99.79
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	169	0.02	99.81
4246	Chemical and Allied Products Merchant Wholesalers	282	0.01	99.82
3339	Other General Purpose Machinery Manufacturing	145	0.01	99.84
3259	Other Chemical Product and Preparation Manufacturing	89	0.01	99.85
5322	Consumer Goods Rental	441	0.01	99.86
5242	Agencies, Brokerages, and Other Insurance Related Activities	5,011	0.01	99.87
3279	Other Nonmetallic Mineral Product Manufacturing	99	0.01	99.88
7223	Special Food Services	77	0.01	99.89
5621	Waste Collection	190	0.01	99.9
3325	Hardware Manufacturing	35	0.01	99.91
3365	Railroad Rolling Stock Manufacturing	13	0.01	99.91
5231	Securities and Commodity Contracts Intermediation and Brokerage	67	0.01	99.92
5311	Lessors of Real Estate	4,578	0.01	99.93
5241	Insurance Carriers	250	0.00	99.93
3315	Foundries	9	0.00	99.94
4451	Grocery Stores	3,432	0.00	99.94
3149	Other Textile Product Mills	162	0.00	99.94
3261	Plastics Product Manufacturing	139	0.00	99.95
4832	Inland Water Transportation	7	0.00	99.95
6211	Offices of Physicians	15,872	0.00	99.95
3391	Medical Equipment and Supplies Manufacturing	252	0.00	99.96
3313	Alumina and Aluminum Production and Processing	5	0.00	99.96
4884	Support Activities for Road Transportation	853	0.00	99.96
3379	Other Furniture Related Product Manufacturing	60	0.00	99.96
2211	Electric Power Generation, Transmission and Distribution	42	0.00	99.97
3132	Fabric Mills	87	0.00	99.97
5179	Other Telecommunications	2,169	0.00	99.97
3331	Agriculture, Construction, and Mining Machinery Manufacturing	56	0.00	99.97
1114	Greenhouse, Nursery, and Floriculture Production	104	0.00	99.97
3333	Commercial and Service Industry Machinery Manufacturing	134	0.00	99.98
3332	Industrial Machinery Manufacturing	37	0.00	99.98
3353	Electrical Equipment Manufacturing	79	0.00	99.98
6111	Elementary and Secondary Schools	4,064	0.00	99.98
6117	Educational Support Services	812	0.00	99.98
4812	Nonscheduled Air Transportation	84	0.00	99.98
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	19	0.00	99.99
3222	Converted Paper Product Manufacturing	18	0.00	99.99
5172	Wireless Telecommunications Carriers (except Satellite)	756	0.00	99.99

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
4411	Automobile Dealers	1,267	0.00	99.99
6212	Offices of Dentists	5,627	0.00	99.99
3262	Rubber Product Manufacturing	36	0.00	99.99
5221	Depository Credit Intermediation	3,270	0.00	99.99
3352	Household Appliance Manufacturing	9	0.00	99.99
4461	Health and Personal Care Stores	351	0.00	99.99
1119	Other Crop Farming	2,303	0.00	100.00
2212	Natural Gas Distribution	87	0.00	100.00
4241	Paper and Paper Product Merchant Wholesalers	332	0.00	100.00
2213	Water, Sewage and Other Systems	142	0.00	100.00
4511	Sporting Goods, Hobby, and Musical Instrument Stores	762	0.00	100.00
5239	Other Financial Investment Activities	2,194	0.00	100.00
8123	Drycleaning and Laundry Services	2,093	0.00	100.00
5615	Travel Arrangement and Reservation Services	1,624	0.00	100.00
3255	Paint, Coating, and Adhesive Manufacturing	25	0.00	100.00
3362	Motor Vehicle Body and Trailer Manufacturing	21	0.00	100.00
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	29	0.00	100.00
5411	Legal Services	14,396	0.00	100.00
4931	Warehousing and Storage	472	0.00	100.00
4921	Couriers and Express Delivery Services	249	0.00	100.00
3328	Coating, Engraving, Heat Treating, and Allied Activities	61	0.00	100.00
3335	Metalworking Machinery Manufacturing	29	0.00	100.00
5152	Cable and Other Subscription Programming	257	0.00	100.00
3141	Textile Furnishings Mills	43	0.00	100.00
4412	Other Motor Vehicle Dealers	281	0.00	100.00
5323	General Rental Centers	14	0.00	100.00
3363	Motor Vehicle Parts Manufacturing	7	0.00	100.00
5223	Activities Related to Credit Intermediation	166	0.00	100.00
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	20	0.00	100.00
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	267	0.00	100.00
6215	Medical and Diagnostic Laboratories	539	0.00	100.00
3274	Lime and Gypsum Product Manufacturing	3	0.00	100.00

Source: Dun & Bradstreet/Hoovers; M/WBE business directory information compiled by NERA; Master Contract/Subcontract Database. Note: the dollar-based industry weight and cumulative industry weight are expressed as percentages.

Table 4.2. AE-CRS—Number of Businesses and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
5413	Architectural, Engineering, and Related Services	9,528	78.58	78.58
5416	Management, Scientific, and Technical Consulting Services	34,151	11.63	90.21
5415	Computer Systems Design and Related Services	13,366	2.74	92.95
2382	Building Equipment Contractors	9,373	1.29	94.24
5418	Advertising, Public Relations, and Related Services	2,550	0.93	95.17
2211	Electric Power Generation, Transmission and Distribution	38	0.67	95.84
5613	Employment Services	2,505	0.42	96.26
5614	Business Support Services	16,807	0.41	96.67
2373	Highway, Street, and Bridge Construction	872	0.37	97.04
2381	Foundation, Structure, and Building Exterior Contractors	4,794	0.32	97.36
2362	Nonresidential Building Construction	3,007	0.31	97.67
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	233	0.22	97.9
2371	Utility System Construction	420	0.22	98.12
5419	Other Professional, Scientific, and Technical Services	5,748	0.2	98.32
2383	Building Finishing Contractors	4,226	0.2	98.52
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	4,999	0.18	98.7
2389	Other Specialty Trade Contractors	5,383	0.12	98.82
5411	Legal Services	15,196	0.11	98.93
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	1,611	0.08	99.01
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	21	0.08	99.09
5622	Waste Treatment and Disposal	300	0.08	99.17
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	801	0.07	99.24
5629	Remediation and Other Waste Management Services	349	0.06	99.3
5619	Other Support Services	1,147	0.05	99.35
5414	Specialized Design Services	1,717	0.05	99.4
3312	Steel Product Manufacturing from Purchased Steel	7	0.04	99.44
3231	Printing and Related Support Activities	1,206	0.04	99.48
8134	Civic and Social Organizations	4,249	0.04	99.52
4885	Freight Transportation Arrangement	598	0.04	99.56
5417	Scientific Research and Development Services	3,568	0.03	99.6
3359	Other Electrical Equipment and Component Manufacturing	93	0.03	99.63
4247	Petroleum and Petroleum Products Merchant Wholesalers	281	0.03	99.66
2361	Residential Building Construction	12,463	0.02	99.68
3118	Bakeries and Tortilla Manufacturing	517	0.02	99.71
8114	Personal and Household Goods Repair and Maintenance	2,497	0.02	99.73
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	1,176	0.02	99.75
5621	Waste Collection	190	0.02	99.76
4841	General Freight Trucking	3,639	0.02	99.78
5191	Other Information Services	544	0.01	99.79
4532	Office Supplies, Stationery, and Gift Stores	386	0.01	99.81
5182	Data Processing, Hosting, and Related Services	1,340	0.01	99.82
4821	Rail Transportation	55	0.01	99.83

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3399	Other Miscellaneous Manufacturing	163	0.01	99.84
5617	Services to Buildings and Dwellings	8,129	0.01	99.85
3341	Computer and Peripheral Equipment Manufacturing	123	0.01	99.86
5616	Investigation and Security Services	1,444	0.01	99.87
5612	Facilities Support Services	311	0.01	99.88
5611	Office Administrative Services	1,035	0.01	99.89
4812	Nonscheduled Air Transportation	84	0.01	99.89
4246	Chemical and Allied Products Merchant Wholesalers	282	0.01	99.9
4431	Electronics and Appliance Stores	1,303	0.01	99.91
5239	Other Financial Investment Activities	1,427	0.01	99.91
2213	Water, Sewage and Other Systems	142	0.01	99.92
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	565	0.01	99.92
6215	Medical and Diagnostic Laboratories	539	0.00	99.93
4421	Furniture Stores	1,423	0.00	99.93
3271	Clay Product and Refractory Manufacturing	12	0.00	99.94
5313	Activities Related to Real Estate	800	0.00	99.94
5242	Agencies, Brokerages, and Other Insurance Related Activities	298	0.00	99.95
7121	Museums, Historical Sites, and Similar Institutions	813	0.00	99.95
5112	Software Publishers	1,070	0.00	99.96
5322	Consumer Goods Rental	383	0.00	99.96
3323	Architectural and Structural Metals Manufacturing	134	0.00	99.96
4236	Electrical and Electronic Goods Merchant Wholesalers	1,188	0.00	99.97
5121	Motion Picture and Video Industries	1,644	0.00	99.97
7115	Independent Artists, Writers, and Performers	1,269	0.00	99.97
3372	Office Furniture (including Fixtures) Manufacturing	24	0.00	99.98
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	179	0.00	99.98
4233	Lumber and Other Construction Materials Merchant Wholesalers	1,004	0.00	99.98
6117	Educational Support Services	812	0.00	99.98
2123	Nonmetallic Mineral Mining and Quarrying	34	0.00	99.99
4543	Direct Selling Establishments	205	0.00	99.99
3329	Other Fabricated Metal Product Manufacturing	75	0.00	99.99
8111	Automotive Repair and Maintenance	940	0.00	99.99
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	0.00	99.99
1151	Support Activities for Crop Production	74	0.00	99.99
3273	Cement and Concrete Product Manufacturing	215	0.00	100.00
7221	Full-Service Restaurants	10,705	0.00	100.00
3342	Communications Equipment Manufacturing	67	0.00	100.00
6211	Offices of Physicians	15,872	0.00	100.00
3261	Plastics Product Manufacturing	139	0.00	100.00
3335	Metalworking Machinery Manufacturing	29	0.00	100.00
4412	Other Motor Vehicle Dealers	281	0.00	100.00
4244	Grocery and Related Product Merchant Wholesalers	612	0.00	100.00
2131	Support Activities for Mining	18	0.00	100.00
4854	School and Employee Bus Transportation	164	0.00	100.00

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
3219	Other Wood Product Manufacturing	16	0.00	100.00
4842	Specialized Freight Trucking	336	0.00	100.00
4239	Miscellaneous Durable Goods Merchant Wholesalers	972	0.00	100.00
4441	Building Material and Supplies Dealers	501	0.00	100.00
4921	Couriers and Express Delivery Services	249	0.00	100.00
1153	Support Activities for Forestry	50	0.00	100.00
4539	Other Miscellaneous Store Retailers	3,201	0.00	100.00
4811	Scheduled Air Transportation	85	0.00	100.00

Source: See Table 4.1.

Table 4.3. Maintenance—Number of Businesses and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5617	Services to Buildings and Dwellings	11,251	19.34	19.34
2373	Highway, Street, and Bridge Construction	872	13.00	32.34
2382	Building Equipment Contractors	9,373	11.01	43.35
5616	Investigation and Security Services	3,680	5.64	48.99
5416	Management, Scientific, and Technical Consulting Services	32,120	4.87	53.86
4851	Urban Transit Systems	150	4.07	57.93
2362	Nonresidential Building Construction	3,007	4.01	61.94
8114	Personal and Household Goods Repair and Maintenance	1,333	3.08	65.02
2381	Foundation, Structure, and Building Exterior Contractors	4,830	2.82	67.84
2211	Electric Power Generation, Transmission and Distribution	42	2.43	70.27
3365	Railroad Rolling Stock Manufacturing	13	2.31	72.57
2383	Building Finishing Contractors	5,931	2.08	74.65
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	1.83	76.48
2389	Other Specialty Trade Contractors	5,383	1.66	78.15
5413	Architectural, Engineering, and Related Services	9,164	1.61	79.75
4543	Direct Selling Establishments	765	1.53	81.28
4881	Support Activities for Air Transportation	63	1.33	82.61
3399	Other Miscellaneous Manufacturing	614	1.23	83.84
2361	Residential Building Construction	16,765	1.23	85.07
5622	Waste Treatment and Disposal	300	1.16	86.23
6241	Individual and Family Services	589	1.16	87.39
4841	General Freight Trucking	3,639	0.95	88.34
5613	Employment Services	2,532	0.79	89.13
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	10	0.79	89.92
3351	Electric Lighting Equipment Manufacturing	51	0.69	90.61
5611	Office Administrative Services	1,035	0.69	91.30
5612	Facilities Support Services	311	0.69	91.99
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	2,676	0.61	92.60
6211	Offices of Physicians	15,872	0.54	93.14
5415	Computer Systems Design and Related Services	12,903	0.51	93.65
4236	Electrical and Electronic Goods Merchant Wholesalers	1,188	0.50	94.15
3342	Communications Equipment Manufacturing	343	0.48	94.63
4471	Gasoline Stations	1,925	0.46	95.09
6212	Offices of Dentists	5,627	0.42	95.51
3364	Aerospace Product and Parts Manufacturing	96	0.39	95.90
4233	Lumber and Other Construction Materials Merchant Wholesalers	1,496	0.39	96.29
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	275	0.34	96.62
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	895	0.23	96.85
5311	Lessors of Real Estate	3,726	0.23	97.08
3344	Semiconductor and Other Electronic Component Manufacturing	202	0.22	97.29

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
2371	Utility System Construction	531	0.21	97.50
8129	Other Personal Services	299	0.19	97.69
4533	Used Merchandise Stores	1,675	0.17	97.86
3339	Other General Purpose Machinery Manufacturing	134	0.16	98.01
8133	Social Advocacy Organizations	747	0.15	98.16
3271	Clay Product and Refractory Manufacturing	12	0.14	98.30
1151	Support Activities for Crop Production	74	0.12	98.42
5619	Other Support Services	1,147	0.12	98.54
6243	Vocational Rehabilitation Services	783	0.11	98.64
8111	Automotive Repair and Maintenance	4,524	0.10	98.74
5629	Remediation and Other Waste Management Services	382	0.10	98.85
4821	Rail Transportation	55	0.08	98.93
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	1,443	0.08	99.01
2379	Other Heavy and Civil Engineering Construction	118	0.06	99.07
8123	Drycleaning and Laundry Services	79	0.06	99.14
3259	Other Chemical Product and Preparation Manufacturing	89	0.06	99.20
3273	Cement and Concrete Product Manufacturing	246	0.05	99.24
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	306	0.05	99.29
4539	Other Miscellaneous Store Retailers	3,201	0.04	99.33
5112	Software Publishers	1,070	0.04	99.38
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	29	0.04	99.42
3359	Other Electrical Equipment and Component Manufacturing	93	0.04	99.46
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	801	0.04	99.50
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	246	0.04	99.54
8112	Electronic and Precision Equipment Repair and Maintenance	1,423	0.04	99.58
5239	Other Financial Investment Activities	1,427	0.03	99.61
3323	Architectural and Structural Metals Manufacturing	303	0.03	99.65
4422	Home Furnishings Stores	1,254	0.03	99.68
2123	Nonmetallic Mineral Mining and Quarrying	77	0.03	99.72
5414	Specialized Design Services	1,717	0.03	99.75
4246	Chemical and Allied Products Merchant Wholesalers	323	0.03	99.77
4431	Electronics and Appliance Stores	1,685	0.02	99.80
5614	Business Support Services	16,807	0.02	99.82
3325	Hardware Manufacturing	35	0.02	99.84
5418	Advertising, Public Relations, and Related Services	535	0.02	99.85
5621	Waste Collection	190	0.01	99.87
4239	Miscellaneous Durable Goods Merchant Wholesalers	1,117	0.01	99.88
3332	Industrial Machinery Manufacturing	55	0.01	99.89
5171	Wired Telecommunications Carriers	124	0.01	99.90
3366	Ship and Boat Building	41	0.01	99.91
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	1,668	0.01	99.92
4232	Furniture and Home Furnishing Merchant Wholesalers	897	0.01	99.93
4921	Couriers and Express Delivery Services	249	0.01	99.93

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4451	Grocery Stores	3,432	0.01	99.94
4441	Building Material and Supplies Dealers	1,322	0.01	99.95
4842	Specialized Freight Trucking	336	0.01	99.95
4247	Petroleum and Petroleum Products Merchant Wholesalers	281	0.01	99.96
4884	Support Activities for Road Transportation	853	0.01	99.96
4853	Taxi and Limousine Service	664	0.01	99.97
6113	Colleges, Universities, and Professional Schools	1,040	0.00	99.97
5322	Consumer Goods Rental	383	0.00	99.98
5417	Scientific Research and Development Services	1,781	0.00	99.98
5242	Agencies, Brokerages, and Other Insurance Related Activities	5,011	0.00	99.98
5241	Insurance Carriers	250	0.00	99.99
5321	Automotive Equipment Rental and Leasing	417	0.00	99.99
7211	Traveler Accommodation	2,047	0.00	99.99
4922	Local Messengers and Local Delivery	70	0.00	99.99
3353	Electrical Equipment Manufacturing	64	0.00	100.00
5179	Other Telecommunications	782	0.00	100.00
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	75	0.00	100.00
5323	General Rental Centers	14	0.00	100.00
4532	Office Supplies, Stationery, and Gift Stores	386	0.00	100.00
5419	Other Professional, Scientific, and Technical Services	3,353	0.00	100.00
3221	Pulp, Paper, and Paperboard Mills	16	0.00	100.00
3255	Paint, Coating, and Adhesive Manufacturing	25	0.00	100.00
3329	Other Fabricated Metal Product Manufacturing	11	0.00	100.00
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	318	0.00	100.00
3279	Other Nonmetallic Mineral Product Manufacturing	14	0.00	100.00
4241	Paper and Paper Product Merchant Wholesalers	112	0.00	100.00

Source: See Table 4.1.

Table 4.4. IT—Number of Businesses and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5415	Computer Systems Design and Related Services	13,366	48.98	48.98
5179	Other Telecommunications	782	17.39	66.38
5416	Management, Scientific, and Technical Consulting Services	33,957	6.67	73.05
5112	Software Publishers	1,070	4.13	77.17
4431	Electronics and Appliance Stores	1,303	4.00	81.17
5413	Architectural, Engineering, and Related Services	9,164	3.89	85.06
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	833	3.57	88.63
5417	Scientific Research and Development Services	1,781	3.43	92.06
3343	Audio and Video Equipment Manufacturing	91	1.42	93.48
3342	Communications Equipment Manufacturing	253	1.29	94.77
3341	Computer and Peripheral Equipment Manufacturing	217	1.18	95.95
3344	Semiconductor and Other Electronic Component Manufacturing	202	0.69	96.64
5419	Other Professional, Scientific, and Technical Services	1,049	0.65	97.29
5171	Wired Telecommunications Carriers	124	0.42	97.71
4236	Electrical and Electronic Goods Merchant Wholesalers	1,329	0.40	98.11
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	76	0.36	98.47
2382	Building Equipment Contractors	9,288	0.28	98.75
4532	Office Supplies, Stationery, and Gift Stores	386	0.24	98.99
5616	Investigation and Security Services	925	0.14	99.14
3231	Printing and Related Support Activities	911	0.11	99.25
5223	Activities Related to Credit Intermediation	166	0.09	99.33
5612	Facilities Support Services	311	0.08	99.42
4232	Furniture and Home Furnishing Merchant Wholesalers	398	0.07	99.48
4821	Rail Transportation	55	0.06	99.54
3353	Electrical Equipment Manufacturing	46	0.06	99.60
5111	Newspaper, Periodical, Book, and Directory Publishers	470	0.06	99.65
5613	Employment Services	1,184	0.04	99.70
5191	Other Information Services	938	0.04	99.74
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	815	0.03	99.77
2362	Nonresidential Building Construction	2,622	0.03	99.80
4931	Warehousing and Storage	338	0.03	99.83
5614	Business Support Services	16,807	0.03	99.86
3333	Commercial and Service Industry Machinery Manufacturing	50	0.03	99.88
3323	Architectural and Structural Metals Manufacturing	317	0.02	99.90
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	3,902	0.02	99.92
6117	Educational Support Services	812	0.02	99.94
4512	Book, Periodical, and Music Stores	750	0.02	99.96
5414	Specialized Design Services	2,202	0.01	99.97
5418	Advertising, Public Relations, and Related Services	384	0.01	99.98
5411	Legal Services	14,396	0.01	99.99
4543	Direct Selling Establishments	457	0.01	100.00
8112	Electronic and Precision Equipment Repair and Maintenance	693	0.00	100.00

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
4241	Paper and Paper Product Merchant Wholesalers	332	0.00	100.00
5182	Data Processing, Hosting, and Related Services	1,340	0.00	100.00
5611	Office Administrative Services	1,035	0.00	100.00

Source: See Table 4.1.

Table 4.5. Services—Number of Businesses and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5242	Agencies, Brokerages, and Other Insurance Related Activities	5,348	28.57	28.57
5241	Insurance Carriers	410	14.90	43.47
6211	Offices of Physicians	16,599	5.33	48.80
3341	Computer and Peripheral Equipment Manufacturing	249	3.90	52.70
5415	Computer Systems Design and Related Services	13,366	3.74	56.44
4851	Urban Transit Systems	150	3.67	60.11
4821	Rail Transportation	55	3.04	63.15
5418	Advertising, Public Relations, and Related Services	3,156	2.95	66.10
6241	Individual and Family Services	5,857	2.66	68.77
5613	Employment Services	2,505	2.47	71.24
6239	Other Residential Care Facilities	466	1.97	73.21
4859	Other Transit and Ground Passenger Transportation	361	1.76	74.98
5413	Architectural, Engineering, and Related Services	9,207	1.74	76.72
5223	Activities Related to Credit Intermediation	2,277	1.71	78.43
3231	Printing and Related Support Activities	1,864	1.70	80.13
5416	Management, Scientific, and Technical Consulting Services	34,151	1.45	81.58
4855	Charter Bus Industry	143	1.22	82.81
5321	Automotive Equipment Rental and Leasing	830	0.87	83.67
6219	Other Ambulatory Health Care Services	2,355	0.84	84.51
6117	Educational Support Services	812	0.80	85.31
6221	General Medical and Surgical Hospitals	462	0.78	86.09
6212	Offices of Dentists	5,627	0.76	86.86
6113	Colleges, Universities, and Professional Schools	1,040	0.73	87.59
5617	Services to Buildings and Dwellings	11,251	0.71	88.30
2211	Electric Power Generation, Transmission and Distribution	42	0.57	88.86
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	234	0.52	89.38
4854	School and Employee Bus Transportation	164	0.50	89.88
2382	Building Equipment Contractors	9,373	0.49	90.37
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	2,192	0.49	90.85
5616	Investigation and Security Services	2,526	0.48	91.33
5411	Legal Services	14,396	0.47	91.81
7223	Special Food Services	1,029	0.45	92.25
5611	Office Administrative Services	1,035	0.45	92.70
5171	Wired Telecommunications Carriers	124	0.35	93.05
5419	Other Professional, Scientific, and Technical Services	7,459	0.35	93.40
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	5,076	0.31	93.71
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	916	0.30	94.01
8129	Other Personal Services	9,753	0.29	94.30
6216	Home Health Care Services	929	0.28	94.58
4241	Paper and Paper Product Merchant Wholesalers	482	0.27	94.86
5312	Offices of Real Estate Agents and Brokers	10,717	0.26	95.12
6214	Outpatient Care Centers	1,432	0.22	95.34

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
7132	Gambling Industries	28	0.19	95.53
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	478	0.19	95.72
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	267	0.18	95.89
6116	Other Schools and Instruction	3,148	0.17	96.06
4853	Taxi and Limousine Service	370	0.16	96.23
5191	Other Information Services	1,356	0.16	96.39
3399	Other Miscellaneous Manufacturing	1,109	0.16	96.54
3391	Medical Equipment and Supplies Manufacturing	594	0.15	96.70
5221	Depository Credit Intermediation	2,782	0.15	96.85
6213	Offices of Other Health Practitioners	4,612	0.13	96.98
5182	Data Processing, Hosting, and Related Services	1,340	0.13	97.11
2381	Foundation, Structure, and Building Exterior Contractors	3,687	0.13	97.24
5414	Specialized Design Services	3,982	0.12	97.35
3221	Pulp, Paper, and Paperboard Mills	16	0.11	97.46
4532	Office Supplies, Stationery, and Gift Stores	2,781	0.11	97.57
8139	Business, Professional, Labor, Political, and Similar Organizations	5,552	0.11	97.68
4247	Petroleum and Petroleum Products Merchant Wholesalers	281	0.10	97.78
5251	Insurance and Employee Benefit Funds	34	0.10	97.88
4885	Freight Transportation Arrangement	598	0.10	97.97
5614	Business Support Services	17,213	0.09	98.07
5112	Software Publishers	1,070	0.09	98.15
7211	Traveler Accommodation	2,047	0.08	98.23
5615	Travel Arrangement and Reservation Services	1,862	0.08	98.31
6215	Medical and Diagnostic Laboratories	593	0.08	98.38
8134	Civic and Social Organizations	4,249	0.07	98.46
6242	Community Food and Housing, and Emergency and Other Relief Services	189	0.07	98.53
6244	Child Day Care Services	5,102	0.07	98.60
5179	Other Telecommunications	2,169	0.06	98.66
2362	Nonresidential Building Construction	3,007	0.06	98.72
4842	Specialized Freight Trucking	742	0.06	98.79
8133	Social Advocacy Organizations	747	0.06	98.85
5121	Motion Picture and Video Industries	1,748	0.06	98.90
3351	Electric Lighting Equipment Manufacturing	51	0.06	98.96
4232	Furniture and Home Furnishing Merchant Wholesalers	897	0.05	99.01
8111	Automotive Repair and Maintenance	5,842	0.05	99.06
5622	Waste Treatment and Disposal	168	0.05	99.11
6222	Psychiatric and Substance Abuse Hospitals	186	0.05	99.16
4233	Lumber and Other Construction Materials Merchant Wholesalers	1,288	0.04	99.20
5152	Cable and Other Subscription Programming	257	0.04	99.24
8114	Personal and Household Goods Repair and Maintenance	2,497	0.03	99.27
6115	Technical and Trade Schools	316	0.03	99.31
2373	Highway, Street, and Bridge Construction	872	0.03	99.34
4931	Warehousing and Storage	810	0.03	99.37
2212	Natural Gas Distribution	87	0.03	99.41

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4841	General Freight Trucking	2,725	0.03	99.44
4921	Couriers and Express Delivery Services	249	0.03	99.46
8112	Electronic and Precision Equipment Repair and Maintenance	1,384	0.03	99.49
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	57	0.03	99.52
5172	Wireless Telecommunications Carriers (except Satellite)	756	0.02	99.54
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	2,097	0.02	99.57
5417	Scientific Research and Development Services	3,568	0.02	99.59
5311	Lessors of Real Estate	8,569	0.02	99.61
6243	Vocational Rehabilitation Services	783	0.02	99.63
3365	Railroad Rolling Stock Manufacturing	13	0.02	99.65
4244	Grocery and Related Product Merchant Wholesalers	891	0.02	99.67
4543	Direct Selling Establishments	765	0.02	99.69
5629	Remediation and Other Waste Management Services	470	0.02	99.70
5322	Consumer Goods Rental	925	0.02	99.72
4236	Electrical and Electronic Goods Merchant Wholesalers	1,329	0.02	99.73
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	1,668	0.02	99.75
5313	Activities Related to Real Estate	800	0.01	99.76
2389	Other Specialty Trade Contractors	5,383	0.01	99.78
4533	Used Merchandise Stores	1,675	0.01	99.79
7111	Performing Arts Companies	1,081	0.01	99.80
4451	Grocery Stores	3,432	0.01	99.81
8123	Drycleaning and Laundry Services	509	0.01	99.83
4471	Gasoline Stations	1,925	0.01	99.84
5612	Facilities Support Services	311	0.01	99.85
4812	Nonscheduled Air Transportation	84	0.01	99.85
4889	Other Support Activities for Transportation	1,164	0.01	99.86
2372	Land Subdivision	1,480	0.01	99.87
4461	Health and Personal Care Stores	2,334	0.01	99.88
6114	Business Schools and Computer and Management Training	257	0.01	99.88
6111	Elementary and Secondary Schools	4,064	0.01	99.89
3353	Electrical Equipment Manufacturing	95	0.01	99.90
2383	Building Finishing Contractors	4,269	0.01	99.90
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	834	0.01	99.91
5222	Nondepository Credit Intermediation	488	0.01	99.91
4539	Other Miscellaneous Store Retailers	3,201	0.01	99.92
6112	Junior Colleges	87	0.01	99.93
3342	Communications Equipment Manufacturing	343	0.00	99.93
5111	Newspaper, Periodical, Book, and Directory Publishers	2,188	0.00	99.93
4242	Drugs and Druggists' Sundries Merchant Wholesalers	312	0.00	99.94
6231	Nursing Care Facilities	836	0.00	99.94
5239	Other Financial Investment Activities	3,621	0.00	99.95
3254	Pharmaceutical and Medicine Manufacturing	355	0.00	99.95
4246	Chemical and Allied Products Merchant Wholesalers	323	0.00	99.95
5621	Waste Collection	190	0.00	99.96
4431	Electronics and Appliance Stores	2,988	0.00	99.96

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3339	Other General Purpose Machinery Manufacturing	113	0.00	99.96
7221	Full-Service Restaurants	10,705	0.00	99.97
3271	Clay Product and Refractory Manufacturing	13	0.00	99.97
3133	Textile and Fabric Finishing and Fabric Coating Mills	232	0.00	99.97
4411	Automobile Dealers	1,267	0.00	99.97
2371	Utility System Construction	420	0.00	99.97
2213	Water, Sewage and Other Systems	6	0.00	99.98
4922	Local Messengers and Local Delivery	70	0.00	99.98
4441	Building Material and Supplies Dealers	1,684	0.00	99.98
2361	Residential Building Construction	16,365	0.00	99.98
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	54	0.00	99.98
5511	Management of Companies and Enterprises	1,001	0.00	99.98
3118	Bakeries and Tortilla Manufacturing	636	0.00	99.98
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	1,320	0.00	99.98
3346	Manufacturing and Reproducing Magnetic and Optical Media	142	0.00	99.99
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	524	0.00	99.99
5151	Radio and Television Broadcasting	256	0.00	99.99
3333	Commercial and Service Industry Machinery Manufacturing	21	0.00	99.99
4811	Scheduled Air Transportation	85	0.00	99.99
5323	General Rental Centers	14	0.00	99.99
7113	Promoters of Performing Arts, Sports, and Similar Events	749	0.00	99.99
5122	Sound Recording Industries	419	0.00	99.99
3372	Office Furniture (including Fixtures) Manufacturing	55	0.00	99.99
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	101	0.00	99.99
4413	Automotive Parts, Accessories, and Tire Stores	1,051	0.00	99.99
3115	Dairy Product Manufacturing	17	0.00	99.99
4512	Book, Periodical, and Music Stores	1,076	0.00	100.00
3344	Semiconductor and Other Electronic Component Manufacturing	10	0.00	100.00
8122	Death Care Services	432	0.00	100.00
3149	Other Textile Product Mills	78	0.00	100.00
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	246	0.00	100.00
3329	Other Fabricated Metal Product Manufacturing	65	0.00	100.00
3219	Other Wood Product Manufacturing	177	0.00	100.00
3359	Other Electrical Equipment and Component Manufacturing	14	0.00	100.00
3323	Architectural and Structural Metals Manufacturing	33	0.00	100.00
3261	Plastics Product Manufacturing	139	0.00	100.00
3259	Other Chemical Product and Preparation Manufacturing	89	0.00	100.00
1114	Greenhouse, Nursery, and Floriculture Production	160	0.00	100.00
8131	Religious Organizations	11,386	0.00	100.00
5619	Other Support Services	1,147	0.00	100.00
3363	Motor Vehicle Parts Manufacturing	7	0.00	100.00
4442	Lawn and Garden Equipment and Supplies Stores	102	0.00	100.00
4422	Home Furnishings Stores	612	0.00	100.00

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
7115	Independent Artists, Writers, and Performers	1,269	0.00	100.00
3315	Foundries	5	0.00	100.00
4531	Florists	966	0.00	100.00
4482	Shoe Stores	1,037	0.00	100.00
3369	Other Transportation Equipment Manufacturing	15	0.00	100.00
3331	Agriculture, Construction, and Mining Machinery Manufacturing	56	0.00	100.00
3326	Spring and Wire Product Manufacturing	3	0.00	100.00
7222	Limited-Service Eating Places	7,693	0.00	100.00

Source: See Table 4.1.

Table 4.6. CSE—Number of Businesses and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
2211	Electric Power Generation, Transmission and Distribution	346	20.77	20.77
3362	Motor Vehicle Body and Trailer Manufacturing	19	11.27	32.04
4242	Drugs and Druggists' Sundries Merchant Wholesalers	312	9.61	41.65
3365	Railroad Rolling Stock Manufacturing	13	8.06	49.71
7223	Special Food Services	69	6.87	56.59
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	2,676	6.25	62.83
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	2,217	4.68	67.51
4247	Petroleum and Petroleum Products Merchant Wholesalers	315	3.82	71.33
4411	Automobile Dealers	1,267	2.89	74.22
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	316	2.05	76.27
2212	Natural Gas Distribution	87	2.01	78.28
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	1,710	1.98	80.26
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	893	1.36	81.62
3254	Pharmaceutical and Medicine Manufacturing	373	1.01	82.62
4236	Electrical and Electronic Goods Merchant Wholesalers	1,329	0.99	83.61
3341	Computer and Peripheral Equipment Manufacturing	217	0.96	84.57
3231	Printing and Related Support Activities	1,468	0.92	85.49
4239	Miscellaneous Durable Goods Merchant Wholesalers	1,224	0.90	86.39
4543	Direct Selling Establishments	308	0.69	87.09
3342	Communications Equipment Manufacturing	343	0.68	87.76
4481	Clothing Stores	793	0.53	88.29
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	857	0.52	88.81
8111	Automotive Repair and Maintenance	3,735	0.49	89.30
5413	Architectural, Engineering, and Related Services	7,283	0.48	89.78
4532	Office Supplies, Stationery, and Gift Stores	386	0.42	90.20
5415	Computer Systems Design and Related Services	13,207	0.41	90.61
3391	Medical Equipment and Supplies Manufacturing	252	0.40	91.01
4431	Electronics and Appliance Stores	1,303	0.40	91.41
4232	Furniture and Home Furnishing Merchant Wholesalers	398	0.39	91.80
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	626	0.38	92.18
2213	Water, Sewage and Other Systems	6	0.38	92.56
4241	Paper and Paper Product Merchant Wholesalers	444	0.38	92.93
4883	Support Activities for Water Transportation	45	0.36	93.30
3364	Aerospace Product and Parts Manufacturing	106	0.34	93.64
3311	Iron and Steel Mills and Ferroalloy Manufacturing	53	0.34	93.98
5111	Newspaper, Periodical, Book, and Directory Publishers	1,676	0.31	94.29
3333	Commercial and Service Industry Machinery Manufacturing	193	0.31	94.60
4413	Automotive Parts, Accessories, and Tire Stores	1,051	0.29	94.89
3369	Other Transportation Equipment Manufacturing	15	0.28	95.17
3259	Other Chemical Product and Preparation Manufacturing	89	0.26	95.43
4233	Lumber and Other Construction Materials Merchant Wholesalers	1,399	0.26	95.69

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5612	Facilities Support Services	311	0.26	95.95
4246	Chemical and Allied Products Merchant Wholesalers	282	0.25	96.20
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	63	0.21	96.41
5416	Management, Scientific, and Technical Consulting Services	3,117	0.20	96.60
3363	Motor Vehicle Parts Manufacturing	67	0.18	96.78
4512	Book, Periodical, and Music Stores	750	0.17	96.95
3344	Semiconductor and Other Electronic Component Manufacturing	297	0.15	97.10
4421	Furniture Stores	1,423	0.14	97.24
5112	Software Publishers	1,070	0.14	97.38
3331	Agriculture, Construction, and Mining Machinery Manufacturing	76	0.13	97.51
4884	Support Activities for Road Transportation	75	0.12	97.63
3372	Office Furniture (including Fixtures) Manufacturing	151	0.12	97.75
3329	Other Fabricated Metal Product Manufacturing	5	0.11	97.86
5179	Other Telecommunications	1,387	0.10	97.96
5417	Scientific Research and Development Services	3,568	0.10	98.06
4511	Sporting Goods, Hobby, and Musical Instrument Stores	1,575	0.10	98.15
2362	Nonresidential Building Construction	2,622	0.09	98.24
8139	Business, Professional, Labor, Political, and Similar Organizations	3,582	0.08	98.32
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	10	0.08	98.40
4539	Other Miscellaneous Store Retailers	3,766	0.08	98.48
4244	Grocery and Related Product Merchant Wholesalers	763	0.07	98.55
3339	Other General Purpose Machinery Manufacturing	100	0.07	98.62
3323	Architectural and Structural Metals Manufacturing	121	0.07	98.69
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	69	0.07	98.76
3332	Industrial Machinery Manufacturing	37	0.06	98.83
3359	Other Electrical Equipment and Component Manufacturing	93	0.06	98.89
3261	Plastics Product Manufacturing	139	0.06	98.94
4811	Scheduled Air Transportation	85	0.06	99.00
5242	Agencies, Brokerages, and Other Insurance Related Activities	5,011	0.05	99.05
5321	Automotive Equipment Rental and Leasing	830	0.05	99.11
3271	Clay Product and Refractory Manufacturing	12	0.05	99.15
8112	Electronic and Precision Equipment Repair and Maintenance	230	0.05	99.20
5311	Lessors of Real Estate	4,555	0.05	99.25
5616	Investigation and Security Services	1,444	0.05	99.29
8123	Drycleaning and Laundry Services	478	0.04	99.33
7211	Traveler Accommodation	2,047	0.04	99.37
8134	Civic and Social Organizations	4,249	0.04	99.41
5419	Other Professional, Scientific, and Technical Services	3,353	0.04	99.45
5614	Business Support Services	16,807	0.04	99.48
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	57	0.03	99.52

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
2389	Other Specialty Trade Contractors	1,204	0.03	99.55
3399	Other Miscellaneous Manufacturing	608	0.03	99.58
5629	Remediation and Other Waste Management Services	437	0.03	99.61
4412	Other Motor Vehicle Dealers	275	0.03	99.64
1152	Support Activities for Animal Production	440	0.03	99.67
5613	Employment Services	2,505	0.03	99.70
3274	Lime and Gypsum Product Manufacturing	3	0.03	99.73
5191	Other Information Services	1,165	0.02	99.75
3353	Electrical Equipment Manufacturing	33	0.02	99.78
6212	Offices of Dentists	5,627	0.02	99.80
5622	Waste Treatment and Disposal	46	0.02	99.82
3221	Pulp, Paper, and Paperboard Mills	58	0.02	99.84
4442	Lawn and Garden Equipment and Supplies Stores	102	0.02	99.86
8131	Religious Organizations	11,386	0.02	99.88
7221	Full-Service Restaurants	10,705	0.02	99.89
7224	Drinking Places (Alcoholic Beverages)	1,197	0.02	99.91
6215	Medical and Diagnostic Laboratories	539	0.01	99.92
5617	Services to Buildings and Dwellings	4,347	0.01	99.93
3121	Beverage Manufacturing	59	0.01	99.94
8129	Other Personal Services	606	0.01	99.95
8121	Personal Care Services	6,564	0.01	99.96
5174	Satellite Telecommunications	32	0.01	99.96
3115	Dairy Product Manufacturing	49	0.01	99.97
4881	Support Activities for Air Transportation	63	0.01	99.98
2382	Building Equipment Contractors	3,734	0.01	99.98
3118	Bakeries and Tortilla Manufacturing	119	0.00	99.99
6214	Outpatient Care Centers	185	0.00	99.99
4422	Home Furnishings Stores	1,254	0.00	99.99
6213	Offices of Other Health Practitioners	607	0.00	100.00
4841	General Freight Trucking	914	0.00	100.00
6117	Educational Support Services	812	0.00	100.00

Source: See Table 4.1.

Table 4.7. Construction—Number of Listed M/WBEs and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
2373	Highway, Street, and Bridge Construction	135	26.27	26.27
2382	Building Equipment Contractors	885	14.01	40.28
2362	Nonresidential Building Construction	618	13.87	54.15
2381	Foundation, Structure, and Building Exterior Contractors	562	8.68	62.82
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	46	4.32	67.14
5413	Architectural, Engineering, and Related Services	1,701	4.31	71.45
2383	Building Finishing Contractors	607	3.14	74.60
2389	Other Specialty Trade Contractors	525	2.96	77.55
5415	Computer Systems Design and Related Services	4,564	2.74	80.29
3273	Cement and Concrete Product Manufacturing	23	2.58	82.87
3323	Architectural and Structural Metals Manufacturing	59	2.01	84.88
2371	Utility System Construction	68	1.71	86.60
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	21	1.11	87.71
5614	Business Support Services	2,015	0.93	88.64
4233	Lumber and Other Construction Materials Merchant Wholesalers	127	0.63	89.27
5416	Management, Scientific, and Technical Consulting Services	8,424	0.63	89.90
2361	Residential Building Construction	1,029	0.55	90.46
4236	Electrical and Electronic Goods Merchant Wholesalers	165	0.55	91.00
4842	Specialized Freight Trucking	160	0.54	91.55
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	307	0.51	92.05
2379	Other Heavy and Civil Engineering Construction	25	0.46	92.51
5418	Advertising, Public Relations, and Related Services	227	0.41	92.92
4841	General Freight Trucking	494	0.39	93.31
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	467	0.34	93.66
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	62	0.33	93.98
5617	Services to Buildings and Dwellings	2,033	0.30	94.28
3219	Other Wood Product Manufacturing	14	0.29	94.57
4441	Building Material and Supplies Dealers	181	0.26	94.83
3399	Other Miscellaneous Manufacturing	244	0.25	95.08
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	77	0.24	95.32
5613	Employment Services	706	0.22	95.55
5222	Nondepository Credit Intermediation	10	0.21	95.75
5312	Offices of Real Estate Agents and Brokers	1,138	0.21	95.96
8139	Business, Professional, Labor, Political, and Similar Organizations	26	0.20	96.16
8114	Personal and Household Goods Repair and Maintenance	322	0.18	96.34
3241	Petroleum and Coal Products Manufacturing	10	0.17	96.51
5182	Data Processing, Hosting, and Related Services	379	0.16	96.67
3359	Other Electrical Equipment and Component Manufacturing	16	0.16	96.83
4242	Drugs and Druggists' Sundries Merchant Wholesalers	65	0.15	96.98
5616	Investigation and Security Services	467	0.14	97.12

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
2123	Nonmetallic Mineral Mining and Quarrying	7	0.14	97.26
4442	Lawn and Garden Equipment and Supplies Stores	75	0.13	97.39
4422	Home Furnishings Stores	276	0.13	97.52
4239	Miscellaneous Durable Goods Merchant Wholesalers	201	0.13	97.64
5612	Facilities Support Services	118	0.12	97.77
3271	Clay Product and Refractory Manufacturing	4	0.12	97.89
3351	Electric Lighting Equipment Manufacturing	11	0.10	97.99
1151	Support Activities for Crop Production	13	0.10	98.10
5619	Other Support Services	269	0.10	98.20
4247	Petroleum and Petroleum Products Merchant Wholesalers	21	0.10	98.30
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	0.10	98.40
4889	Other Support Activities for Transportation	118	0.09	98.49
3329	Other Fabricated Metal Product Manufacturing	11	0.09	98.58
3372	Office Furniture (including Fixtures) Manufacturing	23	0.09	98.67
3311	Iron and Steel Mills and Ferroalloy Manufacturing	4	0.08	98.75
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	13	0.08	98.83
5629	Remediation and Other Waste Management Services	73	0.07	98.90
5121	Motion Picture and Video Industries	382	0.07	98.96
4232	Furniture and Home Furnishing Merchant Wholesalers	149	0.06	99.03
4539	Other Miscellaneous Store Retailers	393	0.06	99.09
8111	Automotive Repair and Maintenance	402	0.05	99.14
4421	Furniture Stores	165	0.05	99.19
5321	Automotive Equipment Rental and Leasing	11	0.05	99.24
5622	Waste Treatment and Disposal	41	0.05	99.29
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	276	0.04	99.33
5417	Scientific Research and Development Services	669	0.03	99.36
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	216	0.03	99.39
4431	Electronics and Appliance Stores	150	0.03	99.42
3231	Printing and Related Support Activities	350	0.03	99.45
8112	Electronic and Precision Equipment Repair and Maintenance	95	0.03	99.48
3312	Steel Product Manufacturing from Purchased Steel	0	0.03	99.50
3342	Communications Equipment Manufacturing	61	0.03	99.53
4883	Support Activities for Water Transportation	8	0.02	99.55
5414	Specialized Design Services	1,663	0.02	99.58
2372	Land Subdivision	62	0.02	99.60
3326	Spring and Wire Product Manufacturing	3	0.02	99.62
3344	Semiconductor and Other Electronic Component Manufacturing	27	0.02	99.65
5419	Other Professional, Scientific, and Technical Services	750	0.02	99.67
4471	Gasoline Stations	138	0.02	99.69
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	36	0.02	99.71
4543	Direct Selling Establishments	123	0.02	99.73
5171	Wired Telecommunications Carriers	14	0.02	99.75

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4532	Office Supplies, Stationery, and Gift Stores	93	0.02	99.76
6213	Offices of Other Health Practitioners	36	0.02	99.78
8129	Other Personal Services	1,430	0.02	99.79
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	30	0.02	99.81
4246	Chemical and Allied Products Merchant Wholesalers	36	0.01	99.82
3339	Other General Purpose Machinery Manufacturing	12	0.01	99.84
3259	Other Chemical Product and Preparation Manufacturing	14	0.01	99.85
5322	Consumer Goods Rental	56	0.01	99.86
5242	Agencies, Brokerages, and Other Insurance Related Activities	466	0.01	99.87
3279	Other Nonmetallic Mineral Product Manufacturing	14	0.01	99.88
7223	Special Food Services	14	0.01	99.89
5621	Waste Collection	33	0.01	99.90
3325	Hardware Manufacturing	2	0.01	99.91
3365	Railroad Rolling Stock Manufacturing	3	0.01	99.91
5231	Securities and Commodity Contracts Intermediation and Brokerage	11	0.01	99.92
5311	Lessors of Real Estate	222	0.01	99.93
5241	Insurance Carriers	18	0.00	99.93
3315	Foundries	2	0.00	99.94
4451	Grocery Stores	324	0.00	99.94
3149	Other Textile Product Mills	35	0.00	99.94
3261	Plastics Product Manufacturing	15	0.00	99.95
4832	Inland Water Transportation	1	0.00	99.95
6211	Offices of Physicians	1,232	0.00	99.95
3391	Medical Equipment and Supplies Manufacturing	33	0.00	99.96
3313	Alumina and Aluminum Production and Processing	0	0.00	99.96
4884	Support Activities for Road Transportation	63	0.00	99.96
3379	Other Furniture Related Product Manufacturing	11	0.00	99.96
2211	Electric Power Generation, Transmission and Distribution	0	0.00	99.97
3132	Fabric Mills	25	0.00	99.97
5179	Other Telecommunications	235	0.00	99.97
3331	Agriculture, Construction, and Mining Machinery Manufacturing	4	0.00	99.97
1114	Greenhouse, Nursery, and Floriculture Production	17	0.00	99.97
3333	Commercial and Service Industry Machinery Manufacturing	15	0.00	99.98
3332	Industrial Machinery Manufacturing	3	0.00	99.98
3353	Electrical Equipment Manufacturing	10	0.00	99.98
6111	Elementary and Secondary Schools	9	0.00	99.98
6117	Educational Support Services	291	0.00	99.98
4812	Nonscheduled Air Transportation	7	0.00	99.98
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing	0	0.00	99.99
3222	Converted Paper Product Manufacturing	0	0.00	99.99
5172	Wireless Telecommunications Carriers (except Satellite)	33	0.00	99.99
4411	Automobile Dealers	51	0.00	99.99
6212	Offices of Dentists	488	0.00	99.99
3262	Rubber Product Manufacturing	4	0.00	99.99

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
5221	Depository Credit Intermediation	25	0.00	99.99
3352	Household Appliance Manufacturing	3	0.00	99.99
4461	Health and Personal Care Stores	56	0.00	99.99
1119	Other Crop Farming	76	0.00	100.00
2212	Natural Gas Distribution	4	0.00	100.00
4241	Paper and Paper Product Merchant Wholesalers	114	0.00	100.00
2213	Water, Sewage and Other Systems	5	0.00	100.00
4511	Sporting Goods, Hobby, and Musical Instrument Stores	173	0.00	100.00
5239	Other Financial Investment Activities	116	0.00	100.00
8123	Drycleaning and Laundry Services	426	0.00	100.00
5615	Travel Arrangement and Reservation Services	376	0.00	100.00
3255	Paint, Coating, and Adhesive Manufacturing	2	0.00	100.00
3362	Motor Vehicle Body and Trailer Manufacturing	5	0.00	100.00
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	0	0.00	100.00
5411	Legal Services	1,078	0.00	100.00
4931	Warehousing and Storage	38	0.00	100.00
4921	Couriers and Express Delivery Services	51	0.00	100.00
3328	Coating, Engraving, Heat Treating, and Allied Activities	13	0.00	100.00
3335	Metalworking Machinery Manufacturing	6	0.00	100.00
5152	Cable and Other Subscription Programming	13	0.00	100.00
3141	Textile Furnishings Mills	22	0.00	100.00
4412	Other Motor Vehicle Dealers	15	0.00	100.00
5323	General Rental Centers	2	0.00	100.00
3363	Motor Vehicle Parts Manufacturing	0	0.00	100.00
5223	Activities Related to Credit Intermediation	11	0.00	100.00
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	2	0.00	100.00
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	16	0.00	100.00
6215	Medical and Diagnostic Laboratories	59	0.00	100.00
3274	Lime and Gypsum Product Manufacturing	0	0.00	100.00

Source: See Table 4.1.

Table 4.8. AE-CRS—Number of Listed M/WBEs and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5413	Architectural, Engineering, and Related Services	1,701	78.58	78.58
5416	Management, Scientific, and Technical Consulting Services	9,310	11.63	90.21
5415	Computer Systems Design and Related Services	4,737	2.74	92.95
2382	Building Equipment Contractors	885	1.29	94.24
5418	Advertising, Public Relations, and Related Services	665	0.93	95.17
2211	Electric Power Generation, Transmission and Distribution	0	0.67	95.84
5613	Employment Services	706	0.42	96.26
5614	Business Support Services	1,989	0.41	96.67
2373	Highway, Street, and Bridge Construction	135	0.37	97.04
2381	Foundation, Structure, and Building Exterior Contractors	538	0.32	97.36
2362	Nonresidential Building Construction	618	0.31	97.67
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	45	0.22	97.90
2371	Utility System Construction	46	0.22	98.12
5419	Other Professional, Scientific, and Technical Services	830	0.20	98.32
2383	Building Finishing Contractors	452	0.20	98.52
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	922	0.18	98.70
2389	Other Specialty Trade Contractors	525	0.12	98.82
5411	Legal Services	1,177	0.11	98.93
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	169	0.08	99.01
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	2	0.08	99.09
5622	Waste Treatment and Disposal	41	0.08	99.17
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	60	0.07	99.24
5629	Remediation and Other Waste Management Services	50	0.06	99.30
5619	Other Support Services	269	0.05	99.35
5414	Specialized Design Services	811	0.05	99.40
3312	Steel Product Manufacturing from Purchased Steel	0	0.04	99.44
3231	Printing and Related Support Activities	228	0.04	99.48
8134	Civic and Social Organizations	26	0.04	99.52
4885	Freight Transportation Arrangement	106	0.04	99.56
5417	Scientific Research and Development Services	669	0.03	99.60
3359	Other Electrical Equipment and Component Manufacturing	16	0.03	99.63
4247	Petroleum and Petroleum Products Merchant Wholesalers	16	0.03	99.66
2361	Residential Building Construction	747	0.02	99.68
3118	Bakeries and Tortilla Manufacturing	85	0.02	99.71
8114	Personal and Household Goods Repair and Maintenance	254	0.02	99.73
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	255	0.02	99.75
5621	Waste Collection	33	0.02	99.76
4841	General Freight Trucking	494	0.02	99.78
5191	Other Information Services	166	0.01	99.79
4532	Office Supplies, Stationery, and Gift Stores	93	0.01	99.81
5182	Data Processing, Hosting, and Related Services	379	0.01	99.82
4821	Rail Transportation	1	0.01	99.83

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3399	Other Miscellaneous Manufacturing	22	0.01	99.84
5617	Services to Buildings and Dwellings	1,646	0.01	99.85
3341	Computer and Peripheral Equipment Manufacturing	29	0.01	99.86
5616	Investigation and Security Services	291	0.01	99.87
5612	Facilities Support Services	118	0.01	99.88
5611	Office Administrative Services	180	0.01	99.89
4812	Nonscheduled Air Transportation	7	0.01	99.89
4246	Chemical and Allied Products Merchant Wholesalers	36	0.01	99.90
4431	Electronics and Appliance Stores	197	0.01	99.91
5239	Other Financial Investment Activities	80	0.01	99.91
2213	Water, Sewage and Other Systems	5	0.01	99.92
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	39	0.01	99.92
6215	Medical and Diagnostic Laboratories	59	0.00	99.93
4421	Furniture Stores	165	0.00	99.93
3271	Clay Product and Refractory Manufacturing	3	0.00	99.94
5313	Activities Related to Real Estate	102	0.00	99.94
5242	Agencies, Brokerages, and Other Insurance Related Activities	37	0.00	99.95
7121	Museums, Historical Sites, and Similar Institutions	52	0.00	99.95
5112	Software Publishers	166	0.00	99.96
5322	Consumer Goods Rental	46	0.00	99.96
3323	Architectural and Structural Metals Manufacturing	17	0.00	99.96
4236	Electrical and Electronic Goods Merchant Wholesalers	153	0.00	99.97
5121	Motion Picture and Video Industries	370	0.00	99.97
7115	Independent Artists, Writers, and Performers	518	0.00	99.97
3372	Office Furniture (including Fixtures) Manufacturing	12	0.00	99.98
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	25	0.00	99.98
4233	Lumber and Other Construction Materials Merchant Wholesalers	81	0.00	99.98
6117	Educational Support Services	291	0.00	99.98
2123	Nonmetallic Mineral Mining and Quarrying	1	0.00	99.99
4543	Direct Selling Establishments	19	0.00	99.99
3329	Other Fabricated Metal Product Manufacturing	9	0.00	99.99
8111	Automotive Repair and Maintenance	70	0.00	99.99
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	0.00	99.99
1151	Support Activities for Crop Production	13	0.00	99.99
3273	Cement and Concrete Product Manufacturing	18	0.00	100.00
7221	Full-Service Restaurants	986	0.00	100.00
3342	Communications Equipment Manufacturing	7	0.00	100.00
6211	Offices of Physicians	1,232	0.00	100.00
3261	Plastics Product Manufacturing	15	0.00	100.00
3335	Metalworking Machinery Manufacturing	6	0.00	100.00
4412	Other Motor Vehicle Dealers	15	0.00	100.00
4244	Grocery and Related Product Merchant Wholesalers	92	0.00	100.00
2131	Support Activities for Mining	2	0.00	100.00
4854	School and Employee Bus Transportation	42	0.00	100.00

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
3219	Other Wood Product Manufacturing	2	0.00	100.00
4842	Specialized Freight Trucking	79	0.00	100.00
4239	Miscellaneous Durable Goods Merchant Wholesalers	120	0.00	100.00
4441	Building Material and Supplies Dealers	33	0.00	100.00
4921	Couriers and Express Delivery Services	51	0.00	100.00
1153	Support Activities for Forestry	6	0.00	100.00
4539	Other Miscellaneous Store Retailers	393	0.00	100.00
4811	Scheduled Air Transportation	1	0.00	100.00

Source: See Table 4.1.

Table 4.9. Maintenance—Number of Listed M/WBEs and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5617	Services to Buildings and Dwellings	2,033	19.34	19.34
2373	Highway, Street, and Bridge Construction	135	13.00	32.34
2382	Building Equipment Contractors	885	11.01	43.35
5616	Investigation and Security Services	601	5.64	48.99
5416	Management, Scientific, and Technical Consulting Services	8,865	4.87	53.86
4851	Urban Transit Systems	33	4.07	57.93
2362	Nonresidential Building Construction	618	4.01	61.94
8114	Personal and Household Goods Repair and Maintenance	181	3.08	65.02
2381	Foundation, Structure, and Building Exterior Contractors	547	2.82	67.84
2211	Electric Power Generation, Transmission and Distribution	0	2.43	70.27
3365	Railroad Rolling Stock Manufacturing	3	2.31	72.57
2383	Building Finishing Contractors	607	2.08	74.65
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	1.83	76.48
2389	Other Specialty Trade Contractors	525	1.66	78.15
5413	Architectural, Engineering, and Related Services	1,665	1.61	79.75
4543	Direct Selling Establishments	120	1.53	81.28
4881	Support Activities for Air Transportation	4	1.33	82.61
3399	Other Miscellaneous Manufacturing	134	1.23	83.84
2361	Residential Building Construction	1,029	1.23	85.07
5622	Waste Treatment and Disposal	41	1.16	86.23
6241	Individual and Family Services	13	1.16	87.39
4841	General Freight Trucking	494	0.95	88.34
5613	Employment Services	719	0.79	89.13
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	0	0.79	89.92
3351	Electric Lighting Equipment Manufacturing	11	0.69	90.61
5611	Office Administrative Services	180	0.69	91.30
5612	Facilities Support Services	118	0.69	91.99
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	307	0.61	92.60
6211	Offices of Physicians	1,232	0.54	93.14
5415	Computer Systems Design and Related Services	4,564	0.51	93.65
4236	Electrical and Electronic Goods Merchant Wholesalers	153	0.50	94.15
3342	Communications Equipment Manufacturing	61	0.48	94.63
4471	Gasoline Stations	138	0.46	95.09
6212	Offices of Dentists	488	0.42	95.51
3364	Aerospace Product and Parts Manufacturing	7	0.39	95.90
4233	Lumber and Other Construction Materials Merchant Wholesalers	127	0.39	96.29
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	35	0.34	96.62
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	77	0.23	96.85
5311	Lessors of Real Estate	130	0.23	97.08
3344	Semiconductor and Other Electronic Component Manufacturing	27	0.22	97.29

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
2371	Utility System Construction	68	0.21	97.50
8129	Other Personal Services	48	0.19	97.69
4533	Used Merchandise Stores	386	0.17	97.86
3339	Other General Purpose Machinery Manufacturing	16	0.16	98.01
8133	Social Advocacy Organizations	7	0.15	98.16
3271	Clay Product and Refractory Manufacturing	3	0.14	98.30
1151	Support Activities for Crop Production	13	0.12	98.42
5619	Other Support Services	269	0.12	98.54
6243	Vocational Rehabilitation Services	77	0.11	98.64
8111	Automotive Repair and Maintenance	244	0.10	98.74
5629	Remediation and Other Waste Management Services	59	0.10	98.85
4821	Rail Transportation	1	0.08	98.93
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	169	0.08	99.01
2379	Other Heavy and Civil Engineering Construction	25	0.06	99.07
8123	Drycleaning and Laundry Services	9	0.06	99.14
3259	Other Chemical Product and Preparation Manufacturing	14	0.06	99.20
3273	Cement and Concrete Product Manufacturing	21	0.05	99.24
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	46	0.05	99.29
4539	Other Miscellaneous Store Retailers	393	0.04	99.33
5112	Software Publishers	166	0.04	99.38
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	0	0.04	99.42
3359	Other Electrical Equipment and Component Manufacturing	16	0.04	99.46
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	60	0.04	99.50
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	21	0.04	99.54
8112	Electronic and Precision Equipment Repair and Maintenance	234	0.04	99.58
5239	Other Financial Investment Activities	80	0.03	99.61
3323	Architectural and Structural Metals Manufacturing	36	0.03	99.65
4422	Home Furnishings Stores	108	0.03	99.68
2123	Nonmetallic Mineral Mining and Quarrying	7	0.03	99.72
5414	Specialized Design Services	811	0.03	99.75
4246	Chemical and Allied Products Merchant Wholesalers	42	0.03	99.77
4431	Electronics and Appliance Stores	150	0.02	99.80
5614	Business Support Services	1,989	0.02	99.82
3325	Hardware Manufacturing	2	0.02	99.84
5418	Advertising, Public Relations, and Related Services	140	0.02	99.85
5621	Waste Collection	33	0.01	99.87
4239	Miscellaneous Durable Goods Merchant Wholesalers	134	0.01	99.88
3332	Industrial Machinery Manufacturing	5	0.01	99.89
5171	Wired Telecommunications Carriers	14	0.01	99.90
3366	Ship and Boat Building	2	0.01	99.91
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	276	0.01	99.92
4232	Furniture and Home Furnishing Merchant Wholesalers	149	0.01	99.93
4921	Couriers and Express Delivery Services	51	0.01	99.93

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4451	Grocery Stores	324	0.01	99.94
4441	Building Material and Supplies Dealers	111	0.01	99.95
4842	Specialized Freight Trucking	79	0.01	99.95
4247	Petroleum and Petroleum Products Merchant Wholesalers	16	0.01	99.96
4884	Support Activities for Road Transportation	63	0.01	99.96
4853	Taxi and Limousine Service	69	0.01	99.97
6113	Colleges, Universities, and Professional Schools	4	0.00	99.97
5322	Consumer Goods Rental	46	0.00	99.98
5417	Scientific Research and Development Services	322	0.00	99.98
5242	Agencies, Brokerages, and Other Insurance Related Activities	466	0.00	99.98
5241	Insurance Carriers	18	0.00	99.99
5321	Automotive Equipment Rental and Leasing	11	0.00	99.99
7211	Traveler Accommodation	159	0.00	99.99
4922	Local Messengers and Local Delivery	10	0.00	99.99
3353	Electrical Equipment Manufacturing	9	0.00	100.00
5179	Other Telecommunications	81	0.00	100.00
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	10	0.00	100.00
5323	General Rental Centers	2	0.00	100.00
4532	Office Supplies, Stationery, and Gift Stores	93	0.00	100.00
5419	Other Professional, Scientific, and Technical Services	398	0.00	100.00
3221	Pulp, Paper, and Paperboard Mills	1	0.00	100.00
3255	Paint, Coating, and Adhesive Manufacturing	2	0.00	100.00
3329	Other Fabricated Metal Product Manufacturing	0	0.00	100.00
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	39	0.00	100.00
3279	Other Nonmetallic Mineral Product Manufacturing	2	0.00	100.00
4241	Paper and Paper Product Merchant Wholesalers	13	0.00	100.00

Source: See Table 4.1.

Table 4.10. IT—Number of Listed M/WBEs and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5415	Computer Systems Design and Related Services	4,737	48.98	48.98
5179	Other Telecommunications	81	17.39	66.38
5416	Management, Scientific, and Technical Consulting Services	9,283	6.67	73.05
5112	Software Publishers	166	4.13	77.17
4431	Electronics and Appliance Stores	197	4.00	81.17
5413	Architectural, Engineering, and Related Services	1,665	3.89	85.06
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	214	3.57	88.63
5417	Scientific Research and Development Services	322	3.43	92.06
3343	Audio and Video Equipment Manufacturing	20	1.42	93.48
3342	Communications Equipment Manufacturing	48	1.29	94.77
3341	Computer and Peripheral Equipment Manufacturing	42	1.18	95.95
3344	Semiconductor and Other Electronic Component Manufacturing	27	0.69	96.64
5419	Other Professional, Scientific, and Technical Services	574	0.65	97.29
5171	Wired Telecommunications Carriers	14	0.42	97.71
4236	Electrical and Electronic Goods Merchant Wholesalers	165	0.40	98.11
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	4	0.36	98.47
2382	Building Equipment Contractors	870	0.28	98.75
4532	Office Supplies, Stationery, and Gift Stores	93	0.24	98.99
5616	Investigation and Security Services	194	0.14	99.14
3231	Printing and Related Support Activities	171	0.11	99.25
5223	Activities Related to Credit Intermediation	11	0.09	99.33
5612	Facilities Support Services	118	0.08	99.42
4232	Furniture and Home Furnishing Merchant Wholesalers	77	0.07	99.48
4821	Rail Transportation	1	0.06	99.54
3353	Electrical Equipment Manufacturing	6	0.06	99.60
5111	Newspaper, Periodical, Book, and Directory Publishers	68	0.06	99.65
5613	Employment Services	286	0.04	99.70
5191	Other Information Services	187	0.04	99.74
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	90	0.03	99.77
2362	Nonresidential Building Construction	564	0.03	99.80
4931	Warehousing and Storage	15	0.03	99.83
5614	Business Support Services	1,989	0.03	99.86
3333	Commercial and Service Industry Machinery Manufacturing	7	0.03	99.88
3323	Architectural and Structural Metals Manufacturing	44	0.02	99.90
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	503	0.02	99.92
6117	Educational Support Services	291	0.02	99.94
4512	Book, Periodical, and Music Stores	113	0.02	99.96
5414	Specialized Design Services	844	0.01	99.97
5418	Advertising, Public Relations, and Related Services	114	0.01	99.98
5411	Legal Services	1,078	0.01	99.99
4543	Direct Selling Establishments	95	0.01	100.00
8112	Electronic and Precision Equipment Repair and Maintenance	165	0.00	100.00

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
4241	Paper and Paper Product Merchant Wholesalers	114	0.00	100.00
5182	Data Processing, Hosting, and Related Services	379	0.00	100.00
5611	Office Administrative Services	180	0.00	100.00

Source: See Table 4.1.

Table 4.11. Services—Number of Listed M/WBEs and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5242	Agencies, Brokerages, and Other Insurance Related Activities	507	28.57	28.57
5241	Insurance Carriers	21	14.90	43.47
6211	Offices of Physicians	1,335	5.33	48.80
3341	Computer and Peripheral Equipment Manufacturing	48	3.90	52.70
5415	Computer Systems Design and Related Services	4,737	3.74	56.44
4851	Urban Transit Systems	33	3.67	60.11
4821	Rail Transportation	1	3.04	63.15
5418	Advertising, Public Relations, and Related Services	804	2.95	66.10
6241	Individual and Family Services	84	2.66	68.77
5613	Employment Services	706	2.47	71.24
6239	Other Residential Care Facilities	12	1.97	73.21
4859	Other Transit and Ground Passenger Transportation	94	1.76	74.98
5413	Architectural, Engineering, and Related Services	1,667	1.74	76.72
5223	Activities Related to Credit Intermediation	168	1.71	78.43
3231	Printing and Related Support Activities	388	1.70	80.13
5416	Management, Scientific, and Technical Consulting Services	9,310	1.45	81.58
4855	Charter Bus Industry	43	1.22	82.81
5321	Automotive Equipment Rental and Leasing	22	0.87	83.67
6219	Other Ambulatory Health Care Services	197	0.84	84.51
6117	Educational Support Services	291	0.80	85.31
6221	General Medical and Surgical Hospitals	8	0.78	86.09
6212	Offices of Dentists	488	0.76	86.86
6113	Colleges, Universities, and Professional Schools	4	0.73	87.59
5617	Services to Buildings and Dwellings	2,033	0.71	88.30
2211	Electric Power Generation, Transmission and Distribution	0	0.57	88.86
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	19	0.52	89.38
4854	School and Employee Bus Transportation	42	0.50	89.88
2382	Building Equipment Contractors	885	0.49	90.37
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	465	0.49	90.85
5616	Investigation and Security Services	562	0.48	91.33
5411	Legal Services	1,078	0.47	91.81
7223	Special Food Services	249	0.45	92.25
5611	Office Administrative Services	180	0.45	92.70
5171	Wired Telecommunications Carriers	14	0.35	93.05
5419	Other Professional, Scientific, and Technical Services	1,525	0.35	93.40
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	932	0.31	93.71
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	67	0.30	94.01
8129	Other Personal Services	1,496	0.29	94.30
6216	Home Health Care Services	189	0.28	94.58
4241	Paper and Paper Product Merchant Wholesalers	136	0.27	94.86
5312	Offices of Real Estate Agents and Brokers	1,138	0.26	95.12
6214	Outpatient Care Centers	184	0.22	95.34

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
7132	Gambling Industries	2	0.19	95.53
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	59	0.19	95.72
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	16	0.18	95.89
6116	Other Schools and Instruction	863	0.17	96.06
4853	Taxi and Limousine Service	29	0.16	96.23
5191	Other Information Services	207	0.16	96.39
3399	Other Miscellaneous Manufacturing	237	0.16	96.54
3391	Medical Equipment and Supplies Manufacturing	74	0.15	96.70
5221	Depository Credit Intermediation	25	0.15	96.85
6213	Offices of Other Health Practitioners	810	0.13	96.98
5182	Data Processing, Hosting, and Related Services	379	0.13	97.11
2381	Foundation, Structure, and Building Exterior Contractors	410	0.13	97.24
5414	Specialized Design Services	1,663	0.12	97.35
3221	Pulp, Paper, and Paperboard Mills	1	0.11	97.46
4532	Office Supplies, Stationery, and Gift Stores	738	0.11	97.57
8139	Business, Professional, Labor, Political, and Similar Organizations	33	0.11	97.68
4247	Petroleum and Petroleum Products Merchant Wholesalers	16	0.10	97.78
5251	Insurance and Employee Benefit Funds	6	0.10	97.88
4885	Freight Transportation Arrangement	106	0.10	97.97
5614	Business Support Services	2,046	0.09	98.07
5112	Software Publishers	166	0.09	98.15
7211	Traveler Accommodation	159	0.08	98.23
5615	Travel Arrangement and Reservation Services	422	0.08	98.31
6215	Medical and Diagnostic Laboratories	64	0.08	98.38
8134	Civic and Social Organizations	26	0.07	98.46
6242	Community Food and Housing, and Emergency and Other Relief Services	6	0.07	98.53
6244	Child Day Care Services	1,591	0.07	98.60
5179	Other Telecommunications	235	0.06	98.66
2362	Nonresidential Building Construction	618	0.06	98.72
4842	Specialized Freight Trucking	151	0.06	98.79
8133	Social Advocacy Organizations	7	0.06	98.85
5121	Motion Picture and Video Industries	394	0.06	98.90
3351	Electric Lighting Equipment Manufacturing	11	0.06	98.96
4232	Furniture and Home Furnishing Merchant Wholesalers	149	0.05	99.01
8111	Automotive Repair and Maintenance	348	0.05	99.06
5622	Waste Treatment and Disposal	27	0.05	99.11
6222	Psychiatric and Substance Abuse Hospitals	26	0.05	99.16
4233	Lumber and Other Construction Materials Merchant Wholesalers	107	0.04	99.20
5152	Cable and Other Subscription Programming	13	0.04	99.24
8114	Personal and Household Goods Repair and Maintenance	254	0.03	99.27
6115	Technical and Trade Schools	68	0.03	99.31
2373	Highway, Street, and Bridge Construction	135	0.03	99.34
4931	Warehousing and Storage	53	0.03	99.37
2212	Natural Gas Distribution	4	0.03	99.41

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
4841	General Freight Trucking	357	0.03	99.44
4921	Couriers and Express Delivery Services	51	0.03	99.46
8112	Electronic and Precision Equipment Repair and Maintenance	232	0.03	99.49
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	10	0.03	99.52
5172	Wireless Telecommunications Carriers (except Satellite)	33	0.02	99.54
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	253	0.02	99.57
5417	Scientific Research and Development Services	669	0.02	99.59
5311	Lessors of Real Estate	398	0.02	99.61
6243	Vocational Rehabilitation Services	77	0.02	99.63
3365	Railroad Rolling Stock Manufacturing	3	0.02	99.65
4244	Grocery and Related Product Merchant Wholesalers	120	0.02	99.67
4543	Direct Selling Establishments	120	0.02	99.69
5629	Remediation and Other Waste Management Services	49	0.02	99.70
5322	Consumer Goods Rental	85	0.02	99.72
4236	Electrical and Electronic Goods Merchant Wholesalers	165	0.02	99.73
7114	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	276	0.02	99.75
5313	Activities Related to Real Estate	102	0.01	99.76
2389	Other Specialty Trade Contractors	525	0.01	99.78
4533	Used Merchandise Stores	386	0.01	99.79
7111	Performing Arts Companies	193	0.01	99.80
4451	Grocery Stores	324	0.01	99.81
8123	Drycleaning and Laundry Services	67	0.01	99.83
4471	Gasoline Stations	138	0.01	99.84
5612	Facilities Support Services	118	0.01	99.85
4812	Nonscheduled Air Transportation	7	0.01	99.85
4889	Other Support Activities for Transportation	118	0.01	99.86
2372	Land Subdivision	62	0.01	99.87
4461	Health and Personal Care Stores	184	0.01	99.88
6114	Business Schools and Computer and Management Training	91	0.01	99.88
6111	Elementary and Secondary Schools	9	0.01	99.89
3353	Electrical Equipment Manufacturing	13	0.01	99.90
2383	Building Finishing Contractors	474	0.01	99.90
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	74	0.01	99.91
5222	Nondepository Credit Intermediation	26	0.01	99.91
4539	Other Miscellaneous Store Retailers	393	0.01	99.92
6112	Junior Colleges	1	0.01	99.93
3342	Communications Equipment Manufacturing	61	0.00	99.93
5111	Newspaper, Periodical, Book, and Directory Publishers	325	0.00	99.93
4242	Drugs and Druggists' Sundries Merchant Wholesalers	65	0.00	99.94
6231	Nursing Care Facilities	101	0.00	99.94
5239	Other Financial Investment Activities	196	0.00	99.95
3254	Pharmaceutical and Medicine Manufacturing	38	0.00	99.95
4246	Chemical and Allied Products Merchant Wholesalers	42	0.00	99.95
5621	Waste Collection	33	0.00	99.96
4431	Electronics and Appliance Stores	347	0.00	99.96

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
3339	Other General Purpose Machinery Manufacturing	11	0.00	99.96
7221	Full-Service Restaurants	986	0.00	99.97
3271	Clay Product and Refractory Manufacturing	3	0.00	99.97
3133	Textile and Fabric Finishing and Fabric Coating Mills	94	0.00	99.97
4411	Automobile Dealers	51	0.00	99.97
2371	Utility System Construction	46	0.00	99.97
2213	Water, Sewage and Other Systems	1	0.00	99.98
4922	Local Messengers and Local Delivery	10	0.00	99.98
4441	Building Material and Supplies Dealers	138	0.00	99.98
2361	Residential Building Construction	993	0.00	99.98
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	8	0.00	99.98
5511	Management of Companies and Enterprises	31	0.00	99.98
3118	Bakeries and Tortilla Manufacturing	99	0.00	99.98
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	163	0.00	99.98
3346	Manufacturing and Reproducing Magnetic and Optical Media	22	0.00	99.99
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	27	0.00	99.99
5151	Radio and Television Broadcasting	64	0.00	99.99
3333	Commercial and Service Industry Machinery Manufacturing	6	0.00	99.99
4811	Scheduled Air Transportation	1	0.00	99.99
5323	General Rental Centers	2	0.00	99.99
7113	Promoters of Performing Arts, Sports, and Similar Events	101	0.00	99.99
5122	Sound Recording Industries	93	0.00	99.99
3372	Office Furniture (including Fixtures) Manufacturing	11	0.00	99.99
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	32	0.00	99.99
4413	Automotive Parts, Accessories, and Tire Stores	60	0.00	99.99
3115	Dairy Product Manufacturing	1	0.00	99.99
4512	Book, Periodical, and Music Stores	138	0.00	100.00
3344	Semiconductor and Other Electronic Component Manufacturing	3	0.00	100.00
8122	Death Care Services	47	0.00	100.00
3149	Other Textile Product Mills	22	0.00	100.00
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	44	0.00	100.00
3329	Other Fabricated Metal Product Manufacturing	9	0.00	100.00
3219	Other Wood Product Manufacturing	22	0.00	100.00
3359	Other Electrical Equipment and Component Manufacturing	1	0.00	100.00
3323	Architectural and Structural Metals Manufacturing	2	0.00	100.00
3261	Plastics Product Manufacturing	15	0.00	100.00
3259	Other Chemical Product and Preparation Manufacturing	14	0.00	100.00
1114	Greenhouse, Nursery, and Floriculture Production	14	0.00	100.00
8131	Religious Organizations	7	0.00	100.00
5619	Other Support Services	269	0.00	100.00
3363	Motor Vehicle Parts Manufacturing	0	0.00	100.00
4442	Lawn and Garden Equipment and Supplies Stores	6	0.00	100.00
4422	Home Furnishings Stores	117	0.00	100.00

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
7115	Independent Artists, Writers, and Performers	518	0.00	100.00
3315	Foundries	0	0.00	100.00
4531	Florists	306	0.00	100.00
4482	Shoe Stores	50	0.00	100.00
3369	Other Transportation Equipment Manufacturing	2	0.00	100.00
3331	Agriculture, Construction, and Mining Machinery Manufacturing	4	0.00	100.00
3326	Spring and Wire Product Manufacturing	0	0.00	100.00
7222	Limited-Service Eating Places	553	0.00	100.00

Source: See Table 4.1.

Table 4.12. CSE—Number of Listed M/WBEs and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
2211	Electric Power Generation, Transmission and Distribution	16	20.77	20.77
3362	Motor Vehicle Body and Trailer Manufacturing	2	11.27	32.04
4242	Drugs and Druggists' Sundries Merchant Wholesalers	65	9.61	41.65
3365	Railroad Rolling Stock Manufacturing	3	8.06	49.71
7223	Special Food Services	21	6.87	56.59
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	307	6.25	62.83
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	467	4.68	67.51
4247	Petroleum and Petroleum Products Merchant Wholesalers	21	3.82	71.33
4411	Automobile Dealers	51	2.89	74.22
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	31	2.05	76.27
2212	Natural Gas Distribution	4	2.01	78.28
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	210	1.98	80.26
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	56	1.36	81.62
3254	Pharmaceutical and Medicine Manufacturing	45	1.01	82.62
4236	Electrical and Electronic Goods Merchant Wholesalers	165	0.99	83.61
3341	Computer and Peripheral Equipment Manufacturing	42	0.96	84.57
3231	Printing and Related Support Activities	298	0.92	85.49
4239	Miscellaneous Durable Goods Merchant Wholesalers	142	0.90	86.39
4543	Direct Selling Establishments	25	0.69	87.09
3342	Communications Equipment Manufacturing	61	0.68	87.76
4481	Clothing Stores	186	0.53	88.29
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	65	0.52	88.81
8111	Automotive Repair and Maintenance	191	0.49	89.30
5413	Architectural, Engineering, and Related Services	1,443	0.48	89.78
4532	Office Supplies, Stationery, and Gift Stores	93	0.42	90.20
5415	Computer Systems Design and Related Services	4,683	0.41	90.61
3391	Medical Equipment and Supplies Manufacturing	33	0.40	91.01
4431	Electronics and Appliance Stores	197	0.40	91.41
4232	Furniture and Home Furnishing Merchant Wholesalers	77	0.39	91.80
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	42	0.38	92.18
2213	Water, Sewage and Other Systems	1	0.38	92.56
4241	Paper and Paper Product Merchant Wholesalers	127	0.38	92.93
4883	Support Activities for Water Transportation	4	0.36	93.30
3364	Aerospace Product and Parts Manufacturing	8	0.34	93.64
3311	Iron and Steel Mills and Ferroalloy Manufacturing	4	0.34	93.98
5111	Newspaper, Periodical, Book, and Directory Publishers	257	0.31	94.29
3333	Commercial and Service Industry Machinery Manufacturing	27	0.31	94.60
4413	Automotive Parts, Accessories, and Tire Stores	60	0.29	94.89
3369	Other Transportation Equipment Manufacturing	2	0.28	95.17
3259	Other Chemical Product and Preparation Manufacturing	14	0.26	95.43
4233	Lumber and Other Construction Materials Merchant Wholesalers	122	0.26	95.69

NAICS Code	NAICS Description	Number of Establishments	Industry Weight	Cumulative Industry Weight
5612	Facilities Support Services	118	0.26	95.95
4246	Chemical and Allied Products Merchant Wholesalers	36	0.25	96.20
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	11	0.21	96.41
5416	Management, Scientific, and Technical Consulting Services	903	0.20	96.60
3363	Motor Vehicle Parts Manufacturing	4	0.18	96.78
4512	Book, Periodical, and Music Stores	113	0.17	96.95
3344	Semiconductor and Other Electronic Component Manufacturing	40	0.15	97.10
4421	Furniture Stores	165	0.14	97.24
5112	Software Publishers	166	0.14	97.38
3331	Agriculture, Construction, and Mining Machinery Manufacturing	4	0.13	97.51
4884	Support Activities for Road Transportation	8	0.12	97.63
3372	Office Furniture (including Fixtures) Manufacturing	29	0.12	97.75
3329	Other Fabricated Metal Product Manufacturing	2	0.11	97.86
5179	Other Telecommunications	154	0.10	97.96
5417	Scientific Research and Development Services	669	0.10	98.06
4511	Sporting Goods, Hobby, and Musical Instrument Stores	122	0.10	98.15
2362	Nonresidential Building Construction	564	0.09	98.24
8139	Business, Professional, Labor, Political, and Similar Organizations	26	0.08	98.32
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	0	0.08	98.40
4539	Other Miscellaneous Store Retailers	452	0.08	98.48
4244	Grocery and Related Product Merchant Wholesalers	108	0.07	98.55
3339	Other General Purpose Machinery Manufacturing	8	0.07	98.62
3323	Architectural and Structural Metals Manufacturing	11	0.07	98.69
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	20	0.07	98.76
3332	Industrial Machinery Manufacturing	3	0.06	98.83
3359	Other Electrical Equipment and Component Manufacturing	16	0.06	98.89
3261	Plastics Product Manufacturing	15	0.06	98.94
4811	Scheduled Air Transportation	1	0.06	99.00
5242	Agencies, Brokerages, and Other Insurance Related Activities	466	0.05	99.05
5321	Automotive Equipment Rental and Leasing	22	0.05	99.11
3271	Clay Product and Refractory Manufacturing	3	0.05	99.15
8112	Electronic and Precision Equipment Repair and Maintenance	26	0.05	99.20
5311	Lessors of Real Estate	261	0.05	99.25
5616	Investigation and Security Services	291	0.05	99.29
8123	Drycleaning and Laundry Services	62	0.04	99.33
7211	Traveler Accommodation	159	0.04	99.37
8134	Civic and Social Organizations	26	0.04	99.41
5419	Other Professional, Scientific, and Technical Services	398	0.04	99.45
5614	Business Support Services	1,989	0.04	99.48
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	10	0.03	99.52

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
2389	Other Specialty Trade Contractors	130	0.03	99.55
3399	Other Miscellaneous Manufacturing	133	0.03	99.58
5629	Remediation and Other Waste Management Services	40	0.03	99.61
4412	Other Motor Vehicle Dealers	5	0.03	99.64
1152	Support Activities for Animal Production	101	0.03	99.67
5613	Employment Services	706	0.03	99.70
3274	Lime and Gypsum Product Manufacturing	0	0.03	99.73
5191	Other Information Services	178	0.02	99.75
3353	Electrical Equipment Manufacturing	4	0.02	99.78
6212	Offices of Dentists	488	0.02	99.80
5622	Waste Treatment and Disposal	4	0.02	99.82
3221	Pulp, Paper, and Paperboard Mills	10	0.02	99.84
4442	Lawn and Garden Equipment and Supplies Stores	6	0.02	99.86
8131	Religious Organizations	7	0.02	99.88
7221	Full-Service Restaurants	986	0.02	99.89
7224	Drinking Places (Alcoholic Beverages)	89	0.02	99.91
6215	Medical and Diagnostic Laboratories	59	0.01	99.92
5617	Services to Buildings and Dwellings	1,339	0.01	99.93
3121	Beverage Manufacturing	3	0.01	99.94
8129	Other Personal Services	66	0.01	99.95
8121	Personal Care Services	2,117	0.01	99.96
5174	Satellite Telecommunications	3	0.01	99.96
3115	Dairy Product Manufacturing	5	0.01	99.97
4881	Support Activities for Air Transportation	4	0.01	99.98
2382	Building Equipment Contractors	451	0.01	99.98
3118	Bakeries and Tortilla Manufacturing	14	0.00	99.99
6214	Outpatient Care Centers	2	0.00	99.99
4422	Home Furnishings Stores	108	0.00	99.99
6213	Offices of Other Health Practitioners	43	0.00	100.00
4841	General Freight Trucking	137	0.00	100.00
6117	Educational Support Services	291	0.00	100.00

Source: See Table 4.1.

Table 4.13. Listed M/WBE Survey—Amount of Misclassification, by NAICS Code Grouping

Listed M/WBE By NAICS Code Grouping	Misclassification (Percentage Nonminority Male)	Percentage Actually M/WBE-owned	Number of Businesses Interviewed
NAICS 236-A	13.5	86.5	222
NAICS 237-A	13.7	86.3	139
NAICS 238-A	18.2	81.8	236
NAICS 30 or 42-A	15.8	84.2	133
NAICS 48-49-A	8.9	91.1	112
NAICS 44-45-A	14.4	85.6	97
NAICS 54-A	10.2	89.8	216
NAICS 5 but not 54-A	6.0	94.0	100
NAICS 6-7-A	6.5	93.5	108
NAICS 8-A	13.4	86.6	134
NAICS 11 or 22-A	40.0	60.0	5
NAICS 1 or 2-B	22.6	77.4	62
NAICS 3 or 42-B	19.7	80.3	66
NAICS 44-45-B	12.1	87.9	58
NAICS 48-49-B	17.4	82.6	86
NAICS 5-B	7.8	92.2	64
NAICS 6-7-B	8.8	91.2	68
NAICS 8-B	5.5	94.5	73
All NAICS Codes	12.9	87.1	1,979

Source: NERA/Abt SRBI telephone surveys, 2010.

Note: Two groupings of strata, A and B, were created. NAICS codes reflecting approximately 90 percent of all contract and subcontract spending were stratified into group A with the balance stratified into group B.

Table 4.14. Listed M/WBE Survey—Amount of Misclassification, by Putative M/WBE Type

Putative Race/Gender	Misclassif-ication (Percentage Nonminority Male)	Misclassification (Percentage Other M/WBE Type)	Percentage Correctly Classified	Number of Businesses Interviewed
African American (either gender)	3.4	4.4	92.2	499
Hispanic (either gender)	19.2	10.3	70.4	203
Asian (either gender)	10.6	7.7	81.7	246
Native American (either gender)	23.8	21.4	54.8	42
Nonminority Female	16.6	11.6	71.8	989
All M/WBE Types	12.9	9.4	77.7	1,979

Source and Notes: See Table 4.13. Similar calculations, not shown here, were performed for each stratum.

Table 4.15. Unclassified Businesses Survey —By NAICS Code Grouping

Listed M/WBE By SIC Code Grouping	Percentage Actually Nonminority Male-owned	Percentage M/WBE	Number of Businesses Interviewed
NAICS 236-A	79.8	20.2	173
NAICS 237-A	87.4	12.6	167
NAICS 238-A	83.3	16.7	168
NAICS 30 or 42-A	73.4	26.6	128
NAICS 48-49-A	56.7	43.3	90
NAICS 44-45-A	64.8	35.2	105
NAICS 54-A	73.3	26.7	146
NAICS 5 but not 54-A	68.0	32.0	50
NAICS 6-7-A	58.8	41.2	51
NAICS 8-A	75.3	24.7	73
NAICS 11 or 22-A	86.8	13.2	38
NAICS 1 or 2-B	82.1	17.9	39
NAICS 3 or 42-B	72.1	27.9	43
NAICS 44-45-B	56.8	43.2	37
NAICS 48-49-B	68.6	31.4	35
NAICS 5-B	59.5	40.5	37
NAICS 6-7-B	61.0	39.0	41
NAICS 8-B	50.0	50.0	16
All NAICS Codes	73.7	26.3	1,437

Source and Notes: See Table 4.13.

Table 4.16. Unclassified Businesses Survey—By Race and Gender

Verified Race/Gender	Number of Businesses Interviewed	Percentage of Total
Nonminority male	1,059	73.7
Nonminority female	166	11.6
African American (either gender)	104	7.2
Hispanic (either gender)	36	2.5
Asian (either gender)	68	4.7
Native American (either gender)	4	0.3
TOTAL	1,437	100.0

Source and Notes: See Table 4.13. Similar calculations, not shown here, were performed within each stratum.

Table 4.17. Detailed M/WBE Availability—Construction, 2010

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Building Equipment Contractors (NAICS 2382)	6.88	2.80	2.77	0.15	10.55	23.15	76.85
Nonresidential Building Construction (NAICS 2362)	11.16	5.25	3.42	0.93	12.71	33.47	66.53
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	7.33	3.66	2.64	0.20	11.77	25.60	74.40
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	7.12	1.31	8.50	2.27	15.30	34.49	65.51
Architectural, Engineering, and Related Services (NAICS 5413)	8.57	4.27	11.91	0.40	13.05	38.20	61.80
Building Finishing Contractors (NAICS 2383)	5.54	3.37	2.62	0.13	10.71	22.37	77.63
Other Specialty Trade Contractors (NAICS 2389)	6.40	3.05	2.48	0.16	11.21	23.30	76.70
Computer Systems Design and Related Services (NAICS 5415)	15.45	4.16	15.31	0.61	13.98	49.51	50.49
Cement and Concrete Product Manufacturing (NAICS 3273)	5.89	0.35	7.54	0.73	15.57	30.08	69.92
Architectural and Structural Metals Manufacturing (NAICS 3323)	5.91	1.31	8.01	0.78	17.36	33.37	66.63
Utility System Construction (NAICS 2371)	7.10	2.35	0.59	0.45	10.55	21.04	78.96
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	5.44	0.00	8.59	0.71	17.15	31.89	68.11
Business Support Services (NAICS 5614)	13.36	0.74	5.83	0.06	26.78	46.76	53.24
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	4.99	0.25	8.08	0.74	17.81	31.87	68.13
Management, Scientific, and Technical Consulting Services (NAICS 5416)	15.36	1.59	7.22	0.27	29.15	53.59	46.41
Residential Building Construction (NAICS 2361)	4.37	3.39	0.39	0.19	13.41	21.76	78.24
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.51	0.52	8.03	0.86	18.70	33.63	66.37
Specialized Freight Trucking (NAICS 4842)	29.73	8.65	5.10	0.40	11.06	54.94	45.06
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	6.02	0.38	8.23	0.92	17.62	33.16	66.84
Other Heavy and Civil	14.21	3.30	0.85	0.08	11.70	30.13	69.87

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Engineering Construction (NAICS 2379)							
Advertising, Public Relations, and Related Services (NAICS 5418)	8.84	4.04	8.29	0.26	21.41	42.84	57.16
General Freight Trucking (NAICS 4841)	23.28	9.52	5.89	0.23	10.60	49.52	50.48
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	6.43	0.53	9.27	0.99	19.42	36.63	63.37
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.13	6.55	3.97	0.03	11.71	36.38	63.62
Services to Buildings and Dwellings (NAICS 5617)	15.69	6.42	4.62	0.19	13.05	39.96	60.04
Other Wood Product Manufacturing (NAICS 3219)	3.58	0.01	7.31	0.74	22.25	33.90	66.10
Building Material and Supplies Dealers (NAICS 4441)	8.93	2.65	6.62	0.84	21.02	40.06	59.94
Other Miscellaneous Manufacturing (NAICS 3399)	5.77	0.61	8.03	0.98	23.87	39.27	60.73
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	5.63	0.00	8.89	1.31	16.41	32.24	67.76
Employment Services (NAICS 5613)	19.85	6.12	6.59	0.45	18.87	51.88	48.12
Nondepository Credit Intermediation (NAICS 5222)	11.56	0.08	5.27	0.00	24.91	41.82	58.18
Offices of Real Estate Agents and Brokers (NAICS 5312)	12.07	0.58	5.17	0.02	28.08	45.92	54.08
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	25.17	6.20	6.29	0.00	12.68	50.35	49.65
Personal and Household Goods Repair and Maintenance (NAICS 8114)	15.22	3.49	7.56	0.69	16.85	43.81	56.19
Petroleum and Coal Products Manufacturing (NAICS 3241)	5.04	0.63	7.51	0.96	17.12	31.27	68.73
Data Processing, Hosting, and Related Services (NAICS 5182)	15.48	6.45	7.77	0.30	19.44	49.44	50.56
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	8.93	0.36	6.64	0.64	20.04	36.60	63.40
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)	8.08	0.32	9.39	2.55	18.61	38.95	61.05
Investigation and Security Services (NAICS 5616)	17.73	3.38	5.96	0.83	22.25	50.15	49.85
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	2.60	0.20	0.00	0.00	15.04	17.83	82.17

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	8.90	2.55	4.22	1.01	26.06	42.74	57.26
Home Furnishings Stores (NAICS 4422)	9.08	2.67	7.08	0.96	22.40	42.20	57.80
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	6.78	0.03	8.77	1.81	15.39	32.79	67.21
Facilities Support Services (NAICS 5612)	25.91	7.12	10.78	0.96	12.26	57.03	42.97
Clay Product and Refractory Manufacturing (NAICS 3271)	11.94	0.00	7.77	2.30	19.04	41.05	58.95
Electric Lighting Equipment Manufacturing (NAICS 3351)	5.97	0.00	10.99	3.01	21.36	41.33	58.67
Support Activities for Crop Production (NAICS 1151)	3.98	2.63	0.00	0.00	18.26	24.86	75.14
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	8.68	0.03	8.25	2.07	16.54	35.56	64.44
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88
Other Support Activities for Transportation (NAICS 4889)	24.09	7.98	6.08	0.13	9.84	48.12	51.88
Other Fabricated Metal Product Manufacturing (NAICS 3329)	6.39	0.00	9.42	2.53	15.58	33.93	66.07
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	10.52	0.95	9.75	2.18	11.29	34.69	65.31
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)	8.39	0.94	8.66	2.21	10.03	30.23	69.77
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	10.43	0.72	9.63	2.19	11.35	34.32	65.68
Remediation and Other Waste Management Services (NAICS 5629)	15.52	9.13	7.53	0.85	16.57	49.61	50.39
Motion Picture and Video Industries (NAICS 5121)	13.86	1.77	5.53	0.24	30.76	52.16	47.84
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	5.85	0.08	8.77	0.76	22.83	38.28	61.72
Other Miscellaneous Store Retailers (NAICS 4539)	7.28	2.54	15.40	0.51	23.24	48.98	51.02
Automotive Repair and Maintenance (NAICS 8111)	24.07	6.12	6.90	0.13	13.78	51.01	48.99
Furniture Stores (NAICS 4421)	6.74	2.59	15.56	0.35	23.38	48.64	51.36

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Automotive Equipment Rental and Leasing (NAICS 5321)	13.70	5.75	4.50	0.00	10.10	34.05	65.95
Waste Treatment and Disposal (NAICS 5622)	18.13	6.76	4.73	0.08	12.80	42.50	57.50
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures (NAICS 7114)	17.52	3.02	7.67	0.28	18.94	47.43	52.57
Scientific Research and Development Services (NAICS 5417)	8.69	3.29	10.06	0.26	19.22	41.52	58.48
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	3.56	0.22	8.04	1.01	21.57	34.39	65.61
Electronics and Appliance Stores (NAICS 4431)	8.63	3.07	11.17	0.65	19.53	43.04	56.96
Printing and Related Support Activities (NAICS 3231)	8.23	0.15	8.87	2.43	22.25	41.92	58.08
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	13.16	2.97	7.28	0.85	13.78	38.04	61.96
Steel Product Manufacturing from Purchased Steel (NAICS 3312)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Communications Equipment Manufacturing (NAICS 3342)	7.86	0.48	8.40	0.69	16.92	34.35	65.65
Support Activities for Water Transportation (NAICS 4883)	11.84	4.86	7.91	0.00	12.03	36.64	63.36
Specialized Design Services (NAICS 5414)	11.78	2.45	4.00	0.05	43.84	62.12	37.88
Land Subdivision (NAICS 2372)	7.17	1.35	0.00	0.02	7.41	15.94	84.06
Spring and Wire Product Manufacturing (NAICS 3326)	6.50	0.00	10.75	2.30	13.29	32.83	67.17
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	7.39	0.38	9.08	1.73	15.60	34.18	65.82
Other Professional, Scientific, and Technical Services (NAICS 5419)	12.27	0.87	5.43	0.02	27.34	45.93	54.07
Gasoline Stations (NAICS 4471)	5.65	2.70	17.60	0.19	20.43	46.57	53.43
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	10.89	0.03	8.71	2.23	15.66	37.51	62.49
Direct Selling Establishments (NAICS 4543)	6.60	2.52	16.11	0.30	20.71	46.25	53.75
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Offices of Other Health Practitioners (NAICS 6213)	14.71	2.71	7.24	0.00	18.10	42.76	57.24
Other Personal Services (NAICS 8129)	25.88	5.89	7.19	0.12	17.93	57.00	43.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	6.77	0.00	11.94	1.12	18.20	38.02	61.98
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	5.23	0.73	8.70	0.67	17.71	33.04	66.96
Other General Purpose Machinery Manufacturing (NAICS 3339)	6.18	0.00	9.72	2.03	14.86	32.79	67.21
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	6.31	1.12	8.29	0.68	20.53	36.93	63.07
Consumer Goods Rental (NAICS 5322)	15.71	4.04	4.59	0.00	18.34	42.67	57.33
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	11.27	0.64	5.24	0.00	28.09	45.24	54.76
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)	6.24	1.23	10.91	2.46	15.40	36.25	63.75
Special Food Services (NAICS 7223)	13.12	1.46	4.24	0.38	30.41	49.62	50.38
Waste Collection (NAICS 5621)	20.84	6.31	4.20	0.00	11.89	43.24	56.76
Hardware Manufacturing (NAICS 3325)	6.75	0.00	8.94	2.37	13.10	31.16	68.84
Railroad Rolling Stock Manufacturing (NAICS 3365)	3.00	0.00	6.46	0.60	31.89	41.95	58.05
Securities and Commodity Contracts Intermediation and Brokerage (NAICS 5231)	13.59	0.32	10.49	0.00	25.01	49.41	50.59
Lessors of Real Estate (NAICS 5311)	14.24	5.21	4.23	0.03	12.76	36.47	63.53
Insurance Carriers (NAICS 5241)	11.69	2.05	4.71	0.00	23.00	41.45	58.55
Foundries (NAICS 3315)	6.20	0.00	8.06	2.46	22.44	39.17	60.83
Grocery Stores (NAICS 4451)	5.73	2.89	17.01	0.23	21.60	47.46	52.54
Other Textile Product Mills (NAICS 3149)	10.52	0.00	9.41	2.39	21.34	43.65	56.35
Plastics Product Manufacturing (NAICS 3261)	7.90	0.00	9.11	2.31	14.29	33.62	66.38
Inland Water Transportation (NAICS 4832)	7.66	2.76	7.97	0.00	18.49	36.88	63.12
Offices of Physicians (NAICS 6211)	14.90	2.74	7.86	0.02	17.41	42.94	57.06
Medical Equipment and Supplies Manufacturing (NAICS 3391)	7.24	0.15	10.39	2.43	14.39	34.60	65.40
Alumina and Aluminum Production and Processing (NAICS 3313)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Support Activities for Road Transportation (NAICS 4884)	11.79	3.55	8.13	0.00	12.85	36.31	63.69

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Other Furniture Related Product Manufacturing (NAICS 3379)	7.37	0.83	7.90	2.32	18.81	37.22	62.78
Electric Power Generation, Transmission and Distribution (NAICS 2211)	2.56	2.56	0.00	0.00	12.82	17.95	82.05
Fabric Mills (NAICS 3132)	6.66	0.00	8.29	2.43	26.34	43.72	56.28
Other Telecommunications (NAICS 5179)	13.27	1.22	5.55	0.08	25.67	45.78	54.22
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	3.56	0.77	7.27	0.71	17.47	29.77	70.23
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)	2.71	2.71	0.00	0.00	19.18	24.60	75.40
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	5.86	0.00	8.30	0.91	17.49	32.57	67.43
Industrial Machinery Manufacturing (NAICS 3332)	6.57	0.00	10.87	2.30	12.64	32.39	67.61
Electrical Equipment Manufacturing (NAICS 3353)	5.29	0.84	8.28	0.69	17.82	32.93	67.07
Elementary and Secondary Schools (NAICS 6111)	14.68	2.44	7.33	0.00	14.69	39.14	60.86
Educational Support Services (NAICS 6117)	19.59	2.99	7.32	0.57	26.46	56.94	43.06
Nonscheduled Air Transportation (NAICS 4812)	10.40	5.12	8.77	0.04	12.94	37.27	62.73
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Converted Paper Product Manufacturing (NAICS 3222)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)	14.35	6.06	4.73	0.40	9.32	34.86	65.14
Automobile Dealers (NAICS 4411)	9.16	2.90	4.55	0.91	19.59	37.11	62.89
Offices of Dentists (NAICS 6212)	15.05	2.63	7.56	0.02	18.06	43.32	56.68
Rubber Product Manufacturing (NAICS 3262)	10.12	0.00	8.75	2.27	11.32	32.46	67.54
Depository Credit Intermediation (NAICS 5221)	11.02	0.01	5.38	0.00	24.36	40.77	59.23
Household Appliance Manufacturing (NAICS 3352)	16.00	0.00	6.18	2.30	30.42	54.90	45.10
Health and Personal Care Stores (NAICS 4461)	7.93	2.94	15.01	0.46	24.31	50.66	49.34
Other Crop Farming (NAICS 1119)	2.63	2.58	0.02	0.00	14.08	19.32	80.68
Natural Gas Distribution (NAICS 2212)	4.71	2.53	0.00	0.00	13.54	20.77	79.23
Paper and Paper Product Merchant Wholesalers (NAICS	12.55	0.69	9.24	0.80	24.43	47.71	52.29

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
4241)							
Water, Sewage and Other Systems (NAICS 2213)	2.60	2.60	0.00	0.00	14.19	19.38	80.62
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)	9.05	2.22	3.93	0.86	30.61	46.67	53.33
Other Financial Investment Activities (NAICS 5239)	13.18	0.28	5.44	0.00	24.49	43.39	56.61
Drycleaning and Laundry Services (NAICS 8123)	21.06	5.13	14.90	0.00	17.81	58.92	41.08
Travel Arrangement and Reservation Services (NAICS 5615)	13.92	5.63	5.24	0.00	20.99	45.78	54.22
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)	6.66	0.00	8.80	2.38	14.62	32.46	67.54
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	9.56	0.00	7.52	2.20	22.67	41.96	58.04
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Legal Services (NAICS 5411)	5.86	4.00	8.71	0.06	12.77	31.41	68.59
Warehousing and Storage (NAICS 4931)	8.89	2.69	8.94	0.00	14.51	35.03	64.97
Couriers and Express Delivery Services (NAICS 4921)	15.57	3.94	8.93	0.00	13.73	42.17	57.83
Coating, Engraving, Heat Treating, and Allied Activities (NAICS 3328)	7.58	3.28	8.94	2.51	18.50	40.80	59.20
Metalworking Machinery Manufacturing (NAICS 3335)	12.53	0.00	12.54	1.95	9.99	37.01	62.99
Cable and Other Subscription Programming (NAICS 5152)	13.50	6.55	4.33	0.00	10.64	35.02	64.98
Textile Furnishings Mills (NAICS 3141)	8.47	1.16	5.88	2.47	38.02	56.00	44.00
Other Motor Vehicle Dealers (NAICS 4412)	5.67	2.56	15.72	0.54	21.23	45.72	54.28
General Rental Centers (NAICS 5323)	12.78	5.40	3.95	0.00	18.03	40.16	59.84
Motor Vehicle Parts Manufacturing (NAICS 3363)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Activities Related to Credit Intermediation (NAICS 5223)	12.15	0.30	5.62	0.00	25.85	43.94	56.06
Veneer, Plywood, and Engineered Wood Product Manufacturing (NAICS 3212)	6.58	0.00	8.68	2.40	15.95	33.60	66.40
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	5.93	0.16	7.34	0.73	16.42	30.57	69.43
Medical and Diagnostic Laboratories (NAICS 6215)	8.45	0.51	5.26	0.23	31.84	46.28	53.72
Lime and Gypsum Product	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Manufacturing (NAICS 3274)							
CONSTRUCTION	*9.69*	*3.48*	*5.44*	*0.39*	*13.39*	*32.39*	*67.61*

Source: See Table 4.1. Note: Figures are expressed as percentages of all businesses in the respective category and market area.

Table 4.18. Detailed M/WBE Availability—AE-CRS, 2010

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Architectural, Engineering, and Related Services (NAICS 5413)	8.65	4.27	12.07	0.40	13.07	38.46	61.54
Management, Scientific, and Technical Consulting Services (NAICS 5416)	15.30	1.68	7.10	0.30	28.43	52.80	47.20
Computer Systems Design and Related Services (NAICS 5415)	15.56	4.10	15.39	0.61	14.11	49.77	50.23
Building Equipment Contractors (NAICS 2382)	7.06	2.80	2.77	0.16	10.62	23.42	76.58
Advertising, Public Relations, and Related Services (NAICS 5418)	10.26	3.18	7.08	0.18	25.36	46.06	53.94
Electric Power Generation, Transmission and Distribution (NAICS 2211)	2.56	2.56	0.00	0.00	12.82	17.95	82.05
Employment Services (NAICS 5613)	17.23	5.86	5.05	0.26	18.40	46.80	53.20
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	6.54	3.55	2.61	0.09	11.34	24.13	75.87
Nonresidential Building Construction (NAICS 2362)	9.10	4.40	2.58	0.70	13.92	30.71	69.29
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	10.23	1.36	9.46	2.00	16.76	39.80	60.20
Utility System Construction (NAICS 2371)	6.54	2.14	0.24	0.52	10.13	19.55	80.45
Other Professional, Scientific, and Technical Services (NAICS 5419)	12.65	0.89	5.28	0.03	29.38	48.22	51.78
Building Finishing Contractors (NAICS 2383)	5.70	3.68	2.45	0.19	10.89	22.90	77.10
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	7.33	3.90	8.65	0.11	14.41	34.41	65.59
Other Specialty Trade Contractors (NAICS 2389)	6.36	3.04	2.54	0.15	11.08	23.17	76.83
Legal Services (NAICS 5411)	6.10	3.83	8.50	0.06	13.72	32.21	67.79
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.74	0.38	8.10	0.69	18.19	33.10	66.90
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	6.60	0.00	8.70	2.39	15.63	33.33	66.67
Waste Treatment and Disposal	18.32	7.53	3.78	0.02	8.74	38.38	61.62

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
(NAICS 5622)							
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.02	6.67	3.86	0.00	11.77	36.31	63.69
Remediation and Other Waste Management Services (NAICS 5629)	16.03	10.80	9.24	1.33	18.99	56.40	43.60
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Specialized Design Services (NAICS 5414)	11.07	2.61	3.20	0.00	46.97	63.85	36.15
Steel Product Manufacturing from Purchased Steel (NAICS 3312)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Printing and Related Support Activities (NAICS 3231)	5.22	0.27	9.64	0.84	21.95	37.93	62.07
Civic and Social Organizations (NAICS 8134)	22.13	5.15	6.37	0.23	12.08	45.96	54.04
Freight Transportation Arrangement (NAICS 4885)	13.71	3.81	8.94	0.00	15.00	41.47	58.53
Scientific Research and Development Services (NAICS 5417)	9.19	2.77	9.69	0.26	21.80	43.71	56.29
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	8.93	0.36	6.63	0.64	20.05	36.60	63.40
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	5.89	0.15	8.05	0.73	15.07	29.90	70.10
Residential Building Construction (NAICS 2361)	5.88	3.36	0.10	0.02	13.85	23.20	76.80
Bakeries and Tortilla Manufacturing (NAICS 3118)	6.76	0.10	8.74	2.45	18.86	36.91	63.09
Personal and Household Goods Repair and Maintenance (NAICS 8114)	15.16	3.46	7.47	0.71	16.19	42.98	57.02
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	6.02	0.17	8.88	1.21	18.07	34.35	65.65
Waste Collection (NAICS 5621)	20.84	6.31	4.20	0.00	11.89	43.24	56.76
General Freight Trucking (NAICS 4841)	23.64	9.62	5.83	0.25	10.65	49.98	50.02
Other Information Services (NAICS 5191)	15.46	2.22	7.62	0.00	31.36	56.66	43.34
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Data Processing, Hosting, and Related Services (NAICS 5182)	15.48	6.45	7.77	0.30	19.44	49.44	50.56
Rail Transportation (NAICS 4821)	8.30	2.79	8.34	0.00	12.12	31.55	68.45

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Other Miscellaneous Manufacturing (NAICS 3399)	7.05	0.32	9.84	2.57	14.12	33.91	66.09
Services to Buildings and Dwellings (NAICS 5617)	21.07	7.83	5.72	0.18	16.79	51.60	48.40
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	9.97	1.22	12.04	2.38	14.74	40.34	59.66
Investigation and Security Services (NAICS 5616)	17.56	3.27	5.97	0.84	22.76	50.39	49.61
Facilities Support Services (NAICS 5612)	25.91	7.12	10.78	0.96	12.26	57.03	42.97
Office Administrative Services (NAICS 5611)	17.66	5.97	5.56	0.19	13.57	42.95	57.05
Nonscheduled Air Transportation (NAICS 4812)	10.40	5.12	8.77	0.04	12.94	37.27	62.73
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	5.23	0.73	8.70	0.67	17.71	33.04	66.96
Electronics and Appliance Stores (NAICS 4431)	8.79	2.98	16.48	0.74	21.54	50.52	49.48
Other Financial Investment Activities (NAICS 5239)	11.72	0.26	5.73	0.00	25.72	43.43	56.57
Water, Sewage and Other Systems (NAICS 2213)	2.60	2.60	0.00	0.00	14.19	19.38	80.62
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	4.59	0.00	8.86	0.73	16.26	30.44	69.56
Medical and Diagnostic Laboratories (NAICS 6215)	8.45	0.51	5.26	0.23	31.84	46.28	53.72
Furniture Stores (NAICS 4421)	6.74	2.59	15.56	0.35	23.38	48.64	51.36
Clay Product and Refractory Manufacturing (NAICS 3271)	14.07	0.00	7.48	2.25	19.60	43.40	56.60
Activities Related to Real Estate (NAICS 5313)	11.03	0.74	4.84	0.00	30.26	46.87	53.13
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	11.21	1.51	4.73	0.34	29.00	46.80	53.20
Museums, Historical Sites, and Similar Institutions (NAICS 7121)	15.36	2.44	7.28	0.25	16.70	42.03	57.97
Software Publishers (NAICS 5112)	14.20	6.26	8.86	0.19	12.35	41.86	58.14
Consumer Goods Rental (NAICS 5322)	14.42	6.47	4.66	0.00	13.57	39.12	60.88
Architectural and Structural Metals Manufacturing (NAICS 3323)	5.97	1.74	8.06	0.68	17.36	33.81	66.19
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.61	0.42	7.83	0.85	18.49	33.19	66.81

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Motion Picture and Video Industries (NAICS 5121)	13.87	1.78	5.53	0.24	30.78	52.19	47.81
Independent Artists, Writers, and Performers (NAICS 7115)	16.29	2.88	7.51	0.18	31.83	58.69	41.31
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	22.33	4.17	11.27	1.67	17.28	56.71	43.29
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	3.34	0.24	8.04	1.04	22.22	34.88	65.12
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	4.32	0.15	8.17	0.79	17.66	31.08	68.92
Educational Support Services (NAICS 6117)	19.59	2.99	7.32	0.57	26.46	56.94	43.06
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	0.26	0.26	0.00	0.00	17.43	17.96	82.04
Direct Selling Establishments (NAICS 4543)	7.56	2.45	15.18	1.21	21.39	47.80	52.20
Other Fabricated Metal Product Manufacturing (NAICS 3329)	6.78	0.00	9.34	2.39	11.42	29.94	70.06
Automotive Repair and Maintenance (NAICS 8111)	25.45	6.55	6.86	0.03	14.00	52.89	47.11
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88
Support Activities for Crop Production (NAICS 1151)	3.98	2.63	0.00	0.00	18.26	24.86	75.14
Cement and Concrete Product Manufacturing (NAICS 3273)	5.35	0.85	7.64	0.71	17.57	32.12	67.88
Full-Service Restaurants (NAICS 7221)	14.67	2.93	8.40	0.07	17.67	43.75	56.25
Communications Equipment Manufacturing (NAICS 3342)	7.62	0.00	10.70	2.26	12.85	33.44	66.56
Offices of Physicians (NAICS 6211)	14.90	2.74	7.86	0.02	17.41	42.94	57.06
Plastics Product Manufacturing (NAICS 3261)	7.90	0.00	9.11	2.31	14.29	33.62	66.38
Metalworking Machinery Manufacturing (NAICS 3335)	12.53	0.00	12.54	1.95	9.99	37.01	62.99
Other Motor Vehicle Dealers (NAICS 4412)	5.67	2.56	15.72	0.54	21.23	45.72	54.28
Grocery and Related Product Merchant Wholesalers (NAICS 4244)	8.97	0.16	9.41	2.38	15.29	36.21	63.79
Support Activities for Mining (NAICS 2131)	2.66	2.66	0.00	0.00	17.14	22.47	77.53
School and Employee Bus Transportation (NAICS 4854)	11.29	2.48	7.07	0.00	21.93	42.77	57.23
Other Wood Product Manufacturing (NAICS 3219)	3.42	0.00	7.20	0.68	23.17	34.47	65.53

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Specialized Freight Trucking (NAICS 4842)	29.98	8.64	5.06	0.40	11.07	55.15	44.85
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	5.30	0.10	7.66	0.79	20.56	34.41	65.59
Building Material and Supplies Dealers (NAICS 4441)	9.32	2.64	4.92	0.94	20.60	38.42	61.58
Couriers and Express Delivery Services (NAICS 4921)	15.57	3.94	8.93	0.00	13.73	42.17	57.83
Support Activities for Forestry (NAICS 1153)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Miscellaneous Store Retailers (NAICS 4539)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Scheduled Air Transportation (NAICS 4811)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
AE-CRS	*10.17*	*3.86*	*11.35*	*0.39*	*15.36*	*41.14*	*58.86*

Source and Notes: See Table 4.17.

Table 4.19. Detailed M/WBE Availability—Maintenance, 2010

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Services to Buildings and Dwellings (NAICS 5617)	19.97	7.22	5.54	0.19	17.05	49.98	50.02
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Building Equipment Contractors (NAICS 2382)	7.65	2.84	2.77	0.18	11.07	24.52	75.48
Investigation and Security Services (NAICS 5616)	21.14	5.80	5.55	0.49	13.99	46.96	53.04
Management, Scientific, and Technical Consulting Services (NAICS 5416)	17.22	2.35	6.96	0.32	28.03	54.88	45.12
Urban Transit Systems (NAICS 4851)	42.45	5.97	4.44	0.08	8.79	61.72	38.28
Nonresidential Building Construction (NAICS 2362)	11.21	5.27	3.44	0.93	12.68	33.55	66.45
Personal and Household Goods Repair and Maintenance (NAICS 8114)	15.23	3.49	7.60	0.68	17.12	44.11	55.89
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	7.01	4.97	2.63	0.12	10.84	25.56	74.44
Electric Power Generation, Transmission and Distribution (NAICS 2211)	2.56	2.56	0.00	0.00	12.82	17.95	82.05
Railroad Rolling Stock Manufacturing (NAICS 3365)	3.00	0.00	6.46	0.60	31.89	41.95	58.05
Building Finishing Contractors (NAICS 2383)	5.79	3.45	2.63	0.04	11.19	23.09	76.91
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88
Other Specialty Trade Contractors (NAICS 2389)	6.40	3.05	2.48	0.16	11.19	23.28	76.72
Architectural, Engineering, and Related Services (NAICS 5413)	8.39	4.30	11.59	0.40	13.09	37.77	62.23
Direct Selling Establishments (NAICS 4543)	7.56	2.45	15.18	1.21	21.39	47.79	52.21
Support Activities for Air Transportation (NAICS 4881)	8.17	2.81	8.30	0.00	14.57	33.85	66.15
Other Miscellaneous Manufacturing (NAICS 3399)	5.51	0.67	7.93	0.77	24.69	39.56	60.44
Residential Building Construction (NAICS 2361)	4.38	3.41	0.36	0.19	13.45	21.78	78.22
Waste Treatment and Disposal (NAICS 5622)	18.37	7.65	3.65	0.00	8.24	37.91	62.09
Individual and Family Services (NAICS 6241)	7.97	0.05	3.88	0.04	30.27	42.21	57.79
General Freight Trucking	23.59	9.43	5.84	0.24	10.98	50.08	49.92

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
(NAICS 4841)							
Employment Services (NAICS 5613)	18.59	5.96	5.80	0.41	18.80	49.57	50.43
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)	6.28	0.00	8.37	2.09	8.37	25.12	74.88
Electric Lighting Equipment Manufacturing (NAICS 3351)	8.65	0.00	8.48	2.41	18.32	37.86	62.14
Office Administrative Services (NAICS 5611)	17.66	5.97	5.56	0.19	13.57	42.95	57.05
Facilities Support Services (NAICS 5612)	25.91	7.12	10.78	0.96	12.26	57.03	42.97
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.69	0.53	8.10	0.82	18.15	33.30	66.70
Offices of Physicians (NAICS 6211)	14.90	2.74	7.86	0.02	17.41	42.94	57.06
Computer Systems Design and Related Services (NAICS 5415)	11.07	3.78	17.58	0.45	13.84	46.72	53.28
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.22	0.72	8.35	0.84	19.34	34.48	65.52
Communications Equipment Manufacturing (NAICS 3342)	7.53	1.39	9.07	0.91	17.43	36.33	63.67
Gasoline Stations (NAICS 4471)	5.65	2.70	17.60	0.19	20.43	46.57	53.43
Offices of Dentists (NAICS 6212)	15.05	2.63	7.56	0.02	18.06	43.32	56.68
Aerospace Product and Parts Manufacturing (NAICS 3364)	8.41	0.00	9.43	4.45	10.20	32.49	67.51
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	4.54	0.11	7.93	0.72	17.83	31.13	68.87
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	7.36	0.04	12.14	0.61	17.28	37.43	62.57
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	4.67	0.00	8.99	0.87	15.86	30.39	69.61
Lessors of Real Estate (NAICS 5311)	14.10	5.36	4.21	0.00	11.44	35.10	64.90
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	7.39	0.38	9.08	1.73	15.60	34.18	65.82
Utility System Construction (NAICS 2371)	6.75	2.22	0.37	0.49	10.29	20.11	79.89
Other Personal Services (NAICS 8129)	24.02	5.78	8.05	0.33	18.77	56.96	43.04
Used Merchandise Stores (NAICS 4533)	7.09	2.14	14.26	0.88	29.54	53.90	46.10
Other General Purpose Machinery Manufacturing	19.96	0.00	7.26	1.91	11.85	40.99	59.01

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
(NAICS 3339)							
Social Advocacy Organizations (NAICS 8133)	7.39	0.18	6.77	1.34	9.87	25.55	74.45
Clay Product and Refractory Manufacturing (NAICS 3271)	14.07	0.00	7.48	2.25	19.60	43.40	56.60
Support Activities for Crop Production (NAICS 1151)	3.98	2.63	0.00	0.00	18.26	24.86	75.14
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Vocational Rehabilitation Services (NAICS 6243)	11.22	0.61	3.71	0.35	30.25	46.14	53.86
Automotive Repair and Maintenance (NAICS 8111)	8.35	1.15	7.38	1.30	11.14	29.32	70.68
Remediation and Other Waste Management Services (NAICS 5629)	15.48	8.95	7.32	0.78	16.23	48.76	51.24
Rail Transportation (NAICS 4821)	8.30	2.79	8.34	0.00	12.12	31.55	68.45
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	5.42	0.06	7.99	0.73	15.99	30.20	69.80
Other Heavy and Civil Engineering Construction (NAICS 2379)	14.21	3.30	0.85	0.08	11.70	30.13	69.87
Drycleaning and Laundry Services (NAICS 8123)	27.93	5.25	8.40	0.00	15.27	56.86	43.14
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	6.31	1.12	8.29	0.68	20.53	36.93	63.07
Cement and Concrete Product Manufacturing (NAICS 3273)	5.20	1.00	7.67	0.70	18.16	32.74	67.26
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	7.12	1.31	8.50	2.27	15.30	34.49	65.51
Other Miscellaneous Store Retailers (NAICS 4539)	7.28	2.54	15.40	0.51	23.24	48.98	51.02
Software Publishers (NAICS 5112)	14.20	6.26	8.86	0.19	12.35	41.86	58.14
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	8.93	0.36	6.63	0.64	20.05	36.60	63.40
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	14.36	6.30	4.21	0.09	11.57	36.52	63.48
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	5.44	0.00	8.59	0.71	17.15	31.89	68.11

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	18.76	3.89	7.99	0.55	14.14	45.33	54.67
Other Financial Investment Activities (NAICS 5239)	11.72	0.26	5.73	0.00	25.72	43.43	56.57
Architectural and Structural Metals Manufacturing (NAICS 3323)	5.43	0.25	8.12	1.21	17.91	32.92	67.08
Home Furnishings Stores (NAICS 4422)	9.57	2.68	5.29	1.01	20.76	39.31	60.69
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	2.10	0.79	0.00	0.00	14.99	17.89	82.11
Specialized Design Services (NAICS 5414)	11.07	2.61	3.20	0.00	46.97	63.85	36.15
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	6.91	0.36	11.44	1.41	14.63	34.75	65.25
Electronics and Appliance Stores (NAICS 4431)	8.52	3.05	11.40	0.63	19.67	43.26	56.74
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Hardware Manufacturing (NAICS 3325)	6.75	0.00	8.94	2.37	13.10	31.16	68.84
Advertising, Public Relations, and Related Services (NAICS 5418)	12.87	1.27	6.46	0.00	28.96	49.56	50.44
Waste Collection (NAICS 5621)	20.84	6.31	4.20	0.00	11.89	43.24	56.76
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	5.37	0.10	7.69	0.82	20.40	34.38	65.62
Industrial Machinery Manufacturing (NAICS 3332)	6.32	0.00	11.20	2.22	14.78	34.51	65.49
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52
Ship and Boat Building (NAICS 3366)	9.15	0.00	8.92	2.29	10.70	31.05	68.95
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures (NAICS 7114)	17.52	3.02	7.67	0.28	18.94	47.43	52.57
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	7.07	0.02	9.67	2.12	17.78	36.67	63.33
Couriers and Express Delivery Services (NAICS 4921)	15.57	3.94	8.93	0.00	13.73	42.17	57.83
Grocery Stores (NAICS 4451)	5.73	2.89	17.01	0.23	21.60	47.46	52.54
Building Material and Supplies Dealers (NAICS 4441)	8.45	2.69	8.96	0.69	21.72	42.50	57.50
Specialized Freight Trucking (NAICS 4842)	29.98	8.64	5.06	0.40	11.07	55.15	44.85
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	5.89	0.15	8.05	0.73	15.07	29.90	70.10
Support Activities for Road	14.35	3.94	7.78	0.00	11.85	37.91	62.09

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Transportation (NAICS 4884)							
Taxi and Limousine Service (NAICS 4853)	22.29	8.15	6.45	0.21	11.02	48.12	51.88
Colleges, Universities, and Professional Schools (NAICS 6113)	14.80	2.44	7.30	0.00	14.70	39.23	60.77
Consumer Goods Rental (NAICS 5322)	14.42	6.47	4.66	0.00	13.57	39.12	60.88
Scientific Research and Development Services (NAICS 5417)	8.64	3.35	10.10	0.26	18.95	41.29	58.71
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	11.27	0.64	5.24	0.00	28.09	45.24	54.76
Insurance Carriers (NAICS 5241)	11.69	2.05	4.71	0.00	23.00	41.45	58.55
Automotive Equipment Rental and Leasing (NAICS 5321)	13.70	5.75	4.50	0.00	10.10	34.05	65.95
Traveler Accommodation (NAICS 7211)	14.23	2.63	10.11	0.07	16.24	43.27	56.73
Local Messengers and Local Delivery (NAICS 4922)	14.07	2.50	11.70	0.00	12.24	40.51	59.49
Electrical Equipment Manufacturing (NAICS 3353)	5.21	0.93	8.07	0.68	17.90	32.79	67.21
Other Telecommunications (NAICS 5179)	15.67	6.30	5.86	0.13	10.67	38.62	61.38
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	8.56	0.61	9.84	2.34	13.33	34.68	65.32
General Rental Centers (NAICS 5323)	12.78	5.40	3.95	0.00	18.03	40.16	59.84
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Other Professional, Scientific, and Technical Services (NAICS 5419)	12.63	0.59	5.21	0.00	28.20	46.63	53.37
Pulp, Paper, and Paperboard Mills (NAICS 3221)	12.79	0.00	8.72	2.18	8.72	32.41	67.59
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)	6.66	0.00	8.80	2.38	14.62	32.46	67.54
Other Fabricated Metal Product Manufacturing (NAICS 3329)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	4.73	0.10	8.07	0.99	20.42	34.31	65.69
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Paper and Paper Product Merchant Wholesalers (NAICS	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
4241)							
MAINTENANCE	*14.26*	*4.62*	*5.30*	*0.28*	*16.49*	*40.94*	*59.06*

Source and Notes: See Table 4.17.

Table 4.20. Detailed M/WBE Availability—IT, 2010

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Computer Systems Design and Related Services (NAICS 5415)	14.65	3.72	15.59	0.55	15.30	49.81	50.19
Other Telecommunications (NAICS 5179)	15.67	6.30	5.86	0.13	10.67	38.62	61.38
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.63	2.00	7.24	0.21	26.80	52.88	47.12
Software Publishers (NAICS 5112)	14.20	6.26	8.86	0.19	12.35	41.86	58.14
Electronics and Appliance Stores (NAICS 4431)	8.79	2.98	16.48	0.74	21.54	50.52	49.48
Architectural, Engineering, and Related Services (NAICS 5413)	8.70	4.29	12.21	0.44	12.93	38.57	61.43
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	8.59	1.64	12.02	1.06	18.16	41.47	58.53
Scientific Research and Development Services (NAICS 5417)	8.64	3.35	10.10	0.26	18.95	41.29	58.71
Audio and Video Equipment Manufacturing (NAICS 3343)	11.24	1.65	10.79	2.59	14.75	41.01	58.99
Communications Equipment Manufacturing (NAICS 3342)	7.42	1.69	9.29	0.98	17.60	36.98	63.02
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	9.97	1.12	11.58	2.37	14.22	39.26	60.74
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	7.39	0.38	9.08	1.73	15.60	34.18	65.82
Other Professional, Scientific, and Technical Services (NAICS 5419)	10.58	3.94	11.79	0.00	43.01	69.32	30.68
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.28	0.84	8.78	0.95	19.26	35.11	64.89
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	8.04	0.00	8.93	2.32	11.80	31.10	68.90
Building Equipment Contractors (NAICS 2382)	7.63	2.81	2.77	0.19	10.89	24.29	75.71
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Investigation and Security Services (NAICS 5616)	17.54	3.16	6.01	0.86	22.97	50.55	49.45
Printing and Related Support Activities (NAICS 3231)	5.17	0.27	9.65	0.82	22.02	37.93	62.07
Activities Related to Credit	12.15	0.30	5.62	0.00	25.85	43.94	56.06

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Intermediation (NAICS 5223)							
Facilities Support Services (NAICS 5612)	25.91	7.12	10.78	0.96	12.26	57.03	42.97
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	5.73	0.08	8.68	0.63	23.33	38.44	61.56
Rail Transportation (NAICS 4821)	8.30	2.79	8.34	0.00	12.12	31.55	68.45
Electrical Equipment Manufacturing (NAICS 3353)	5.21	0.93	8.07	0.68	17.90	32.79	67.21
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	11.94	0.58	5.68	0.21	29.58	48.00	52.00
Employment Services (NAICS 5613)	17.19	5.86	5.03	0.25	18.39	46.72	53.28
Other Information Services (NAICS 5191)	16.56	4.86	7.08	0.21	17.65	46.37	53.63
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.74	0.37	8.10	0.69	18.20	33.11	66.89
Nonresidential Building Construction (NAICS 2362)	12.10	5.64	3.81	1.03	12.16	34.74	65.26
Warehousing and Storage (NAICS 4931)	8.69	2.75	8.48	0.00	12.96	32.87	67.13
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	7.90	0.00	8.30	2.30	15.58	34.08	65.92
Architectural and Structural Metals Manufacturing (NAICS 3323)	5.58	1.15	8.28	1.08	18.14	34.23	65.77
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	10.66	1.42	5.88	0.02	27.22	45.19	54.81
Educational Support Services (NAICS 6117)	19.59	2.99	7.32	0.57	26.46	56.94	43.06
Book, Periodical, and Music Stores (NAICS 4512)	9.76	2.68	4.59	0.84	24.69	42.55	57.45
Specialized Design Services (NAICS 5414)	13.25	2.28	5.24	0.14	39.07	59.97	40.03
Advertising, Public Relations, and Related Services (NAICS 5418)	10.34	3.11	6.07	0.14	31.18	50.84	49.16
Legal Services (NAICS 5411)	5.86	4.00	8.71	0.06	12.77	31.41	68.59
Direct Selling Establishments (NAICS 4543)	10.51	2.52	4.50	0.72	27.99	46.24	53.76
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	28.71	6.23	9.93	0.05	14.91	59.83	40.17
Paper and Paper Product Merchant Wholesalers (NAICS	12.55	0.69	9.24	0.80	24.43	47.71	52.29

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
4241)							
Data Processing, Hosting, and Related Services (NAICS 5182)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Office Administrative Services (NAICS 5611)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
IT	13.94	3.86	13.94	0.50	15.84	48.09	51.91

Source and Notes: See Table 4.17.

Table 4.21. Detailed M/WBE Availability—Services, 2010

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	11.21	0.78	5.22	0.00	28.05	45.26	54.74
Insurance Carriers (NAICS 5241)	13.79	6.17	4.42	0.00	10.87	35.25	64.75
Offices of Physicians (NAICS 6211)	14.93	2.74	7.86	0.02	17.48	43.04	56.96
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	9.97	0.53	8.92	2.28	11.25	32.95	67.05
Computer Systems Design and Related Services (NAICS 5415)	16.65	3.56	14.36	0.59	16.62	51.79	48.21
Urban Transit Systems (NAICS 4851)	42.76	5.94	4.39	0.08	8.79	61.96	38.04
Rail Transportation (NAICS 4821)	8.30	2.79	8.34	0.00	12.12	31.55	68.45
Advertising, Public Relations, and Related Services (NAICS 5418)	9.26	3.75	8.04	0.23	22.37	43.66	56.34
Individual and Family Services (NAICS 6241)	8.59	0.08	3.95	0.03	29.31	41.97	58.03
Employment Services (NAICS 5613)	19.54	6.09	6.40	0.43	18.81	51.27	48.73
Other Residential Care Facilities (NAICS 6239)	9.71	0.01	3.81	0.01	29.08	42.62	57.38
Other Transit and Ground Passenger Transportation (NAICS 4859)	31.83	7.15	5.69	0.12	11.21	56.00	44.00
Architectural, Engineering, and Related Services (NAICS 5413)	7.50	4.28	9.66	0.31	13.94	35.68	64.32
Activities Related to Credit Intermediation (NAICS 5223)	11.48	0.54	5.43	0.00	26.91	44.36	55.64
Printing and Related Support Activities (NAICS 3231)	8.86	0.29	8.54	2.18	20.24	40.12	59.88
Management, Scientific, and Technical Consulting Services (NAICS 5416)	16.48	1.97	6.97	0.24	27.84	53.50	46.50
Charter Bus Industry (NAICS 4855)	27.19	7.25	7.69	0.05	11.71	53.89	46.11
Automotive Equipment Rental and Leasing (NAICS 5321)	11.11	0.40	5.48	0.00	24.76	41.74	58.26
Other Ambulatory Health Care Services (NAICS 6219)	15.86	2.57	7.56	0.05	17.23	43.26	56.74
Educational Support Services (NAICS 6117)	19.59	2.99	7.32	0.57	26.46	56.94	43.06
General Medical and Surgical Hospitals (NAICS 6221)	14.89	2.43	7.47	0.00	15.13	39.92	60.08
Offices of Dentists (NAICS 6212)	15.05	2.63	7.56	0.02	18.06	43.32	56.68
Colleges, Universities, and	14.80	2.44	7.30	0.00	14.70	39.23	60.77

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Professional Schools (NAICS 6113)							
Services to Buildings and Dwellings (NAICS 5617)	20.72	7.72	5.65	0.18	16.58	50.86	49.14
Electric Power Generation, Transmission and Distribution (NAICS 2211)	2.56	2.56	0.00	0.00	12.82	17.95	82.05
Residential Mental Retardation, Mental Health and Substance Abuse Facilities (NAICS 6232)	12.61	0.69	4.91	0.09	26.56	44.87	55.13
School and Employee Bus Transportation (NAICS 4854)	11.29	2.48	7.07	0.00	21.93	42.77	57.23
Building Equipment Contractors (NAICS 2382)	7.07	2.81	2.77	0.16	10.72	23.54	76.46
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	9.46	1.23	11.22	0.94	18.01	40.84	59.16
Investigation and Security Services (NAICS 5616)	20.82	5.85	5.53	0.48	13.29	45.98	54.02
Legal Services (NAICS 5411)	5.86	4.00	8.71	0.06	12.77	31.41	68.59
Special Food Services (NAICS 7223)	21.55	2.21	8.84	0.02	21.65	54.26	45.74
Office Administrative Services (NAICS 5611)	17.66	5.97	5.56	0.19	13.57	42.95	57.05
Wired Telecommunications Carriers (NAICS 5171)	13.44	5.46	5.65	0.00	16.93	41.48	58.52
Other Professional, Scientific, and Technical Services (NAICS 5419)	11.48	2.98	8.95	0.05	38.46	61.92	38.08
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	7.51	3.92	8.58	0.11	14.77	34.89	65.11
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	13.97	6.53	3.88	0.04	12.09	36.50	63.50
Other Personal Services (NAICS 8129)	26.75	6.41	6.55	0.06	15.01	54.77	45.23
Home Health Care Services (NAICS 6216)	18.56	2.58	7.25	0.07	20.84	49.31	50.69
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	12.52	0.56	9.17	0.76	23.61	46.63	53.37
Offices of Real Estate Agents and Brokers (NAICS 5312)	12.07	0.58	5.17	0.02	28.08	45.92	54.08
Outpatient Care Centers (NAICS 6214)	12.73	1.82	6.11	0.20	22.17	43.02	56.98
Gambling Industries (NAICS 7132)	17.74	2.38	7.02	0.00	15.78	42.92	57.08
Navigational, Measuring, Electromedical, and Control	5.80	0.02	11.48	2.41	19.03	38.75	61.25

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Instruments Manufacturing (NAICS 3345)							
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	5.93	0.16	7.34	0.73	16.42	30.57	69.43
Other Schools and Instruction (NAICS 6116)	17.46	2.99	8.45	0.34	23.65	52.89	47.11
Taxi and Limousine Service (NAICS 4853)	19.86	8.92	6.31	0.06	10.85	46.00	54.00
Other Information Services (NAICS 5191)	15.24	2.16	7.56	0.00	31.24	56.19	43.81
Other Miscellaneous Manufacturing (NAICS 3399)	8.04	0.22	8.25	2.38	19.95	38.84	61.16
Medical Equipment and Supplies Manufacturing (NAICS 3391)	6.92	0.07	10.98	2.70	14.66	35.33	64.67
Depository Credit Intermediation (NAICS 5221)	11.20	0.02	5.35	0.00	24.39	40.96	59.04
Offices of Other Health Practitioners (NAICS 6213)	10.47	1.15	4.94	0.35	32.20	49.11	50.89
Data Processing, Hosting, and Related Services (NAICS 5182)	15.48	6.45	7.77	0.30	19.44	49.44	50.56
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	6.19	4.07	2.82	0.09	10.26	23.43	76.57
Specialized Design Services (NAICS 5414)	13.23	2.28	5.22	0.14	39.12	59.99	40.01
Pulp, Paper, and Paperboard Mills (NAICS 3221)	12.79	0.00	8.72	2.18	8.72	32.41	67.59
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	11.23	2.40	4.36	1.19	28.93	48.11	51.89
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	25.17	6.20	6.30	0.00	12.68	50.35	49.65
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	5.89	0.15	8.05	0.73	15.07	29.90	70.10
Insurance and Employee Benefit Funds (NAICS 5251)	9.70	0.79	7.39	0.00	31.56	49.44	50.56
Freight Transportation Arrangement (NAICS 4885)	13.71	3.81	8.94	0.00	15.00	41.47	58.53
Business Support Services (NAICS 5614)	13.29	1.19	5.83	0.05	26.85	47.21	52.79
Software Publishers (NAICS 5112)	14.20	6.26	8.86	0.19	12.35	41.86	58.14
Traveler Accommodation (NAICS 7211)	14.23	2.63	10.11	0.07	16.24	43.27	56.73
Travel Arrangement and Reservation Services (NAICS 5615)	13.92	5.60	5.24	0.00	21.06	45.82	54.18
Medical and Diagnostic Laboratories (NAICS 6215)	8.47	0.50	5.22	0.23	31.86	46.27	53.73
Civic and Social Organizations	22.13	5.15	6.37	0.23	12.08	45.96	54.04

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
(NAICS 8134)							
Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)	7.65	0.49	3.58	0.19	32.36	44.27	55.73
Child Day Care Services (NAICS 6244)	16.10	2.72	7.06	0.11	28.16	54.15	45.85
Other Telecommunications (NAICS 5179)	14.58	4.00	5.72	0.10	17.47	41.87	58.13
Nonresidential Building Construction (NAICS 2362)	10.66	5.04	3.22	0.87	13.01	32.80	67.20
Specialized Freight Trucking (NAICS 4842)	24.77	8.08	6.35	0.13	12.34	51.66	48.34
Social Advocacy Organizations (NAICS 8133)	7.39	0.18	6.77	1.34	9.87	25.55	74.45
Motion Picture and Video Industries (NAICS 5121)	13.95	1.78	5.51	0.23	30.75	52.22	47.78
Electric Lighting Equipment Manufacturing (NAICS 3351)	5.99	0.00	10.98	3.01	21.41	41.38	58.62
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	5.73	0.08	8.68	0.63	23.32	38.44	61.56
Automotive Repair and Maintenance (NAICS 8111)	24.58	5.47	6.61	0.18	12.95	49.79	50.21
Waste Treatment and Disposal (NAICS 5622)	18.36	7.34	4.10	0.00	10.26	40.06	59.94
Psychiatric and Substance Abuse Hospitals (NAICS 6222)	15.21	2.69	7.13	0.18	20.68	45.88	54.12
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	4.41	0.18	8.17	0.78	17.61	31.15	68.85
Cable and Other Subscription Programming (NAICS 5152)	13.50	6.55	4.33	0.00	10.64	35.02	64.98
Personal and Household Goods Repair and Maintenance (NAICS 8114)	14.91	3.33	7.03	0.81	12.93	39.01	60.99
Technical and Trade Schools (NAICS 6115)	18.76	2.46	8.58	0.00	20.04	49.84	50.16
Highway, Street, and Bridge Construction (NAICS 2373)	8.85	3.72	1.06	0.39	9.88	23.91	76.09
Warehousing and Storage (NAICS 4931)	8.79	2.72	8.72	0.00	13.78	34.01	65.99
Natural Gas Distribution (NAICS 2212)	4.71	2.53	0.00	0.00	13.54	20.77	79.23
General Freight Trucking (NAICS 4841)	23.65	9.66	5.82	0.25	10.58	49.96	50.04
Couriers and Express Delivery Services (NAICS 4921)	15.57	3.94	8.93	0.00	13.73	42.17	57.83
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	26.07	5.66	9.44	0.19	14.72	56.08	43.92
Household and Institutional	9.34	0.00	8.10	2.34	18.30	38.08	61.92

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)							
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)	14.35	6.06	4.73	0.40	9.32	34.86	65.14
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	6.47	0.36	8.40	1.13	17.46	33.84	66.16
Scientific Research and Development Services (NAICS 5417)	9.85	2.08	9.21	0.25	25.21	46.59	53.41
Lessors of Real Estate (NAICS 5311)	14.35	4.71	4.31	0.10	15.85	39.31	60.69
Vocational Rehabilitation Services (NAICS 6243)	11.22	0.61	3.71	0.35	30.25	46.14	53.86
Railroad Rolling Stock Manufacturing (NAICS 3365)	3.00	0.00	6.46	0.60	31.89	41.95	58.05
Grocery and Related Product Merchant Wholesalers (NAICS 4244)	8.27	0.28	9.34	2.17	15.36	35.42	64.58
Direct Selling Establishments (NAICS 4543)	7.51	2.46	15.22	1.14	21.36	47.69	52.31
Remediation and Other Waste Management Services (NAICS 5629)	13.53	5.61	4.80	1.19	13.83	38.97	61.03
Consumer Goods Rental (NAICS 5322)	15.56	2.54	4.71	0.00	21.47	44.27	55.73
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.87	0.49	8.29	1.02	17.99	33.66	66.34
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures (NAICS 7114)	17.52	3.02	7.67	0.28	18.94	47.43	52.57
Activities Related to Real Estate (NAICS 5313)	11.03	0.74	4.84	0.00	30.26	46.87	53.13
Other Specialty Trade Contractors (NAICS 2389)	6.27	3.03	2.67	0.15	10.80	22.91	77.09
Used Merchandise Stores (NAICS 4533)	7.09	2.14	14.26	0.88	29.54	53.90	46.10
Performing Arts Companies (NAICS 7111)	18.14	3.33	7.48	0.23	20.97	50.16	49.84
Grocery Stores (NAICS 4451)	5.73	2.89	17.01	0.23	21.60	47.46	52.54
Drycleaning and Laundry Services (NAICS 8123)	26.32	5.44	8.60	0.00	15.91	56.27	43.73
Gasoline Stations (NAICS 4471)	5.65	2.70	17.60	0.19	20.43	46.57	53.43
Facilities Support Services (NAICS 5612)	25.91	7.12	10.78	0.96	12.26	57.03	42.97
Nonscheduled Air Transportation (NAICS 4812)	10.40	5.12	8.77	0.04	12.94	37.27	62.73
Other Support Activities for Transportation (NAICS 4889)	24.09	7.98	6.08	0.13	9.84	48.12	51.88
Land Subdivision (NAICS 2372)	7.17	1.35	0.00	0.02	7.41	15.94	84.06

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Health and Personal Care Stores (NAICS 4461)	7.49	2.61	13.21	0.64	25.09	49.04	50.96
Business Schools and Computer and Management Training (NAICS 6114)	20.76	2.98	10.10	0.13	23.52	57.48	42.52
Elementary and Secondary Schools (NAICS 6111)	14.68	2.44	7.33	0.00	14.69	39.14	60.86
Electrical Equipment Manufacturing (NAICS 3353)	5.24	0.92	8.10	0.69	17.89	32.83	67.17
Building Finishing Contractors (NAICS 2383)	5.78	3.44	2.68	0.03	11.20	23.13	76.87
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	4.58	0.00	8.91	0.77	16.09	30.35	69.65
Nondepository Credit Intermediation (NAICS 5222)	11.57	0.38	5.51	0.00	25.67	43.13	56.87
Other Miscellaneous Store Retailers (NAICS 4539)	7.28	2.54	15.40	0.51	23.24	48.98	51.02
Junior Colleges (NAICS 6112)	14.47	3.56	7.23	0.00	14.47	39.73	60.27
Communications Equipment Manufacturing (NAICS 3342)	7.87	0.45	8.39	0.69	16.91	34.30	65.70
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	11.51	1.20	6.46	0.08	27.81	47.05	52.95
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)	8.08	0.32	9.39	2.55	18.61	38.95	61.05
Nursing Care Facilities (NAICS 6231)	16.53	2.44	7.30	0.12	18.65	45.04	54.96
Other Financial Investment Activities (NAICS 5239)	11.75	0.26	5.73	0.00	25.70	43.43	56.57
Pharmaceutical and Medicine Manufacturing (NAICS 3254)	6.58	0.22	9.33	1.49	15.23	32.85	67.15
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	5.26	0.72	8.75	0.68	17.66	33.07	66.93
Waste Collection (NAICS 5621)	20.84	6.31	4.20	0.00	11.89	43.24	56.76
Electronics and Appliance Stores (NAICS 4431)	8.05	2.92	14.92	0.59	21.26	47.73	52.27
Other General Purpose Machinery Manufacturing (NAICS 3339)	5.83	0.00	7.63	9.92	18.80	42.18	57.82
Full-Service Restaurants (NAICS 7221)	14.67	2.93	8.40	0.07	17.67	43.75	56.25
Clay Product and Refractory Manufacturing (NAICS 3271)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Textile and Fabric Finishing and Fabric Coating Mills (NAICS 3133)	7.80	0.38	8.05	2.49	29.78	48.51	51.49
Automobile Dealers (NAICS 4411)	9.16	2.90	4.55	0.91	19.59	37.11	62.89
Utility System Construction	6.54	2.14	0.24	0.52	10.13	19.55	80.45

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
(NAICS 2371)							
Water, Sewage and Other Systems (NAICS 2213)	0.00	0.00	0.00	0.00	10.96	10.96	89.04
Local Messengers and Local Delivery (NAICS 4922)	14.07	2.50	11.70	0.00	12.24	40.51	59.49
Building Material and Supplies Dealers (NAICS 4441)	8.32	2.68	9.26	0.73	21.68	42.67	57.33
Residential Building Construction (NAICS 2361)	4.90	3.30	0.55	0.15	13.43	22.32	77.68
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	9.57	0.93	10.42	2.31	12.14	35.37	64.63
Management of Companies and Enterprises (NAICS 5511)	11.14	0.10	5.94	0.00	24.98	42.15	57.85
Bakeries and Tortilla Manufacturing (NAICS 3118)	6.79	0.13	8.77	2.44	18.43	36.56	63.44
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	4.48	0.30	8.41	0.68	20.58	34.45	65.55
Manufacturing and Reproducing Magnetic and Optical Media (NAICS 3346)	6.89	0.00	8.76	2.39	18.53	36.57	63.43
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	7.84	1.39	7.18	1.22	11.50	29.12	70.88
Radio and Television Broadcasting (NAICS 5151)	12.10	1.65	8.35	0.00	31.58	53.67	46.33
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	13.84	0.00	13.92	1.95	13.86	43.57	56.43
Scheduled Air Transportation (NAICS 4811)	9.65	2.82	8.47	0.00	11.29	32.24	67.76
General Rental Centers (NAICS 5323)	12.78	5.40	3.95	0.00	18.03	40.16	59.84
Promoters of Performing Arts, Sports, and Similar Events (NAICS 7113)	17.93	2.42	7.72	0.13	17.73	45.93	54.07
Sound Recording Industries (NAICS 5122)	13.88	2.11	7.45	0.00	30.74	54.18	45.82
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	9.38	0.00	9.34	2.30	18.80	39.82	60.18
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)	11.27	0.00	6.86	2.38	28.79	49.30	50.70
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)	6.38	2.63	15.74	0.27	20.56	45.58	54.42
Dairy Product Manufacturing (NAICS 3115)	6.74	0.00	8.93	2.37	13.21	31.26	68.74

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Book, Periodical, and Music Stores (NAICS 4512)	9.70	2.68	4.88	0.83	24.59	42.67	57.33
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	15.19	0.00	13.96	3.36	14.09	46.59	53.41
Death Care Services (NAICS 8122)	26.85	5.72	6.28	0.00	16.11	54.97	45.03
Other Textile Product Mills (NAICS 3149)	10.72	0.00	9.46	2.44	21.25	43.86	56.14
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)	5.99	1.22	10.20	2.50	17.90	37.82	62.18
Other Fabricated Metal Product Manufacturing (NAICS 3329)	6.33	0.00	9.44	2.55	16.26	34.59	65.41
Other Wood Product Manufacturing (NAICS 3219)	3.65	0.02	7.29	0.78	22.74	34.48	65.52
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	6.48	0.00	13.74	3.18	8.64	32.04	67.96
Architectural and Structural Metals Manufacturing (NAICS 3323)	3.67	0.00	7.51	0.73	18.48	30.40	69.60
Plastics Product Manufacturing (NAICS 3261)	7.90	0.00	9.11	2.31	14.29	33.62	66.38
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	6.31	1.12	8.29	0.68	20.53	36.93	63.07
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)	3.22	3.22	0.00	0.00	15.58	22.02	77.98
Religious Organizations (NAICS 8131)	25.03	6.25	6.25	0.00	12.51	50.03	49.97
Other Support Services (NAICS 5619)	12.16	1.34	5.01	0.17	33.75	52.43	47.57
Motor Vehicle Parts Manufacturing (NAICS 3363)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	8.09	2.58	4.72	1.00	20.38	36.76	63.24
Home Furnishings Stores (NAICS 4422)	6.72	2.45	14.45	0.68	27.63	51.94	48.06
Independent Artists, Writers, and Performers (NAICS 7115)	16.29	2.88	7.51	0.18	31.83	58.69	41.31
Foundries (NAICS 3315)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Florists (NAICS 4531)	7.78	2.16	14.15	1.09	32.77	57.95	42.05
Shoe Stores (NAICS 4482)	5.98	2.70	15.91	0.15	20.72	45.46	54.54
Other Transportation Equipment Manufacturing (NAICS 3369)	6.25	0.00	8.26	2.22	19.78	36.51	63.49
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	3.56	0.77	7.27	0.71	17.47	29.77	70.23
Spring and Wire Product Manufacturing (NAICS 3326)	6.98	0.00	9.30	2.33	9.30	27.91	72.09

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Limited-Service Eating Places (NAICS 7222)	14.70	2.71	7.98	0.05	17.23	42.67	57.33
SERVICES	*12.88*	*1.95*	*6.91*	*0.09*	*22.74*	*44.56*	*55.44*

Source and Notes: See Table 4.17.

Table 4.22. Detailed M/WBE Availability—CSE, 2010

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Electric Power Generation, Transmission and Distribution (NAICS 2211)	2.57	2.56	0.00	0.00	12.82	17.96	82.04
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	15.72	0.00	8.32	2.08	8.32	34.44	65.56
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)	8.08	0.32	9.39	2.55	18.61	38.95	61.05
Railroad Rolling Stock Manufacturing (NAICS 3365)	3.00	0.00	6.46	0.60	31.89	41.95	58.05
Special Food Services (NAICS 7223)	21.76	2.16	8.92	0.00	21.60	54.44	45.56
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	5.63	0.89	8.05	0.80	17.60	32.97	67.03
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	8.30	0.80	10.23	0.94	18.46	38.73	61.27
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	8.58	0.03	8.24	2.02	16.49	35.36	64.64
Automobile Dealers (NAICS 4411)	9.16	2.90	4.55	0.91	19.59	37.11	62.89
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	5.99	0.84	13.08	2.30	13.47	35.68	64.32
Natural Gas Distribution (NAICS 2212)	4.71	2.53	0.00	0.00	13.54	20.77	79.23
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	7.64	0.02	8.56	2.26	15.27	33.73	66.27
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	6.07	0.16	7.55	0.91	15.95	30.63	69.37
Pharmaceutical and Medicine Manufacturing (NAICS 3254)	6.28	0.16	9.30	1.53	16.13	33.41	66.59
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	5.33	0.68	8.34	0.87	19.12	34.34	65.66
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	9.97	0.88	10.48	2.33	13.00	36.67	63.33
Printing and Related Support Activities (NAICS 3231)	5.57	0.28	9.52	0.99	21.88	38.24	61.76
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	5.33	0.10	7.68	0.81	20.46	34.38	65.62
Direct Selling Establishments	7.46	2.46	15.31	1.11	21.30	47.64	52.36

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
(NAICS 4543)							
Communications Equipment Manufacturing (NAICS 3342)	7.45	1.60	9.22	0.96	17.55	36.78	63.22
Clothing Stores (NAICS 4481)	10.56	2.65	6.53	0.90	27.06	47.70	52.30
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	13.95	6.32	3.94	0.10	12.45	36.77	63.23
Automotive Repair and Maintenance (NAICS 8111)	7.08	0.81	7.45	1.39	11.00	27.72	72.28
Architectural, Engineering, and Related Services (NAICS 5413)	8.72	4.29	12.28	0.43	12.84	38.55	61.45
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	13.43	2.50	4.99	1.64	24.95	47.51	52.49
Computer Systems Design and Related Services (NAICS 5415)	15.24	4.14	15.44	0.60	13.97	49.39	50.61
Medical Equipment and Supplies Manufacturing (NAICS 3391)	6.99	0.01	10.68	2.45	14.33	34.44	65.56
Electronics and Appliance Stores (NAICS 4431)	8.79	2.98	16.48	0.74	21.54	50.52	49.48
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	5.73	0.08	8.68	0.63	23.33	38.44	61.56
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	5.08	0.00	8.89	1.09	15.46	30.51	69.49
Water, Sewage and Other Systems (NAICS 2213)	0.00	0.00	0.00	0.00	10.96	10.96	89.04
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	12.08	0.67	9.08	0.79	24.08	46.70	53.30
Support Activities for Water Transportation (NAICS 4883)	11.88	4.87	7.91	0.00	11.99	36.65	63.35
Aerospace Product and Parts Manufacturing (NAICS 3364)	8.33	0.00	9.63	4.37	10.14	32.47	67.53
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)	8.39	0.94	8.66	2.21	10.03	30.23	69.77
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	14.30	5.12	4.10	0.24	18.63	42.38	57.62
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	8.75	0.00	9.77	2.07	15.48	36.07	63.93
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)	6.38	2.63	15.74	0.27	20.56	45.58	54.42
Other Transportation Equipment Manufacturing (NAICS 3369)	6.25	0.00	8.26	2.22	19.78	36.51	63.49
Other Chemical Product and Preparation Manufacturing	6.31	1.12	8.29	0.68	20.53	36.93	63.07

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
(NAICS 3259)							
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	5.74	0.29	7.89	0.70	18.40	33.03	66.97
Facilities Support Services (NAICS 5612)	25.91	7.12	10.78	0.96	12.26	57.03	42.97
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	5.23	0.73	8.70	0.67	17.71	33.04	66.96
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	10.43	0.80	9.84	2.21	11.31	34.59	65.41
Management, Scientific, and Technical Consulting Services (NAICS 5416)	15.84	1.43	6.41	0.07	28.61	52.36	47.64
Motor Vehicle Parts Manufacturing (NAICS 3363)	6.75	0.59	8.97	2.32	11.55	30.18	69.82
Book, Periodical, and Music Stores (NAICS 4512)	9.76	2.68	4.59	0.84	24.69	42.55	57.45
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	7.37	0.58	9.76	1.92	15.02	34.63	65.37
Furniture Stores (NAICS 4421)	6.74	2.59	15.56	0.35	23.38	48.64	51.36
Software Publishers (NAICS 5112)	14.20	6.26	8.86	0.19	12.35	41.86	58.14
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	3.92	0.68	7.49	0.88	16.59	29.57	70.43
Support Activities for Road Transportation (NAICS 4884)	14.38	3.94	7.77	0.00	11.83	37.93	62.07
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	13.59	1.59	10.55	2.19	14.85	42.77	57.23
Other Fabricated Metal Product Manufacturing (NAICS 3329)	5.40	0.00	6.79	2.61	35.88	50.68	49.32
Other Telecommunications (NAICS 5179)	13.09	0.83	5.53	0.07	26.80	46.32	53.68
Scientific Research and Development Services (NAICS 5417)	8.79	3.19	9.98	0.26	19.75	41.97	58.03
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)	6.31	2.70	15.55	0.25	21.93	46.73	53.27
Nonresidential Building Construction (NAICS 2362)	12.10	5.64	3.81	1.03	12.16	34.74	65.26
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	25.11	6.24	6.33	0.00	12.64	50.33	49.67
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)	6.28	0.00	8.37	2.09	8.37	25.12	74.88

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Other Miscellaneous Store Retailers (NAICS 4539)	7.10	2.52	15.38	0.49	23.33	48.83	51.17
Grocery and Related Product Merchant Wholesalers (NAICS 4244)	8.04	0.28	9.24	1.97	15.88	35.42	64.58
Other General Purpose Machinery Manufacturing (NAICS 3339)	6.13	0.00	10.04	1.54	14.71	32.41	67.59
Architectural and Structural Metals Manufacturing (NAICS 3323)	7.08	0.21	7.34	0.69	16.41	31.72	68.28
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)	15.63	0.00	8.10	2.18	19.78	45.69	54.31
Industrial Machinery Manufacturing (NAICS 3332)	6.57	0.00	10.87	2.30	12.64	32.39	67.61
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	8.93	0.36	6.63	0.64	20.05	36.60	63.40
Plastics Product Manufacturing (NAICS 3261)	7.90	0.00	9.11	2.31	14.29	33.62	66.38
Scheduled Air Transportation (NAICS 4811)	9.65	2.82	8.47	0.00	11.29	32.24	67.76
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	11.27	0.64	5.24	0.00	28.09	45.24	54.76
Automotive Equipment Rental and Leasing (NAICS 5321)	11.29	0.78	5.41	0.00	23.73	41.20	58.80
Clay Product and Refractory Manufacturing (NAICS 3271)	14.07	0.00	7.48	2.25	19.60	43.40	56.60
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	10.28	2.72	7.68	1.03	13.61	35.31	64.69
Lessors of Real Estate (NAICS 5311)	13.67	3.68	4.50	0.09	18.65	40.59	59.41
Investigation and Security Services (NAICS 5616)	17.58	3.40	5.92	0.82	22.47	50.19	49.81
Drycleaning and Laundry Services (NAICS 8123)	24.42	5.65	8.77	0.00	16.70	55.53	44.47
Traveler Accommodation (NAICS 7211)	14.23	2.63	10.11	0.07	16.24	43.27	56.73
Civic and Social Organizations (NAICS 8134)	22.13	5.15	6.37	0.23	12.08	45.96	54.04
Other Professional, Scientific, and Technical Services (NAICS 5419)	12.63	0.59	5.21	0.00	28.20	46.63	53.37
Business Support Services (NAICS 5614)	13.36	0.74	5.84	0.06	26.77	46.76	53.24
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	9.34	0.00	8.10	2.34	18.30	38.08	61.92
Other Specialty Trade	6.48	3.06	2.37	0.17	11.43	23.51	76.49

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Contractors (NAICS 2389)							
Other Miscellaneous Manufacturing (NAICS 3399)	5.51	0.67	7.93	0.77	24.69	39.56	60.44
Remediation and Other Waste Management Services (NAICS 5629)	14.41	6.22	4.72	0.45	11.70	37.51	62.49
Other Motor Vehicle Dealers (NAICS 4412)	5.45	2.64	16.26	0.05	19.51	43.92	56.08
Support Activities for Animal Production (NAICS 1152)	2.57	2.57	0.34	0.00	21.99	27.47	72.53
Employment Services (NAICS 5613)	19.36	6.07	6.30	0.42	18.78	50.93	49.07
Lime and Gypsum Product Manufacturing (NAICS 3274)	6.98	0.00	9.30	2.33	9.30	27.91	72.09
Other Information Services (NAICS 5191)	15.08	2.03	7.41	0.00	30.79	55.30	44.70
Electrical Equipment Manufacturing (NAICS 3353)	6.04	0.00	10.12	0.83	17.14	34.13	65.87
Offices of Dentists (NAICS 6212)	15.05	2.63	7.56	0.02	18.06	43.32	56.68
Waste Treatment and Disposal (NAICS 5622)	18.37	7.65	3.65	0.00	8.24	37.91	62.09
Pulp, Paper, and Paperboard Mills (NAICS 3221)	11.26	0.00	8.01	2.24	15.54	37.05	62.95
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	8.09	2.58	4.72	1.00	20.38	36.76	63.24
Religious Organizations (NAICS 8131)	25.03	6.25	6.25	0.00	12.51	50.03	49.97
Full-Service Restaurants (NAICS 7221)	14.67	2.93	8.40	0.07	17.67	43.75	56.25
Drinking Places (Alcoholic Beverages) (NAICS 7224)	8.13	0.22	3.88	0.15	32.53	44.92	55.08
Medical and Diagnostic Laboratories (NAICS 6215)	8.45	0.51	5.26	0.23	31.84	46.28	53.72
Services to Buildings and Dwellings (NAICS 5617)	21.09	7.84	5.73	0.18	16.80	51.64	48.36
Beverage Manufacturing (NAICS 3121)	11.03	0.00	8.83	2.21	8.83	30.89	69.11
Other Personal Services (NAICS 8129)	24.95	6.07	7.51	0.25	17.12	55.88	44.12
Personal Care Services (NAICS 8121)	20.78	4.46	7.77	0.03	30.81	63.85	36.15
Satellite Telecommunications (NAICS 5174)	13.19	3.48	4.85	0.00	23.98	45.51	54.49
Dairy Product Manufacturing (NAICS 3115)	8.16	0.00	8.67	2.34	14.25	33.43	66.57
Support Activities for Air Transportation (NAICS 4881)	8.17	2.81	8.30	0.00	14.57	33.85	66.15
Building Equipment Contractors (NAICS 2382)	7.93	2.82	2.77	0.20	11.03	24.75	75.25
Bakeries and Tortilla	7.02	0.42	9.06	2.29	14.50	33.28	66.72

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Manufacturing (NAICS 3118)							
Outpatient Care Centers (NAICS 6214)	14.65	2.45	7.31	0.00	15.14	39.54	60.46
Home Furnishings Stores (NAICS 4422)	9.57	2.68	5.29	1.01	20.76	39.31	60.69
Offices of Other Health Practitioners (NAICS 6213)	14.72	2.70	7.78	0.05	17.33	42.58	57.42
General Freight Trucking (NAICS 4841)	23.36	8.44	5.92	0.22	12.68	50.62	49.38
Educational Support Services (NAICS 6117)	19.59	2.99	7.32	0.57	26.46	56.94	43.06
CSE	9.39	2.02	9.05	0.93	17.52	38.91	61.09

Source and Notes: See Table 4.17.

Table 4.23A. Estimated Availability (Award Dollar Weights)—Overall and By Major Procurement Category, 2010

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	M/WBE	Non-M/WBE
CONSTRUCTION	9.69	3.48	5.44	0.39	18.99	13.39	32.39	67.61
AE-CRS	10.17	3.86	11.35	0.39	25.78	15.36	41.14	58.86
MAINTENANCE	14.26	4.62	5.30	0.28	24.46	16.49	40.94	59.06
IT	13.94	3.86	13.94	0.50	32.25	15.84	48.09	51.91
SERVICES	12.88	1.95	6.91	0.09	21.83	22.74	44.56	55.44
CSE	9.39	2.02	9.05	0.93	21.39	17.52	38.91	61.09
TOTAL	11.35	2.95	7.27	0.27	21.81	17.76	39.57	60.43

Source and Notes: See Table 4.17.

Table 4.23B. Estimated Availability (Paid Dollar Weights)—Overall and By Major Procurement Category, 2010

Major Procurement Category	African American	Hispanic	Asian	Native American	MBE	WBE	M/WBE	Non-M/WBE
CONSTRUCTION	8.96	3.43	4.42	0.37	17.17	13.09	30.26	69.74
AE-CRS	10.34	3.82	11.19	0.39	25.75	15.59	41.34	58.66
MAINTENANCE	14.86	4.49	5.67	0.29	25.32	17.97	43.29	56.71
IT	13.34	3.77	13.83	0.48	31.43	15.88	47.31	52.69
SERVICES	13.10	2.12	7.10	0.09	22.41	21.91	44.32	55.68
CSE	9.39	2.02	9.05	0.93	21.39	17.52	38.91	61.09
TOTAL	11.21	2.96	6.71	0.26	21.14	17.43	38.57	61.43

Source and Notes: See Table 4.17.

V. Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings

A. Review of Relevant Literature

In this chapter we examine disparities in business formation and earnings principally in the private sector, where contracting activities are generally *not* subject to M/WBE or other affirmative action requirements. Statistical examination of disparities in the private sector of the relevant geographic market area is important for several reasons. First, to the extent that discriminatory practices by contractors, suppliers, insurers, lenders, customers, and others limit the ability of M/WBEs to compete, those practices will impact the larger private sector as well as the public sector. Second, examining the utilization of M/WBEs in the private sector provides an indicator of the extent to which M/WBEs are used in the absence of race- and gender-conscious efforts, since few firms in the private sector make such efforts. Third, the Supreme Court in *Croson* and other courts acknowledged that state and local governments have a constitutional duty not to contribute to the perpetuation of discrimination in the private sector of their relevant geographic and product markets.

After years of comparative neglect, research on the economics of entrepreneurship—especially upon self-employment—has expanded in recent years.[168] There is a good deal of agreement in the literature on the micro-economic correlates of self-employment.[169] In the U.S., it appears that self-employment rises with age, is higher among men than women and higher among non-minorities than African Americans. The least educated have the highest probability of being self-employed. However, evidence is also found in the U.S. that the most highly educated also have relatively high probabilities. On average, however, increases in educational attainment are generally found to lead to increases in the probability of being self-employed. A higher number of children in the family increases the likelihood of (male) self-employment. Workers in agriculture and construction are also especially likely to be self-employed.

There has been relatively less work on how institutional factors influence self-employment. Such work that has been conducted includes examining the role of minimum wage legislation (Blau, 1987), immigration (Fairlie and Meyer, 1998; 2003; Olson, Zuiker and Montalto, 2000; Mora

[168] Microeconometric work includes Fuchs (1982), Borjas and Bronars (1989), Evans and Jovanovic (1989), Evans and Leighton (1989), Fairlie and Meyer (1996, 1998), Reardon (1998), Fairlie (1999), Wainwright (2000), Blanchflower and Wainwright (2005), and Blanchflower (2009) for the United States, Rees and Shah (1986), Pickles and O'Farrell (1987), Blanchflower and Oswald (1990, 1998), Meager (1992), Taylor (1996), Robson (1998a, 1998b), and Blanchflower and Shadforth (2007) for the UK, DeWit and van Winden (1990) for the Netherlands, Alba-Ramirez (1994) for Spain, Bernhardt (1994), Schuetze (1998), Arai (1997), Lentz and Laband (1990), and Kuhn and Schuetze (1998) for Canada, Laferrere and McEntee (1995) for France, Blanchflower and Meyer (1994) and Kidd (1993) for Australia, and Foti and Vivarelli (1994) for Italy. There are also several theoretical papers including Kihlstrom and Laffonte (1979), Kanbur (1990), Holmes and Schmitz (1990), Croate and Tennyson (1992), and Cagetti and DeNardi (2006), plus a few papers that draw comparisons across countries *i.e.* Schuetze (1998) for Canada and the U.S., Blanchflower and Meyer (1994) for Australia and the U.S., Alba-Ramirez (1994) for Spain and the United States, and Acs and Evans (1994), Blanchflower (2000), Blanchflower, Oswald, and Stutzer (2001), and Blanchflower and Oswald (2008) for many countries.

[169] Parker (2004) and Aronson (1991) provide good overviews.

and Davila 2006, Robles and Cordero-Gúzman, 2007),[170] immigration policy (Borjas and Bronars, 1989), and retirement policies (Quinn, 1980). Studies by Long (1982), and Blau (1987), and more recently by Schuetze (1998), have considered the role of taxes.[171] A number of other studies have also considered the cyclical aspects of self-employment and in particular how movements of self-employment are correlated with movements in unemployment. Meager (1992), provides a useful summary of much of this work.[172]

Blanchflower, Oswald and Stutzer (2001) found that there is a strikingly large latent desire to own a business. There exists frustrated entrepreneurship on a huge scale in the U.S. and other Organization for Economic Co-operation and Development (OECD) countries.[173] In the U.S., 7 out of 10 people say they would prefer to be self-employed. This compares to an actual proportion of self-employed people in 2001 of 7.3 percent of the civilian labor force, which also shows that the proportion of the labor force that is self-employed has declined steadily since 1990 following a small increase in the rate from 1980 to 1990. This raises an important question. Why do so few individuals in the U.S. and OECD countries manage to translate their preferences into action? Lack of start-up capital is one likely explanation. This factor is commonly cited by small-business managers themselves (Blanchflower and Oswald, 1998). There is also

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[170] Fairlie and Meyer (1998) found that immigration had no statistically significant impact at all on African American self-employment. In a subsequent paper Fairlie and Meyer (2003), found that self-employed immigrants did displace self-employed native non-African Americans. They found that immigration has a large negative effect on the probability of self-employment among native non-African Americans, although, surprisingly, they found that immigrants increase native self-employment earnings.

[171] In an interesting study pooling individual level data for the U.S. and Canada from the Current Population Survey and the Survey of Consumer Finances, respectively, Schuetze (1998) finds that increases in income taxes have large and positive effects on the male self-employment rate. He found that a 30 percent increase in taxes generated a rise of 0.9 to 2.0 percentage points in the male self-employment rate in Canada compared with a rise of 0.8 to 1.4 percentage points in the U.S. over 1994 levels.

[172] Evans and Leighton (1989) found that non-minority men who are unemployed are nearly twice as likely as wage workers to enter self-employment. Bogenhold and Staber (1991) also find evidence that unemployment and self-employment are positively correlated. Blanchflower and Oswald (1990) found a strong negative relationship between regional unemployment and self-employment for the period 1983-1989 in the U.K. using a pooled cross-section time-series data set. Blanchflower and Oswald (1998) confirmed this result, finding that the log of the county unemployment rate entered negatively in a cross-section self-employment model for young people age 23 in 1981 and for the same people aged 33 in 1991. Taylor (1996) confirmed this result using data from the British Household Panel Study of 1991, showing that the probability of being self-employed rises when expected self-employment earnings increase relative to employee earnings, *i.e.*, when unemployment is low. Acs and Evans (1994) found evidence from an analysis of a panel of countries that the unemployment rate entered negatively in a fixed effect and random effects formulation. However, Schuetze (1998) found that for the U.S. and Canada the elasticity of the male self-employment rate with respect to the unemployment rate was considerably smaller than found for the effect from taxes discussed above. The elasticity of self-employment associated with the unemployment rate is about 0.1 in both countries using 1994 figures. A decrease of 5 percentage points in the unemployment rate in the U.S. (about the same decline occurred from 1983-1989) leads to about a 1 percentage point decrease in self-employment. Blanchflower (2000) found that there is generally a negative relationship between the self-employment rate and the unemployment rate. It does seem then that there is some disagreement in the literature on whether high unemployment acts to discourage self-employment because of the lack of available opportunities or encourage it because of the lack of viable alternatives.

[173] The OECD is an international organization of those developed countries that accept the principles of representative democracy and a free market economy. There are currently 30 full members.

econometric evidence that confirms this barrier. Holding other influences constant, people who inherit cash, who win the lottery, or who have large family assets, are all more likely both to set up and sustain a lasting small business. By contrast, childhood personality test-scores turn out to have almost no predictive power about which persons will be running their own businesses as adults (Blanchflower and Oswald, 1998).

One primary impediment to entrepreneurship among minorities is lack of capital. In work based on U.S. micro data at the level of the individual, Evans and Leighton (1989), and Evans and Jovanovic (1989), have argued formally that entrepreneurs face liquidity constraints. The authors use the National Longitudinal Survey of Young Men for 1966-1981, and the Current Population Surveys for 1968-1987. The key test shows that, all else remaining equal, people with greater family assets are more likely to switch to self-employment from employment. This asset variable enters econometric equations significantly and with a quadratic form. Although Evans and his collaborators draw the conclusion that capital and liquidity constraints bind, this claim is open to the objection that other interpretations of their correlation are feasible. One possibility, for example, is that inherently acquisitive individuals both start their own businesses and forego leisure to build up family assets. In this case, there would be a correlation between family assets and movement into self-employment even if capital constraints did not exist. A second possibility is that the correlation between family assets and the movement to self-employment arises because children tend to inherit family firms. Blanchflower and Oswald (1998), however, find that the probability of self-employment depends positively upon whether the individual ever received an inheritance or gift.[174] Moreover, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Work by Holtz-Eakin, Joulfaian and Harvey (1994a, 1994b), drew similar conclusions using different methods on U.S. data, examining flows into and out of self-employment and finding that inheritances both raise entry and slow exit. In contrast, Hurst and Lusardi (2004), citing evidence from the U.S. *Panel Study of Income Dynamics*, claim to show that wealth is not a significant determinant of entry into self-employment. In response, however, Fairlie and Krashinsky (2006) have demonstrated that when the sample is split into two segments—those who enter self-employment after job loss and those who do not—the strong correlation between assets and rate of entry business formation is evident in both segments.

The work of Black *et al.* (1996) for the United Kingdom discovers an apparently powerful role for house prices (through its impact on equity withdrawal) in affecting the supply of small new firms. Cowling and Mitchell (1997), find a similar result. Again this is suggestive of capital constraints. Finally, Lindh and Ohlsson (1996) adopt the Blanchflower-Oswald procedure and provide complementary evidence for Sweden. Bernhardt (1994), in a study for Canada, using data from the 1981 Social Change in Canada Project also found evidence that capital constraints appear to bind. Using the 1991 French Household Survey of Financial Assets, Laferrere and McEntee (1995), examined the determinants of self-employment using data on intergenerational transfers of wealth, education, informal human capital and a range of demographic variables.

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[174] This emerges from British data, the National Child Development Study; a birth cohort of children born in March 1958 who have been followed for the whole of their lives.

They also find evidence of the importance played by the family in the decision to enter self-employment. Intergenerational transfers of wealth, familial transfers of human capital and the structure of the family were found to be determining factors in the decision to move from wage work into entrepreneurship. Broussard et al. (2003) found that the self-employed have between 0.2 and 0.4 more children compared to the non-self-employed. The authors argue that having more children can increase the likelihood that an inside family member will be a good match at running the business. One might also think that the existence of family businesses, which are particularly prevalent in construction and in agriculture, is a further way to overcome the existence of capital constraints. Transfers of firms within families will help to preserve the status quo and will work against the interests of African Americans in particular who do not have as strong a history of business ownership as indigenous non-minorities. Analogously, Hout and Rosen (2000) and Fairlie and Robb (2007a) found that the offspring of self-employed parents are more likely than others to become self-employed and argued that the historically low rates of self-employment among African Americans and Latinos may contribute to their low contemporary rates. Fairlie and Robb (2007b), using data from the U.S. *Characteristics of Business Owners* survey, and Dunn and Holtz-Eakin (2000), using data from the U.S. *National Longitudinal Surveys*, show that the transmission of positive effects of family on self-employment operates through two channels, intergenerational transmission of entrepreneurial preferences and wealth, and the acquisition of general and specific human capital.

A continuing puzzle in the literature has been why, nationally, the self-employment rate of African American males is one third of that of nonminority males and has remained roughly constant since 1910. Fairlie and Meyer (2000) rule out a number of explanations for the difference. They found that trends in demographic factors, including the Great Migration and the racial convergence in education levels "did not have large effects on the trend in the racial gap in self-employment" (p. 662). They also found that an initial lack of business experience "cannot explain the current low levels of black self-employment." Further they found that "the lack of traditions in business enterprise among blacks that resulted from slavery cannot explain a substantial part of the current racial gap in self-employment" (p. 664).

Fairlie (1999) and Wainwright (2000) have shown that a considerable part of the explanation of the differences between the African American and nonminority self-employment rate can be attributed to discrimination. Using PUMS data from the 1990 Census, Wainwright (2000) demonstrated that these disparities tend to persist even when factors such as geography, industry, occupation, age, education and assets are held constant.

Bates (1989) finds strong supporting evidence that racial differences in levels of financial capital have significant effects upon racial patterns in business failure rates. Fairlie (1999, 2006) demonstrates, for example, that the African American exit rate from self-employment is twice as high as that of non-minorities. An example will help to make the point. Two baths are being filled with water. In the first scenario, both have the plug in. Water flows into bath A at the same rate as it does into bath B -- that is, the inflow rate is the same. When we return after ten minutes the amount of water (the stock) will be the same in the two baths as the inflow rates were the same. In the second scenario, we take out the plugs and allow for the possibility that the outflow rates from the two baths are different. Bath A (the African American firms) has a much larger drain and hence the water flows out more quickly than it does from bath B (the nonminority firms). When we return after 10 minutes, even though the inflow rates are the same there is much

less water in bath A than there is in bath B. A lower exit rate for nonminority-owned firms than is found for minority-owned firms is perfectly consistent with the observed fact that minority-owned firms are younger and smaller than nonminority-owned firms. The extent to which that will be true is a function of the relative sizes of the inflow and the outflow rates.

B. Race and Gender Disparities in Earnings

In this section, we examine earnings to determine whether minority and female entrepreneurs earn less from their businesses than do their nonminority male counterparts. Other things equal, if minority and female business owners as a group cannot achieve comparable earnings from their businesses as similarly-situated nonminorities because of discrimination, then failure rates for M/WBEs will be higher and M/WBE formation rates will be lower than would be observed in a race- and gender-neutral market area. Both phenomena would contribute directly to lower levels of minority and female business ownership.

Below, we first examine earnings disparities among wage and salary employees, that is, non-business owners. It is helpful to examine this segment of the labor force since a key source of new entrepreneurs in any given industry is the pool of experienced wage and salary workers in similar or related industries (Blanchflower, 2000; 2004). Employment discrimination that adversely impacts the ability of minorities or women to succeed in the labor force directly shrinks the available pool of potential M/WBEs. In almost every instance examined, a statistically significant adverse impact on wage and salary earnings is observed—in both the economy at large and also in the construction and construction-related professional services sector.[175]

We then turn to an examination of differences in earnings among the self-employed, that is, among business owners. Here too, among the pool of minorities and women who have formed businesses despite discrimination in both employment opportunities and business opportunities, statistically significant adverse impacts are observed in the vast majority of cases in construction and construction-related professional services (hereafter, "construction"), and other sectors of the economy.

In the remainder of this Chapter we discuss the methods and data we employed and present the specific findings.

1. Methods

We used the statistical technique of linear regression analysis to estimate the effect of each of a set of observable characteristics, such as education and age, on an outcome variable of interest. In this case, the outcome variable of interest is earnings and we used regression to compare

[175] There is a growing body of evidence that discriminatory constraints in the capital market prevent minority-owned businesses from obtaining business loans. Furthermore, even when they are able to obtain them there is evidence that these loans are not obtained on equal terms: minority-owned firms have to pay higher interest rates, other things being equal. This is another form of discrimination with an obvious and direct impact on the ability of racial minorities to form businesses and to expand or grow previously formed businesses. *See* Chapter VI, *infra*.

earnings among individuals in similar geographic and product markets at similar points in time and with similar years of education and potential labor market experience and see if any adverse race or gender differences remain. In a discrimination free market area, one would not expect to observe significant differences in earnings by race or gender among such similarly situated observations.

Regression also allows us to narrowly tailor our statistical tests to the State's relevant geographic market, and assess whether disparities in that market are statistically significantly different from those observed elsewhere in the nation. Starting from an economy-wide data set, we first estimated the basic model of earnings differences just described and also included an indicator variable for the Maryland Market Area (MDMA), which encompasses the Maryland, Delaware, the District of Columbia, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area. This model appears as Specification (1) in Tables 5.1 through 5.12. Next, we estimated Specification (2), which is the same model as (1) but with the addition of indicator variables that interact race and gender with the MDMA indicator. Specification (3) represents our ultimate specification, which includes all the variables from the basic model as well as any of the interaction terms from Specification (2) that were statistically significant.[176]

Any negative and statistically significant differences by race or gender that remain in Specification (3) after holding all of these other factors constant—time, age, education, geography, and industry—are consistent with what would be observed in a market suffering from business-related discrimination.[177]

2. Data

The analyses undertaken in this Study require individual-level data (*i.e.* "microdata") with relevant information on business ownership status and other key socioeconomic characteristics.

The data source used is the American Community Survey (ACS) Public Use Microdata Sample (PUMS) for 2006–2008. The Census Bureau's ACS is an ongoing survey covering the same type of information collected in the decennial census. The ACS is sent to approximately 3 million addresses annually, including housing units in all counties in the 50 states and the District of Columbia. The PUMS files from the ACS contain records for a subsample of the full ACS. The data used here are the multi-year estimates combining the 2006, 2007, and 2008 ACS PUMS records. The combined file contains over 3.6 million person-level records. Released in early 2010, the ACS PUMS provides the full range of population and housing information collected in the annual ACS and in the decennial census. Business ownership status is identified in the ACS PUMS through the "class of worker" variable, which distinguishes the unincorporated and incorporated self-employed from others in the labor force. The presence of the class of worker

[176] If none of these terms is significant then Specification (3) reduces to Specification (1).

[177] Typically, a given test statistic is considered to be statistically significant if there is a reasonably low probability that the value of the statistic is due to random chance alone. Unless otherwise indicated, in this and subsequent chapters, we employ three levels of statistical significance, corresponding to 10 percent, 5 percent, and 1 percent probabilities that results were the result of random chance.

variable allows us to construct a detailed cross-sectional sample of individual business owners and their associated earnings.

3. Findings: Race and Gender Disparities in Wage and Salary Earnings

Tables 5.1, 5.2, and 5.3 report results from our regression analyses of annual earnings among wage and salary workers. Table 5.1 focuses on the economy as a whole, Table 5.2 on Construction and AE-CRS, and Table 5.3 on Goods and Services. The numbers shown in each table indicate the percentage difference in that sector between the average annual wages of a given race/gender group and comparable nonminority males.

a. Specification (1) - the Basic Model

For example, in Table 5.1 Specification (1) the estimated percentage difference in average annual wages between African Americans (both genders) and nonminority males in 2006–2008 was -32.6 percent. That is, average annual wages among African Americans were 32.6 percent lower than for nonminority males who were otherwise similar in terms of geographic location, industry, age, and education. The number in parentheses below each percentage difference is the t-statistic, which indicates whether the estimated percentage difference is statistically significant or not. In Tables 5.1 through 5.6, a t-statistic of 1.99 or larger indicates statistical significance at a 95 percent confidence level or better.[178] In the example just used, the t-statistic of 172.13 indicates that the result is statistically significant.

Specification (1) in Table 5.1 shows adverse and statistically significant wage disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and nonminority women consistent with the presence of discrimination in these markets. Observed disparities are large as well, ranging from a low of -22.6 percent for Hispanics to a high of -32.6 percent for African Americans.

Specification (1) in Table 5.2 shows similar results when the basic analysis is restricted to the Construction and CRS sector. In this sector, large, adverse, and statistically significant wage disparities are once again observed for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and nonminority women. Similarly, Specification (1) in Table 5.3 for the Goods and Services sector also shows large, adverse, and statistically significant wage disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and nonminority women.

A comparison of Tables 5.1 and 5.2 shows that for Hispanics and Asians, the disparities in the Construction and CRS sector are somewhat smaller than those observed in the economy as a whole. For African Americans and nonminority women, they are somewhat larger. Disparities for Native Americans are about the same in both sectors. A comparison of Tables 5.1 and 5.3 shows that for African Americans, Hispanics, Asians, Native Americans, persons reporting in

[178] From a two-tailed test.

multiple race categories, and nonminority women, the disparities in the Goods and Services sector are all larger than those observed in the economy as a whole.

b. Specifications (2) and (3) - the Full Model Including MDMA-Specific Interaction Terms

Next, we turn to Specifications (2) and (3) in Tables 5.1–5.3. In each of these Tables, Specification (2) is the basic regression model with a set of interaction terms added to test whether minorities and women in the MDMA differ significantly from those elsewhere in the U.S. economy. Specification (2) in Table 5.1, for example, shows a -22.7 percent wage difference that estimates the direct effect of being Hispanic in 2006–2008, as well as a statistically significant 4.5 percent wage increment that captures the indirect effect of residing in the MDMA and being Hispanic. That is, wages for Hispanics in the MDMA, on average, were 4.5 percent higher than for Hispanics in the nation as a whole and 18.2 percent lower (-22.7 percent plus 4.5 percent) than for nonminority males in the MDMA.

Specification (3) simply repeats Specification (2), dropping any MDMA interactions that are not statistically significant. In Table 5.1, for example, the only interaction terms included in the final specification are for Hispanics and Asians/Pacific Islanders. The net result of Specification (3) in Table 5.1 is evidence of large, adverse, and statistically significant wage disparities for all minority groups and for nonminority women. With only one exception, in Table 5.2 for Construction and CRS and Table 5.3 for Goods and Services, there is evidence of large, adverse, and statistically significant wage disparities for all minority groups and for nonminority women as well.[179]

c. Conclusions

Clearly, minorities and women earn substantially and significantly less from their labor than do their nonminority male counterparts—in the Maryland market area just as in the nation as a whole. Such disparities are symptoms of discrimination in the labor force that, in addition to its direct effect on workers, reduces the future availability of M/WBEs by stifling opportunities for minorities and women to progress through precisely those internal labor markets and occupational hierarchies that are most likely to lead to acquiring the skills, experience and contacts necessary to take advantage of entrepreneurial opportunities. They also demonstrate that discrimination results in less opportunity for minorities and women to accumulate and save business start-up capital through their work as employees. These disparities reflect more than mere "societal discrimination" because they demonstrate the nexus between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. Other things equal, these reduced entrepreneurial opportunities in turn lead to lower M/WBE availability levels than would be observed in a race- and gender-neutral market area.

[179] No wage disparity is observed for Asians/Pacific Islanders in Table 5.2.

4. Findings: Race and Gender Disparities in Business Owner Earnings

The patterns of discrimination that affect minority and female wage earners affect minority and female entrepreneurs as well. We turn next to the analysis of race and gender disparities in business owner earnings. Table 5.4 focuses on the economy as a whole, Table 5.5 on Construction and CRS, and Table 5.6 on Goods and Services. The numbers shown in each table indicate the percentage difference in that sector between the average annual self-employment earnings of a given race/gender group and comparable nonminority males.

a. Specification (1) - the Basic Model

Specification (1) in Table 5.4 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and nonminority women consistent with the presence of discrimination in these markets. The measured difference for African Americans is 40 percent lower than for comparable nonminority males; for Hispanics, 23.1 percent lower; for Asians, 9.3 percent lower; for Native Americans, 35.8 percent lower; and for nonminority women, 40.7 percent lower.

Turning to the Construction and CRS sector, Specification (1) in Table 5.5 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and nonminority women consistent with the presence of discrimination in these markets. The measured difference for African Americans is 43.2 percent lower than for comparable nonminority males; for Hispanics, 15.9 percent lower; for Asians, 17.3 percent lower; for Native Americans, 31.2 percent lower; and for nonminority women, 45.9 percent lower.

For the Goods and Services sector, Specification (1) in Table 5.6 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and nonminority women consistent with the presence of discrimination in these markets. The measured difference for African Americans is 43.5 percent lower than for comparable nonminority males; for Hispanics, 29.6 percent lower; for Asians, 12.0 percent lower; for Native Americans, 40.1 percent lower; and for nonminority women, 43.1 percent lower.

b. Specifications (2) and (3) - the Full Model Including MDMA-Specific Interaction Terms

Next, we turn to Specifications (2) and (3) in Tables 5.4–5.6. Specification (2) is the basic regression model enhanced by a set of interaction terms to test whether minorities and women in the MDMA differ significantly from those elsewhere in the U.S. economy. Specification (3) drops any MDMA interaction terms that are not statistically significant.

For the economy as a whole in 2006-2008, Table 5.4 shows that only the MDMA interaction term for persons reporting multiple races is statistically significant, indicating that disparities for persons reporting multiple races are worse in the MDMA than in the nation as a whole, while disparities for all other minorities and nonminority women in the MDMA are no better or worse than in the nation as a whole.

For the Construction and CRS sector in 2006–2008, Table 5.5 shows that the estimates for the MDMA are in agreement with results for the nation as a whole.

For the Goods and Services sector in 2006–2008, Table 5.6 shows that the estimates for the MDMA are in agreement with results for the nation as a whole.

c. Conclusions

As was the case for wage and salary earners, minority and female entrepreneurs earn substantially and significantly less from their efforts than similarly situated nonminority male entrepreneurs. The situation is, in general, little different in the Maryland market area than in the nation as a whole. These disparities are a symptom of discrimination in commercial markets that directly and adversely affect M/WBEs. Other things equal, if minorities and women are prevented by discrimination from earning remuneration from their entrepreneurial efforts comparable to that of similarly situated nonminority males, then capital reinvestment and growth rates may slow, business failure rates may increase, and as demonstrated in the next section, business formation rates may decrease. Combined, these phenomena result in lower M/WBE availability levels than would be observed in a race- and gender-neutral market area. As this chapter demonstrates, discrimination depresses business owner earnings for women and minority entrepreneurs. Business owner earnings, however, are often directly related to whether an owner has the capital to reinvest (firm size), how long a firm survives (firm age) and how much money a firm takes in (firm revenues). These observations illustrate why firm size, age and revenues are especially inappropriate factors to consider in any sort of "capacity" type analysis.

C. Race and Gender Disparities in Business Formation

As discussed in the two previous sections, discrimination that affects the wages and entrepreneurial earnings of minorities and women will ultimately affect the number of businesses formed by these groups as well. In the final section of this chapter, we turn to the analysis of race and gender disparities in business formation.[180] We compare self-employment rates by race and gender to determine whether minorities or women are as likely to enter the ranks of entrepreneurs as similarly-situated nonminority males. We find that they are not as likely to do so and that minority and female business formation rates would likely be substantially and significantly higher if markets operated in a race- and gender-neutral manner.

Discrimination in the labor market, symptoms of which are evidenced in Section B.3 above, might cause wage and salary workers to turn to self-employment in hopes of encountering less discrimination from customers and suppliers than from employers and co-workers. Other things equal, and assuming minority and female workers did not believe that discrimination pervaded commercial markets as well, this would lead minority and female business formation rates to be higher than would otherwise be expected.

On the other hand, discrimination in the labor market prevents minorities and women from acquiring the very skills, experience, and positions that are often observed among those who

[180] We use the phrases "business formation rates" and "self-employment rates" interchangeably in this Study.

leave the ranks of the wage and salary earners to start their own businesses. Many construction contracting concerns have been formed by individuals who were once employed as foremen for other contractors, fewer by those who were employed instead as laborers. Similarly, discrimination in commercial capital and credit markets, as well as asset and wealth distribution, prevents minorities and women from acquiring the financial credit and capital that are so often prerequisite to starting or expanding a business. Other things being equal, these phenomena would lead minority and female business formation rates to be lower than otherwise would be expected.

Further, discrimination by commercial customers and suppliers against M/WBEs, symptoms of which are evidenced in Section B.4 above and elsewhere, operates to increase input prices and lower output prices for M/WBEs. This discrimination leads to higher rates of failure for some minority- and women-owned firms, lower rates of profitability and growth for others, and prevents some minorities and women from ever starting businesses at all.[181] All of these phenomena, other things equal, would contribute directly to relatively lower observed rates of minority and female self-employment.

1. Methods and Data

To see if minorities or nonminority women are as likely to be business owners as are comparable nonminority males, we use a statistical technique known as Probit regression. Probit regression is used to determine the relationship between a categorical variable—one that can be characterized in terms of a "yes" or a "no" response as opposed to a continuous number—and a set of characteristics that are related to the outcome of the categorical variable. Probit regression produces estimates of the extent to which each characteristic is positively or negatively related to the likelihood that the categorical variable will be a yes or no. For example, Probit regression is used by statisticians to estimate the likelihood that an individual participates in the labor force, retires this year, or contracts a particular disease—these are all variables that can be categorized by a response of "yes" (for example, she is in the labor force) or "no" (for example, she is not in the labor force)—and the extent to which certain factors are positively or negatively related to the likelihood (for example, the more education she has, the more likely that she is in the labor force). Probit regression is one of several techniques that can be used to examine qualitative outcomes. Generally, other techniques such as Logit regression yield similar results.[182] In the present case, Probit regression is used to examine the relationship between the choice to own a business (yes or no) and the other demographic and socioeconomic characteristics in our basic model. The underlying data for this section is once again the 2006–2008 ACS PUMS.

[181] See also the materials cited at fn. 168 *supra*.

[182] For a detailed discussion, see G.S. Maddala, *Limited Dependent and Qualitative Variables in Econometrics*, Cambridge University Press, 1983. Probit analysis is performed here using the "dprobit" command in the statistical program STATA.

2. Findings: Race and Gender Disparities in Business Formation

As a point of reference for what follows, Tables 5.7 and 5.8 provide a summary of business ownership rates in 2006–2008 by race and gender. A striking feature of both tables is how much higher business ownership rates are for nonminority males than for all other groups.

Table 5.7, for example, shows a 10.08 percentage point difference between the overall self-employment rate of African Americans and nonminority males in the MDMA (15.05 – 4.97 = 10.08). As shown in the rightmost column, this 10.08 percentage point gap translates into an African American business formation rate in the MDMA that is 67.0 percent lower than the nonminority male business formation rate (*i.e.*, (4.97 – 15.05) ÷ 15.05 ≈ -67.0%). Large deficits are observed for all minority groups as well as nonminority women, in the Construction and CRS sector, the Goods and Services sector, and the economy as a whole.

There is little doubt that part of the group differences documented in Tables 5.7 and 5.8 are associated with differences in the distribution of individual characteristics and preferences between minorities, women, and nonminority males. It is well known, for example, that earnings tend to increase with age (i.e. labor market experience). It is also true that the propensity toward self-employment increases with experience.[183] Since most minority populations in the United States have a lower median age than the nonminority population, we must examine whether the disparities in business ownership evidenced in Tables 5.7 and 5.8 are largely—or even entirely—due to differences in the age distribution or other factors such as education, geographic location, or industry preferences of minorities and nonminority women compared to nonminority males.

To do this, the remainder of this section presents a series of regression analyses that test whether large, adverse, and statistically significant race and gender disparities for minorities and women remain when these other factors are held constant. Table 5.9 focuses on the economy as a whole and Tables 5.10 and 5.11 focus on the Construction and CRS sector and the Goods and Services sector, respectively. The numbers shown in each of these tables indicate the percentage point difference between the probability of self-employment for a given race/gender group compared to similarly-situated nonminority males.

a. Specification (1) - the Basic Model

Specification (1) in Table 5.9 shows large, adverse, and statistically significant business formation disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and nonminority women consistent with the presence of discrimination in these markets. Specification (1) in Tables 5.10 and 5.11 shows large, negative, and statistically significant business formation disparities for every group in the Construction and CRS sectors as well as in the Goods and Services sectors.

[183] Wainwright (2000), p. 86.

b. Specifications (2) and (3) - the Full Model Including MDMA-Specific Interaction Terms

Very few of the MDMA interaction terms included in Specification (2) were significant. The final results are in Specification (3) for Tables 5.9-5.11.

To summarize for the economy-wide results (Table 5.9):

- For African Americans, business formation rates are 4.2 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 4.3 percentage points lower than what would be expected in a race- and gender-neutral market area.[184]
- For Asians, business formation rates are 1.8 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 2.7 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 2.8 percentage points lower than what would be expected in a race- and gender-neutral market area.

To summarize for the Construction and CRS sector results (Table 5.10):

- For African Americans, business formation rates are 9.2 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 11.7 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians, business formation rates are 6.2 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 7.9 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For nonminority women, business formation rates are 9.6 percentage points lower than what would be expected in a race- and gender-neutral market area.

To summarize for the Goods and Services sector results (Table 5.11):

[184] Recall that the net business formation rate is equal to the value direct coefficient (on the Hispanic indicator variable in this case) plus the value of the statistically significant coefficient on the MDMA*Hispanic interaction term.

- For African Americans, business formation rates are 5.3 percentage points lower than what would be expected in a race- and gender-neutral market area.

- For Hispanics, business formation rates are 4.2 percentage points lower than what would be expected in a race- and gender-neutral market area.

- For Asians, business formation rates are between 2.7 percentage points lower than what would be expected in a race- and gender-neutral market area.

- For Native Americans, business formation rates are 2.8 percentage points lower than what would be expected in a race- and gender-neutral market area.

- For nonminority women, business formation rates are 2.7 percentage points lower than what would be expected in a race- and gender-neutral market area.

c. Conclusions

This section has demonstrated that observed M/WBE availability levels in the Maryland market area are substantially and statistically significantly lower in every case examined than those that would be expected to be observed if commercial markets operated in a race- and gender-neutral manner. Minorities and women are substantially and significantly less likely to own their own businesses than would be expected based upon their observable characteristics including age, education, geographic location, industry, and trends over time. As demonstrated in previous sections, these groups also suffer substantial and significant earnings disadvantages relative to comparable nonminority males whether they work as employees or as entrepreneurs. These findings are consistent with results expected to be observed in a discriminatory market area.

D. Expected Business Formation Rates—Implications for Current M/WBE Availability[185]

In Table 5.12, the Probit regression results from Tables 5.9, 5.10, and 5.11 for the overall Maryland market area economy, Construction and CRS sector, and Goods and Services sector, respectively, are combined with weighted average self-employment rates by race and gender from the 2006–2008 ACS PUMS (Tables 5.7 and 5.8) to determine the disparity between baseline availability and expected availability in a race- and gender-neutral market area. These figures appear in column (3) of each panel in Table 5.12.

The business formation rate in the MDMA for minorities and women in the Construction and CRS sector is 14.93 percent (*see* middle panel of Table 5.12, last row). According to the regression specification underlying Table 5.10, however, that rate would be 23.90 percent, or 60.1 percent higher, in a race- and gender-neutral market area. Put differently, the disparity index of the actual business formation rate to the expected business formation rate is 62.47. Disparity indices are adverse and statistically significant for all groups examined.

[185] This exercise also addresses the requirements of 49 CFR 26.45 ("Step 2") for the USDOT DBE Program.

In Construction and CRS, the largest disparities observed are for Hispanics (51.19) and for minorities as a group (55.18), followed in descending order by Native Americans (64.30), nonminority females (65.04), Asians (68.42), African Americans (70.73), and persons reporting two or more races (78.95). As previously indicated, for M/WBEs as a group in the MDMA Construction and CRS sectors, the disparity index is 62.47.

In the Goods and Services sector, the largest disparity observed is for African Americans (44.39), followed by Hispanics (62.30), minorities as a group (65.51), persons reporting two or more races (76.09), Native Americans (78.43), Asians (78.97), and nonminority women (81.13). For M/WBEs as a group in the MDMA Goods and Services sectors, the disparity index is 74.57.

Given the large disparities observed throughout Table 5.12, goal-setters might consider adjusting baseline estimates of M/WBE availability upward to account for the continuing effects of discrimination. The business formation rate disparities documented in Table 5.12 can be combined with the estimates of current M/WBE availability documented in Table 4.23A and elsewhere to provide estimates of expected availability. These estimates appear below in Table 7.53. In every single instance in the Maryland market area, expected M/WBE availability exceeds current M/WBE availability.

E. Evidence from the Survey of Business Owners

As a final check on the statistical findings in this Chapter, we present evidence from a Census Bureau data collection effort dedicated to M/WBEs. The Census Bureau's *Survey of Business Owners and Self-Employed Persons* (SBO), formerly known as the *Survey of Minority- and Women-Owned Business Enterprises* (SMWOBE), collects and disseminates data on the number, sales, employment, and payrolls of businesses owned by women and members of racial and ethnic minority groups. This survey has been conducted every five years since 1972 as part of the *Economic Censuses* program. Data from the 2002 SBO were released in 2007.[186]

The SBO estimates are created by matching data collected from income tax returns by the Internal Revenue Service with Social Security Administration data on race and ethnicity, and supplementing this information using statistical sampling methods. The unique field for conducting this matching is the Social Security Number (SSN) or the Employer Identification Number (EIN), as reported on the tax return.[187]

The SBO covers women and five groups of minorities—(1) African Americans, (2) Hispanics, (3) Asians, (4) Native Hawaiians and Pacific Islanders, and (5) American Indians and Alaskan

[186] The new 2007 SBO data will not be fully available until June 2011.

[187] Prior to 2002, "C" corporations were not included in the SMWOBE universe due to technical difficulties. This has been rectified in the 2002 SBO. For more information, consult the discussion of SBO survey methodology at http://www.census.gov/econ/sbo/.

Natives. The 2002 SBO also includes comparative information for nonminority-owned, non-women-owned firms.[188]

The SBO provides aggregate estimates of the number of minority-owned and women-owned firms and their annual sales and receipts. The SBO distinguishes employer firms (*i.e.* firms with one or more paid employees) from nonemployer firms, and for the former also includes estimates of aggregate annual employment and payroll.

Compared to the ACS PUMS, the SBO is more limited in the scope of industrial and geographic detail it provides. Nonetheless, it contains a wealth of information on the character of minority and female business enterprise in the U.S as a whole as well as in the Maryland market area.[189] In the remainder of this section we present SBO statistics for the United States as a whole and the Maryland market area and calculate disparity indices from them. We find that results in the SBO regarding disparities are consistent with our findings above using the ACS PUMS.

Tables 5.13 and 5.14 contain data for all industries combined. Table 5.13 is for the U.S. as a whole, Table 5.14 is for the Maryland market area. Panel A in these two tables summarizes the SBO results for each grouping. Panel A of Table 5.13, for example, shows a total of 22.48 million firms in the U.S. (column 1) with overall sales and receipts of $8.784 trillion (column 2). Of these 22.48 million firms, 5.17 million had one or more employees (column 3) and these 5.17 million firms had overall sales and receipts of $8.039 trillion (column 4). Column (5) shows a total of 55.37 million employees on the payroll of these 5.17 million firms and a total annual payroll expense of $1.627 trillion (column 6).

The remaining rows in Panel A provide comparable statistics for women-owned and minority-owned firms. For example, Table 5.13 shows that there were 1.2 million African American-owned firms counted in the SBO, and that these 1.2 million firms registered $88.6 billion in sales and receipts. It also shows that 94,518 of these African American-owned firms had one or more employees, and that they employed a total of 753,978 workers with an annual payroll total of $17.55 billion.

Panel A of Table 5.14 provides comparable information for the Maryland market area. The SBO counted 168,429 female-owned firms in the market area, 85,866 African American-owned firms, 18,401 Hispanic-owned firms, 30,490 Asian-owned firms, 3,809 Native American-owned firms, and 100 Native Hawaiian- or Pacific Islander-owned firms.

Panel B in each Table converts the figures in Panel A to percentage distributions within each column. For example, Column (1) in Panel B of Table 5.14 shows that African American-owned

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[188] In the ACS PUMS data, discussed above, the unit of analysis is the business owner, or self-employed person. In the SBO data the unit of analysis is the business rather than the business owner. Furthermore, unlike most other business statistics, including the other components of the *Economic Censuses*, the unit of analysis in the SBO is the firm, rather than the establishment.

[189] It is, in general, not possible with the SBO dataset to examine geographic divisions below the state level. For this analysis, the Maryland market area definition has been modified slightly from that used above. In the SBO data, it includes Maryland, Delaware, and the District of Columbia, but not the Virginia or West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area.

firms were 16.07 percent and female-owned firms were 31.52 percent of all firms in the Maryland market area. Additionally, 3.44 percent of firms were Hispanic-owned, 5.71 percent were Asian-owned, 0.71 percent were Native American-owned, and 0.02 percent were Native Hawaiian- or Pacific Islander-owned.

Column (2) in Panel B provides the same percentage distribution for overall sales and receipts. Table 5.14, for example, shows that although African American-owned firms were 16.07 percent of all firms in the Maryland market area, they accounted for only 3.42 percent of all sales and receipts. Similar results are obtained when the sample is restricted to firms with one or more paid employees. Column (3) in Table 5.14 shows that African American-owned employer firms accounted for 4.95 percent of all employer firms but only 2.80 percent of all sales and receipts. Large disparities in the Maryland market area are observed not only for African Americans, but also for female-owned firms, Hispanic-owned firms, Asian-owned firms, Native American-owned firms, and Native Hawaiian- or Pacific Islander-owned firms.

The disparity indices are presented in Panel C of each table. Disparity indices of 80 percent or less indicate disparate impact consistent with business discrimination against minority-owned and female-owned firms (0 percent being complete disparity and 100 percent being full parity). In the Maryland market area as a whole (Table 5.14), the sales and receipts disparity indices fall beneath the 80 percent threshold in all but one case. All of these disparity indices are statistically significant within a 95 percent confidence interval.

Table 5.16 shows comparable SBO data for the Construction and CRS sector (measured here using NAICS 23 and 54) in the Maryland market area. The sales and receipts disparity indices fall beneath the 80 percent threshold in all but one case in Table 5.16. The disparity indices for women, African Americans and Hispanics are statistically significant within a 95 percent confidence interval. The disparity indices for Asians and Native Americans are statistically significant for all firms but not for employer firms.

Table 5.18 shows data for the Goods and Services sector (the balance of the NAICS codes). The sales and receipts disparity indices fall beneath the 80 percent threshold in all but one case in Table 5.18 as well. All of these disparity indices are statistically significant within a 95 percent confidence interval.

Tables

Table 5.1. Annual Wage Earnings Regressions, All Industries, 2006–2008

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.326 (172.13)	-0.326 (170.63)	-0.326 (172.16)
Hispanic	-0.226 (122.60)	-0.227 (121.65)	-0.227 (121.80)
Asian	-0.266 (110.29)	-0.267 (109.79)	-0.267 (109.86)
Native American	-0.308 (47.67)	-0.309 (47.25)	-0.308 (47.68)
Two or more races	-0.262 (62.74)	-0.263 (61.87)	-0.262 (62.76)
Nonminority Female	-0.325 (293.66)	-0.325 (288.67)	-0.325 (293.66)
Age	0.182 (572.68)	0.182 (572.68)	0.182 (572.68)
Age^2	-0.002 (498.90)	-0.002 (498.90)	-0.002 (498.90)
MDMA	-0.046 (5.02)	-0.050 (5.18)	-0.048 (5.16)
MDMA*African American		0.017 (1.03)	
MDMA*Hispanic		0.045 (3.78)	0.043 (3.69)
MDMA * Asian/Pacific Islander		0.057 (2.49)	0.055 (2.40)
MDMA * Native American		0.059 (1.17)	
MDMA *Two or more races		0.015 (0.52)	
MDMA *Nonminority female		0.003 (0.53)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	2548959	2548959	2548959
Adj. R^2	.4592	.4593	.4593

Source: NERA calculations from the 2006-2008 ACS Public Use Microdata Samples.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported coefficient is the percentage difference in annual wages between a given group and nonminority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence; (6) "MDMA" is shorthand for Maryland Market Area," which includes Delaware, the District of Columbia, Maryland, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area; (7) Each specification also included 16 indicator variables for educational attainment, 51 for state of residence, and 88 for industry affiliation, signified by a "Yes" for the corresponding table row and column.

Table 5.2. Annual Wage Earnings Regressions, Construction and Related Industries, 2006–2008

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.350 (44.21)	-0.351 (43.97)	-0.350 (44.22)
Hispanic	-0.196 (36.90)	-0.196 (36.40)	-0.196 (36.91)
Asian	-0.219 (19.37)	-0.221 (19.45)	-0.222 (19.47)
Native American	-0.309 (17.13)	-0.312 (17.01)	-0.309 (17.13)
Two or more races	-0.227 (15.89)	-0.222 (15.24)	-0.227 (15.90)
Nonminority Female	-0.360 (81.48)	-0.360 (79.69)	-0.360 (81.48)
Age	0.149 (139.48)	0.149 (139.48)	0.149 (139.48)
Age^2	-0.001 (119.52)	-0.001 (119.51)	-0.001 (119.52)
MDMA	-0.103 (3.48)	-0.105 (3.52)	-0.104 (3.49)
MDMA *African American		0.035 (0.40)	
MDMA *Hispanic		0.004 (0.14)	
MDMA * Asian/Pacific Islander		0.224 (1.96)	0.225 (1.97)
MDMA * Native American		0.123 (1.02)	
MDMA *Two or more races		-0.151 (1.90)	
MDMA*Nonminority female		0.000 (0.01)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	221546	221546	221546
Adj. R^2	.2762	.2762	.2762

Source and Notes: See Table 5.1.

Table 5.3. Annual Wage Earnings Regressions, Goods and Services Industries, 2006–2008

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.378 (193.81)	-0.378 (191.83)	-0.378 (193.81)
Hispanic	-0.286 (144.30)	-0.286 (142.63)	-0.286 (144.30)
Asian	-0.292 (114.46)	-0.292 (113.60)	-0.292 (114.46)
Native American	-0.374 (53.87)	-0.374 (53.25)	-0.374 (53.87)
Two or more races	-0.318 (71.64)	-0.318 (70.54)	-0.318 (71.64)
Nonminority Female	-0.394 (367.93)	-0.394 (360.01)	-0.394 (367.93)
Age	0.218 (624.89)	0.218 (624.88)	0.218 (624.89)
Age^2	-0.002 (542.61)	-0.002 (542.61)	-0.002 (542.61)
MDMA	-0.011 (1.07)	-0.007 (0.63)	-0.011 (1.07)
MDMA *African American		0.010 (0.58)	
MDMA *Hispanic		0.018 (1.34)	
MDMA * Asian/Pacific Islander		0.019 (0.78)	
MDMA * Native American		0.017 (0.30)	
MDMA *Two or more races		0.001 (0.04)	
MDMA*Nonminority female		-0.011 (1.69)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	2327413	2327413	2327413
Adj. R^2	.4100	.4100	.4100

Source and Notes: See Table 5.1.

Table 5.4. Annual Business Owner Earnings Regressions, All Industries, 2006–2008

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.400 (32.05)	-0.400 (31.77)	-0.400 (32.05)
Hispanic	-0.231 (20.70)	-0.233 (20.66)	-0.230 (20.69)
Asian	-0.093 (5.77)	-0.092 (5.65)	-0.093 (5.75)
Native American	-0.358 (10.16)	-0.352 (9.81)	-0.358 (10.16)
Two or more races	-0.363 (16.19)	-0.356 (15.57)	-0.356 (15.55)
Nonminority Female	-0.407 (67.41)	-0.407 (66.43)	-0.407 (67.41)
Age	0.163 (79.12)	0.163 (79.13)	0.163 (79.12)
Age^2	-0.002 (69.62)	-0.002 (69.63)	-0.002 (69.62)
MDMA	-0.003 (0.05)	-0.010 (0.21)	0.000 (0.01)
MDMA*African American		-0.026 (0.22)	
MDMA*Hispanic		0.106 (1.38)	
MDMA* Asian/Pacific Islander		-0.107 (0.85)	
MDMA * Native American		-0.250 (1.14)	
MDMA *Two or more races		-0.287 (2.12)	-0.297 (2.22)
MDMA *Nonminority female		0.036 (1.07)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	284365	284365	284365
Adj. R^2	.1673	.1673	.1673

Source: NERA calculations from the 2006-2008 ACS Public Use Microdata Samples.

Notes: (1) Universe is all persons in the private sector with positive business earnings between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported coefficient is the percentage difference in annual business earnings between a given group and nonminority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence; (6) "MDMA" is shorthand for Maryland Market Area," which includes Delaware, the District of Columbia, Maryland, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area; (7) Each specification also included 16 indicator variables for educational attainment, 51 for state of residence, and 88 for industry affiliation, signified by a "Yes" for the corresponding table row and column.

Table 5.5. Business Owner Earnings Regressions, Construction and Related Industries, 2006–2008

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.432 (14.07)	-0.435 (14.04)	-0.432 (14.07)
Hispanic	-0.159 (6.96)	-0.164 (7.10)	-0.159 (6.96)
Asian/Pacific Islanders	-0.173 (3.53)	-0.175 (3.55)	-0.173 (3.53)
Native American	-0.312 (4.48)	-0.310 (4.38)	-0.312 (4.48)
Two or more races	-0.280 (5.41)	-0.265 (4.99)	-0.280 (5.41)
Nonminority female	-0.459 (22.95)	-0.461 (22.52)	-0.459 (22.95)
Age	0.126 (27.40)	0.126 (27.41)	0.126 (27.40)
Age^2	-0.001 (24.68)	-0.001 (24.69)	-0.001 (24.68)
MDMA	-0.027 (0.30)	-0.031 (0.34)	-0.027 (0.30)
MDMA*African American		0.225 (0.70)	
MDMA *Hispanic		0.197 (1.38)	
MDMA * Asian/Pacific Islanders		0.137 (0.26)	
MDMA * Native American		-0.071 (0.16)	
MDMA *Two or more races		-0.429 (1.71)	
MDMA *Nonminority Female		0.103 (0.84)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	47414	47414	47414
Adj. R^2	.0524	.0524	.0524

Source and Notes: See Table 5.5.

Table 5.6. Business Owner Earnings Regressions, Goods and Services Industries, 2006–2008

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.435 (32.15)	-0.434 (31.77)	-0.435 (32.15)
Hispanic	-0.296 (23.87)	-0.297 (23.64)	-0.296 (23.87)
Asian/Pacific Islanders	-0.120 (6.91)	-0.118 (6.77)	-0.120 (6.91)
Native American	-0.401 (9.87)	-0.394 (9.50)	-0.401 (9.87)
Two or more races	-0.412 (16.50)	-0.407 (15.99)	-0.412 (16.50)
Nonminority female	-0.431 (72.86)	-0.433 (71.55)	-0.431 (72.86)
Age	0.181 (76.15)	0.181 (76.16)	0.181 (76.15)
Age^2	-0.002 (66.13)	-0.002 (66.14)	-0.002 (66.13)
MDMA	0.007 (0.11)	-0.007 (0.12)	0.007 (0.11)
MDMA*African American		-0.116 (0.91)	
MDMA *Hispanic		0.033 (0.36)	
MDMA * Asian/Pacific Islanders		-0.114 (0.82)	
MDMA * Native American		-0.318 (1.27)	
MDMA *Two or more races		-0.248 (1.52)	
MDMA *Nonminority Female		0.053 (1.37)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	236951	236951	236951
Adj. R^2	.1134	.1134	.1134

Source and Notes: See Table 5.5.

Table 5.7. Self-Employment Rates in 2006–2008 for Selected Race and Gender Groups: United States and the Maryland Market Area, All Industries

Race/Gender	U.S. (%)	Maryland Market Area (%)	Percent Difference from Nonminority male (Maryland Market Area)
African American	5.38	4.97	-67.0%
Hispanic	8.65	7.95	-47.2%
Asian and Pacific Islander	10.58	10.28	-31.7%
Native American	8.65	10.82	-28.1%
Two or more races	8.96	7.85	-47.8%
Minority	7.95	7.50	-50.2%
Nonminority female	8.76	9.73	-35.3%
M/WBE	8.38	9.04	-39.9%
Nonminority male	14.22	15.05	

Source: NERA calculations from the 2006-2008 ACS Public Use Microdata Samples.

Table 5.8. Self-Employment Rates in 2006–2008 for Selected Race and Gender Groups: United States and the Maryland Market Area, Construction and AE-CRS Sectors and Goods and Services Sectors

Race/Gender	U.S. (%)	Maryland Market Area (%)	Percent Difference from Nonminority male (Maryland Market Area)
Construction and AE-CRS Sectors			
African American	16.61	22.23	-22.4%
Hispanic	14.60	12.27	-57.2%
Asian and Pacific Islander	17.68	13.43	-53.1%
Native American	18.06	14.23	-50.3%
Two or more races	18.93	15.38	-46.3%
Minority	15.40	13.31	-53.6%
Nonminority female	15.34	17.86	-37.7%
M/WBE	15.39	14.93	-47.9%
Nonminority male	26.17	28.66	
Goods and Services Sectors			
African American	4.81	4.23	-65.5%
Hispanic	7.65	6.94	-43.4%
Asian and Pacific Islander	10.26	10.14	-17.3%
Native American	7.37	10.18	-17.0%
Two or more races	8.01	7.00	-42.9%
Minority	7.17	6.63	-45.9%
Nonminority female	8.56	9.46	-22.8%
M/WBE	7.93	8.65	-29.4%
Nonminority male	11.99	12.26	

Source: NERA calculations from the 2006-2008 ACS Public Use Microdata Samples.

Table 5.9. Business Formation Regressions, All Industries, 2006–2008

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.042 (74.39)	-0.042 (73.54)	-0.042 (74.36)
Hispanic	-0.032 (64.73)	-0.032 (63.42)	-0.032 (63.49)
Asian and Pacific Islander	-0.018 (27.05)	-0.018 (26.73)	-0.018 (26.99)
Native American	-0.027 (15.06)	-0.027 (14.96)	-0.027 (15.06)
Two or more races	-0.020 (16.41)	-0.020 (16.05)	-0.020 (16.40)
Nonminority Female	-0.028 (80.34)	-0.028 (79.04)	-0.028 (80.34)
Age	0.010 (115.64)	0.010 (115.63)	0.010 (115.64)
Age^2	-0.000 (80.52)	-0.000 (80.51)	-0.000 (80.51)
MDMA	0.012 (4.27)	0.011 (4.11)	0.012 (4.34)
MDMA*African American		-0.008 (1.52)	
MDMA*Hispanic		-0.011 (3.35)	-0.011 (3.48)
MDMA* Asian/Pacific Islander		-0.004 (0.59)	
MDMA* Native American		0.010 (0.73)	
MDMA*Two or more races		-0.004 (0.51)	
MDMA*Nonminority Female		0.001 (0.69)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	2695435	2695435	2695435
Pseudo R^2	.2194	.2195	.2195

Source: NERA calculations from the 2006-2008 ACS Public Use Microdata Samples.

Notes: (1) Universe is all private sector labor force participants between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported coefficient represents the percentage point probability difference in business ownership rates between a given group and nonminority men, evaluated at the mean business ownership rate for the estimation sample; (3) Number in parentheses is the absolute value of the associated z-statistic. Using a two-tailed test, z-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence; (6) "MDMA" is shorthand for Maryland Market Area," which includes Delaware, the District of Columbia, Maryland, and the Virginia and West Virginia portions of the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area.

Table 5.10. Business Formation Regressions, Construction and Related Industries, 2006–2008

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.092 (21.59)	-0.092 (21.54)	-0.092 (21.57)
Hispanic	-0.078 (27.90)	-0.076 (27.02)	-0.076 (27.03)
Asian/Pacific Islanders	-0.062 (10.16)	-0.061 (9.97)	-0.062 (10.12)
Native American	-0.079 (8.27)	-0.078 (7.94)	-0.079 (8.27)
Two or more races	-0.041 (5.46)	-0.041 (5.29)	-0.041 (5.45)
Nonminority Female	-0.096 (37.27)	-0.096 (36.50)	-0.096 (37.27)
Age	0.025 (46.81)	0.025 (46.80)	0.025 (46.80)
Age^2	-0.000 (32.55)	-0.000 (32.54)	-0.000 (32.54)
MDMA	0.022 (1.59)	0.023 (1.60)	0.023 (1.65)
MDMA*African American		0.048 (1.12)	
MDMA*Hispanic		-0.040 (2.80)	-0.041 (2.87)
MDMA* Asian/Pacific Islanders		-0.043 (0.77)	
MDMA* Native American		-0.059 (1.05)	
MDMA*Two or more races		-0.013 (0.32)	
MDMA*Nonminority female		0.008 (0.59)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	259606	259590	259590
Pseudo R^2	.0815	.0815	.0815

Source and Notes: See Table 5.9.

Table 5.11. Business Formation Regressions, Goods and Services Industries, 2006–2008

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.053 (78.16)	-0.053 (77.29)	-0.053 (78.17)
Hispanic	-0.030 (46.85)	-0.030 (45.88)	-0.030 (45.90)
Asian and Pacific Islander	-0.027 (33.62)	-0.027 (33.41)	-0.027 (33.61)
Native American	-0.028 (12.03)	-0.029 (12.03)	-0.028 (12.04)
Two or more races	-0.022 (14.61)	-0.022 (14.37)	-0.022 (14.61)
Nonminority Female	-0.027 (68.11)	-0.027 (67.12)	-0.027 (67.20)
Age	0.010 (92.13)	0.010 (92.12)	0.010 (92.13)
Age^2	-0.000 (61.64)	-0.000 (61.63)	-0.000 (61.63)
MDMA	0.007 (2.23)	0.005 (1.65)	0.005 (1.63)
MDMA*African American		-0.009 (1.45)	
MDMA*Hispanic		-0.012 (2.83)	-0.012 (2.83)
MDMA* Asian/Pacific Islander		0.005 (0.64)	
MDMA* Native American		0.018 (1.01)	
MDMA*Two or more races		-0.001 (0.12)	
MDMA*Nonminority female		0.004 (2.21)	0.005 (2.34)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	2504250	2504250	2504250
Pseudo R^2	.0663	.0665	.0665

Source and Notes: See Table 5.9.

Table 5.12. Actual and Potential Business Formation Rates in the Maryland Market Area

Race/Gender	Business Formation Rate (%)	Expected Business Formation Rate (%)	Disparity Index
All Industries	(1)	(2)	(3)
African American	4.97	9.17	54.20
Hispanic	7.95	12.25	64.90
Asian and Pacific Islander	10.28	12.08	85.10
Native American	10.82	13.52	80.03
Two or more races	7.85	9.85	79.70
Minority	7.50	11.64	64.43
Nonminority female	9.73	12.53	77.65
M/WBE	9.04	12.45	72.61
Construction and AE-CRS Sectors	(1)	(2)	(3)
African American	22.23	31.43	70.73
Hispanic	12.27	23.97	51.19
Asian and Pacific Islander	13.43	19.63	68.42
Native American	14.23	22.13	64.30
Two or more races	15.38	19.48	78.95
Minority	13.31	24.12	55.18
Nonminority female	17.86	27.46	65.04
M/WBE	14.93	23.90	62.47
Goods and Services Sectors	(1)	(2)	(3)
African American	4.23	9.53	44.39
Hispanic	6.94	11.14	62.30
Asian and Pacific Islander	10.14	12.84	78.97
Native American	10.18	12.98	78.43
Two or more races	7.00	9.20	76.09
Minority	6.63	10.12	65.51
Nonminority female	9.46	11.66	81.13
M/WBE	8.65	11.60	74.57

Source: 2006–2008 ACS Public Use Microdata Sample. *See* Tables 5.9-5.11. MBE and M/WBE results from similar regression analyses, not reported here.

Notes: Figures in column (1) are average self-employment rates weighted using ACS population-based person weights. Figures in column (2), top, middle, and bottom panels, are derived by combining the figure in column (1) with the corresponding result from the regression reported in Table 5.9, 5.10, or 5.11, respectively. MBE and M/WBE figures were derived from similar regression analyses, not reported separately. Column (3) is the figure in column (1) divided by the figure in column (2), with the result multiplied by 100.

Table 5.13. Disparity Indices from the Survey of Business Owners: United States, All Industries

	Number of Firms	Sales and Receipts ($000s)	Number of Employer Firms	Sales and Receipts ($000s)	Number of Employees	Payroll ($000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
UNITED STATES	22,480,256	8,783,541,146	5,172,064	8,039,252,709	55,368,216	1,626,785,430
Female	6,489,259	939,538,208	916,657	802,851,495	7,141,369	173,528,707
African American	1,197,567	88,641,608	94,518	65,799,425	753,978	17,550,064
Hispanic	1,573,464	221,927,425	199,542	179,507,959	1,536,795	36,711,718
Asian	1,103,587	326,663,445	319,468	291,162,771	2,213,948	56,044,960
Native Hawaiian/Pac. Islander	28,948	4,279,591	3,693	3,502,157	29,319	826,217
Am. Indian & Alaska Native	201,387	26,872,947	24,498	21,986,696	191,270	5,135,273
Panel B. Column Percentages						
UNITED STATES	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	28.87%	10.70%	17.72%	9.99%	12.90%	10.67%
African American	5.33%	1.01%	1.83%	0.82%	1.36%	1.08%
Hispanic	7.00%	2.53%	3.86%	2.23%	2.78%	2.26%
Asian	4.91%	3.72%	6.18%	3.62%	4.00%	3.45%
Native Hawaiian/Pac. Islander	0.13%	0.05%	0.07%	0.04%	0.05%	0.05%
Am. Indian & Alaska Native	0.90%	0.31%	0.47%	0.27%	0.35%	0.32%
Panel C. Disparity Indices		**(2) vs. (1)**		**(4) vs. (3)**	**(5) vs. (3)**	**(6) vs. (3)**
Female		37.06%		56.35%	72.77%	60.19%
African American		18.94%		44.79%	74.52%	59.03%
Hispanic		36.10%		57.88%	71.94%	58.49%
Asian		75.76%		58.63%	64.74%	55.78%
Native Hawaiian/Pac. Islander		37.84%		61.01%	74.16%	71.13%
Am. Indian & Alaska Native		34.15%		57.74%	72.93%	66.64%

Source: NERA calculations using 2002 SBO. Excludes publicly-owned, foreign-owned, and not-for-profit firms.

Table 5.14. Disparity Indices from the Survey of Business Owners: Maryland Market Area, All Industries

	Number of Firms	Sales and Receipts ($000s)	Number of Employer Firms	Sales and Receipts ($000s)	Number of Employees	Payroll ($000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
DE-DC-MD	534,432	188,455,109	121,901	171,250,373	1,303,317	42,124,043
Female	168,429	21,719,175	23,281	15,996,270	161,265	4,417,998
African American	85,866	6,437,777	6,031	4,795,274	56,758	1,583,435
Hispanic	18,401	3,083,996	2,658	2,561,913	23,647	756,126
Asian	30,490	8,682,323	9,889	6,884,862	54,348	1,630,782
Native Hawaiian/Pacific Islander	100	-	42	35,056	494	12,539
Am. Indian & Alaska Native	3,809	455,381	410	354,243	3,460	135,596
Panel B. Column Percentages						
DE-DC-MD	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	31.52%	11.52%	19.10%	9.34%	12.37%	10.49%
African American	16.07%	3.42%	4.95%	2.80%	4.35%	3.76%
Hispanic	3.44%	1.64%	2.18%	1.50%	1.81%	1.79%
Asian	5.71%	4.61%	8.11%	4.02%	4.17%	3.87%
Native Hawaiian/Pac. Islander	0.02%	-	0.03%	0.02%	0.04%	0.03%
Am. Indian & Alaska Native	0.71%	0.24%	0.34%	0.21%	0.27%	0.32%
Panel C. Disparity Indices						
Female		36.57%		48.91%	64.79%	54.92%
African American		21.26%		56.60%	88.02%	75.98%
Hispanic		47.53%		68.61%	83.21%	82.32%
Asian		80.75%		49.56%	51.40%	47.72%
Native Hawaiian/Pac. Islander		-		59.41%	110.01%	86.40%
Am. Indian & Alaska Native		33.90%		61.50%	78.93%	95.71%

Source: See Table 5.13. Note: A dash in Panel A indicates the actual number could not be released due to confidentiality or other restrictions imposed by the Census Bureau. Dashes in Panels B and C indicate that the corresponding percentage figure or disparity index could therefore not be calculated.

Table 5.15. Disparity Indices from the Survey of Business Owners: United States, Construction and AE-CRS Industries

	Number of Firms	Sales and Receipts ($000s)	Number of Employer Firms	Sales and Receipts ($000s)	Number of Employees	Payroll ($000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
UNITED STATES	5,996,428	1,685,502,784	1,406,037	1,476,285,725	10,446,834	410,330,833
Female	1,136,584	147,556,354	185,072	119,542,082	1,028,439	37,265,214
African American	190,840	19,026,591	19,743	14,600,451	125,988	4,596,509
Hispanic	350,845	46,462,089	44,506	34,190,411	288,520	9,446,399
Asian	193,007	36,948,648	37,390	31,489,180	242,907	11,627,079
Native Hawaiian/Pac. Islander	6,092	1,173,615	321	172,732	1,351	53,364
Am. Indian & Alaska Native	54,758	8,145,166	8,103	6,435,409	46,650	1,712,542
Panel B. Column Percentages						
UNITED STATES	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	18.95%	8.75%	13.16%	8.10%	9.84%	9.08%
African American	3.18%	1.13%	1.40%	0.99%	1.21%	1.12%
Hispanic	5.85%	2.76%	3.17%	2.32%	2.76%	2.30%
Asian	3.22%	2.19%	2.66%	2.13%	2.33%	2.83%
Native Hawaiian/Pac. Islander	0.10%	0.07%	0.02%	0.01%	0.01%	0.01%
Am. Indian & Alaska Native	0.91%	0.48%	0.58%	0.44%	0.45%	0.42%
Panel C. Disparity Indices						
Female		46.19%		61.52%	74.79%	69.00%
African American		35.47%		70.43%	85.89%	79.78%
Hispanic		47.11%		73.17%	87.25%	72.73%
Asian		68.11%		80.21%	87.44%	106.56%
Native Hawaiian/Pac. Islander		68.54%		51.25%	56.65%	56.96%
Am. Indian & Alaska Native		52.92%		75.64%	77.49%	72.42%

Source: See Table 5.13.

Table 5.16. Disparity Indices from the Survey of Business Owners: Maryland Market Area, Construction and AE-CRS Industries

	Number of Firms	Sales and Receipts ($000s)	Number of Employer Firms	Sales and Receipts ($000s)	Number of Employees	Payroll ($000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
DE-DC-MD	154,258	54,616,833	38,910	49,383,212	335,763	15,031,129
Female	36,107	5,958,684	6,375	4,852,727	40,003	1,717,042
African American	16,123	1,834,749	1,593	1,586,585	13,132	572,511
Hispanic	7,064	1,173,228	956	925,718	6,977	289,762
Asian	6,847	1,920,349	1,512	1,354,633	10,357	558,914
Native Hawaiian/Pac. Islander	9	-	3	-	-	-
Am. Indian & Alaska Native	1,549	236,519	94	125,034	1,166	53,156
Panel B. Column Percentages						
DE-DC-MD	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	23.41%	10.91%	16.38%	9.83%	11.91%	11.42%
African American	10.45%	3.36%	4.09%	3.21%	3.91%	3.81%
Hispanic	4.58%	2.15%	2.46%	1.87%	2.08%	1.93%
Asian	4.44%	3.52%	3.89%	2.74%	3.08%	3.72%
Native Hawaiian/Pac. Islander	0.01%	-	0.01%	-	-	-
Am. Indian & Alaska Native	1.00%	0.43%	0.24%	0.25%	0.35%	0.35%
Panel C. Disparity Indices						
Female		46.61%		59.98%	72.72%	69.72%
African American		32.14%		78.47%	95.53%	93.03%
Hispanic		46.91%		76.30%	84.57%	78.46%
Asian		79.21%		70.59%	79.38%	95.69%
Native Hawaiian/Pac. Islander		-		-	-	-
Am. Indian & Alaska Native		43.13%		104.81%	143.75%	146.38%

Source: See Table 5.13. Note: A dash in Panel A indicates the actual number could not be released due to confidentiality or other restrictions imposed by the Census Bureau. Dashes in Panels B and C indicate that the corresponding percentage figure or disparity index could therefore not be calculated.

Table 5.17. Disparity Indices from the Survey of Business Owners: United States, Goods and Services Industries

	Number of Firms	Sales and Receipts ($000s)	Number of Employer Firms	Sales and Receipts ($000s)	Number of Employees	Payroll ($000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
UNITED STATES	16,483,828	7,098,038,362	3,766,027	6,562,966,984	44,921,382	1,216,454,597
Female	5,352,675	791,981,854	731,585	683,309,413	6,112,930	136,263,493
African American	1,006,727	69,615,017	74,775	51,198,974	627,990	12,953,555
Hispanic	1,222,619	175,465,336	155,036	145,317,548	1,248,275	27,265,319
Asian	910,580	289,714,797	282,078	259,673,591	1,971,041	44,417,881
Native Hawaiian/Pac. Islander	22,856	3,105,976	3,372	3,329,425	27,968	772,853
Am. Indian & Alaska Native	146,629	18,727,781	16,395	15,551,287	144,620	3,422,731
Panel B. Column Percentages						
UNITED STATES	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	32.47%	11.16%	19.43%	10.41%	13.61%	11.20%
African American	6.11%	0.98%	1.99%	0.78%	1.40%	1.06%
Hispanic	7.42%	2.47%	4.12%	2.21%	2.78%	2.24%
Asian	5.52%	4.08%	7.49%	3.96%	4.39%	3.65%
Native Hawaiian/Pac. Islander	0.14%	0.04%	0.09%	0.05%	0.06%	0.06%
Am. Indian & Alaska Native	0.89%	0.26%	0.44%	0.24%	0.32%	0.28%
Panel C. Disparity Indices						
Female		34.36%		53.60%	70.05%	57.66%
African American		16.06%		39.29%	70.41%	53.63%
Hispanic		33.33%		53.79%	67.50%	54.45%
Asian		73.89%		52.83%	58.58%	48.75%
Native Hawaiian/Pac. Islander		31.56%		56.66%	69.54%	70.96%
Am. Indian & Alaska Native		29.66%		54.43%	73.95%	64.63%

Source: See Table 5.13.

Table 5.18. Disparity Indices from the Survey of Business Owners: Maryland Market Area, Goods and Services Industries

	Number of Firms	Sales and Receipts ($000s)	Number of Employer Firms	Sales and Receipts ($000s)	Number of Employees	Payroll ($000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
DE-DC-MD	380,174	133,838,276	82,991	121,867,161	967,554	27,092,914
Female	132,322	15,760,491	16,906	11,143,543	121,262	2,700,956
African American	69,743	4,603,028	4,438	3,208,689	43,626	1,010,924
Hispanic	11,337	1,910,768	1,702	1,636,195	16,670	466,364
Asian	23,643	6,761,974	8,377	5,530,229	43,991	1,071,868
Native Hawaiian/Pac. Islander	91	-	39	35,056	494	12,539
Am. Indian & Alaska Native	2,260	218,862	316	229,209	2,294	82,440
Panel B. Column Percentages						
DE-DC-MD	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	34.81%	11.78%	20.37%	9.14%	12.53%	9.97%
African American	18.35%	3.44%	5.35%	2.63%	4.51%	3.73%
Hispanic	2.98%	1.43%	2.05%	1.34%	1.72%	1.72%
Asian	6.22%	5.05%	10.09%	4.54%	4.55%	3.96%
Native Hawaiian/Pac. Islander	0.02%	-	0.05%	0.03%	0.05%	0.05%
Am. Indian & Alaska Native	0.59%	0.16%	0.38%	0.19%	0.24%	0.30%
Panel C. Disparity Indices						
Female		33.83%		44.89%	61.52%	48.94%
African American		18.75%		49.24%	84.32%	69.78%
Hispanic		47.88%		65.47%	84.01%	83.93%
Asian		81.24%		44.96%	45.04%	39.19%
Native Hawaiian/Pac. Islander		-		61.21%	108.65%	98.49%
Am. Indian & Alaska Native		27.51%		49.40%	62.27%	79.91%

Source: See Table 5.13. Note: A dash in Panel A indicates the actual number could not be released due to confidentiality or other restrictions imposed by the Census Bureau. Dashes in Panels B and C indicate that the corresponding percentage figure or disparity index could therefore not be calculated.

VI. Statistical Disparities in Capital Markets

Discrimination occurs whenever the terms of a transaction are affected by personal characteristics of the participants that are not relevant to the transaction. Among such characteristics, the most commonly considered are race, ethnicity and gender. In labor markets, this might translate into equally productive workers in similar jobs being paid different salaries because of their race, ethnicity or gender. In credit markets, it might translate into loan approvals differing across racial or gender groups with otherwise similar financial backgrounds.

In this Chapter, we examine whether there is evidence consistent with the presence of discrimination in the small business credit market against minority-owned or women-owned small businesses. Discrimination in the credit market against such businesses can have an important effect on the likelihood that they will succeed. Moreover, discrimination in the credit market might even prevent businesses from opening in the first place, might negatively impact the size a firm could obtain, and/or shorten its longevity in the market.[190]

In our analysis, we use data from the Federal Reserve Board to examine the existence or otherwise of discrimination in the small business credit market for 1993, 1998 and 2003. These surveys are based on a large representative sample of firms with fewer than 500 employees and are administered by the Federal Reserve Board and the U.S. Small Business Administration. The 1993 and 1998 surveys deliberately oversampled minority-owned firms but the 2003 survey did not.[191]

These data provide qualitative and quantitative evidence consistent with the presence of discrimination against minorities in the credit market for small businesses. For example, we find that African American-owned firms are much more likely to report being seriously concerned with credit market problems and report being less likely to apply for credit because they fear the loan would be denied. Moreover, after controlling for a large number of characteristics of the firms, we find that African American-owned firms, Hispanic-owned firms, and to a lesser extent other minority-owned firms are substantially and statistically significantly more likely to be denied credit than are nonminority-owned firms. We find some evidence that women are discriminated against in this market as well. The principal results are as follows:

- Minority-owned firms were more likely to report that they did not apply for a loan over the preceding three years because they feared the loan would be denied.

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[190] Again, as noted in Chapter V, these factors also illustrate why, in a disparity study intended to answer the question of whether discrimination is present in business, adjusting availability for "capacity" factors such as firm age, firm size or firm revenues, is not a legitimate practice when there is evidence that suggests that these factors themselves are tainted by discrimination. To do so would be to inappropriately introduce one or more endogenous variables into the analysis.

[191] The 2003 survey took other steps, however, to increase the likelihood that minority-owned and women-owned firms were captured in the sampling frame. For more details, see NORC (2005), p. 11.

- When minority-owned firms applied for a loan their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences like firm size and credit history.

- When minority-owned firms *did* receive a loan they were obligated to pay higher interest rates on the loans than comparable nonminority-owned firms.

- A larger proportion of minority-owned firms than nonminority-owned firms report that credit market conditions are a serious concern.

- A larger share of minority-owned firms than nonminority-owned firms believes that the availability of credit is the most important issue likely to confront them in the upcoming year.

- There is no evidence that discrimination in the market for credit is significantly different in the Middle Atlantic census division or in the construction and construction-related professional services industries than it is in the nation or the economy as a whole.

- There is no evidence that the level of discrimination in the market for credit has diminished between 1993 and 2003.

The structure of this Chapter is as follows. First, we outline the main theories of discrimination and discuss how they might be tested. Second, we examine the evidence on the existence of capital/liquidity constraints facing individuals in the mortgage market, households in the non-mortgage loan market, and for small businesses in the commercial credit market. Third, we describe the data files used in the remainder of the Chapter and then examine in more detail problems faced by minority-owned firms in obtaining credit. Fourth, we provide a series of answers to criticisms. Finally, we present our conclusions.

A. Theoretical Framework and Review of the Literature

Most recent economic studies of discrimination draw on the analyses contained in Gary Becker's (1957) *The Economics of Discrimination*. Becker's main contribution was to translate the notion of discrimination into financial terms. Discrimination, in this view, results from the desire of owners, workers, or customers to avoid contact with certain groups. This being the case, transactions with the undesired groups would require more favorable terms than those that occur with a desired group. Assume that the primary objective of a financial institution is to maximize their expected profits. The expected return on a loan will depend on the interest rate charged and the likelihood that a borrower defaults. The financial institution would approve any loan for which the expected return on the loan exceeded the cost of the funds to the institution. Discrimination would then result in either (a) higher interest rates being charged to undesired groups having otherwise similar characteristics to the desired group or (b) requiring better characteristics (*i.e.* a lower expected default rate) from the undesired group at any given interest rate. In other words, applicants from the disadvantaged group might either be appraised more rigorously or be given less favorable terms on the loan.

A similar connection between the likelihood of loan approval and the race, ethnicity or gender of the applicant might also be found if lenders employ statistical discrimination—meaning that lenders use personal characteristics such as race, ethnicity or gender to infer the likelihood of default on the loan. If experience has suggested that certain groups of individuals are on average more or less likely to default, then the lender may use this information to economize on the costs of gathering more directly relevant information. Hence, discrimination would not reflect the preferences of the owner but would rather reflect an attempt to minimize costs. Empirically, the racial, ethnic or gender characteristics of the applicant could proxy for unobserved characteristics of their creditworthiness.

There has been an active debate about whether banks discriminate against minority applicants for mortgages. In particular, banks were often accused of "redlining"—that is, not granting loans for properties located in certain areas. To analyze that issue, the Home Mortgage Disclosure Act was passed to require lenders to disclose information on the geographic location of their home mortgage loans. These data, however, were not sufficient to assess whether or not there was discrimination in the market for mortgage loans.

In 1992, researchers at the Federal Reserve Bank of Boston collected additional information from mortgage lenders (Munnell et al., 1996). In particular, they tried to collect any information that might be deemed economically relevant to whether a loan would be approved. In the raw data, non-minorities had 10 percent of their loans rejected whereas rejection rates were 28 percent for both African Americans and Hispanics. Even after the creditworthiness of the borrowers (including the amount of the debt, debt-to-income ratio, credit history, loan characteristics, etc.) were controlled for, African Americans were still found to be 7 percentage points less likely to be granted the loan. A variety of criticisms have been launched at this study (see, for example, Horne, 1994; Day and Liebowitz, 1998; Harrison, 1998). Responses to these criticisms are found in Browne and Tootell (1995).

In addition to the type of statistical analysis done in the Munnell et al. (1996) study, two other approaches have been used to measure discrimination in mortgage markets. First, Federal Reserve regulators can examine a lending institution's files to try to identify any cases where a loan rejection looks suspicious. Second, audit studies have been used with paired "identical" applicants. Such studies have also found evidence of discrimination (*c.f.* Cloud and Galster, 1993) although the audit approach is not without its critics (Heckman, 1998).

Another relevant literature is concerned with the severity of liquidity constraints affecting consumers in non-mortgage credit markets. A consumer is said to be liquidity-constrained when lenders refuse to make the household a loan or offer the household less than they wished to borrow (Ferri and Simon, 1997). Many studies have suggested that roughly twenty percent of U.S. families are liquidity-constrained (cf. Hall and Mishkin, 1982; and Jappelli, 1990). As might be expected, liquidity-constrained households are typically younger, with less wealth and accumulated savings (Hayashi, 1985; and Jappelli, 1990). The research shows minority households to be substantially more likely to be liquidity-constrained even when a variety of financial characteristics of households are controlled for (Jappelli, 1990; and Ferri and Simon, 1997).

We now turn to the more directly relevant evidence on liquidity constraints facing small businesses. Just like individuals and households, businesses can also face liquidity constraints.[192] Liquidity constraints can be a problem in starting a business as well as in running it. Discrimination in the credit market against minority-owned small businesses can have a devastating effect on the success of such businesses, and even prevent them from opening in the first place. Evidence of the latter effect is provided in the economics literature on self-employment.[193]

In his 2003 report for *Builders Association of Greater Chicago v. the City of Chicago*,[194] Bates argued that "from its origins, the black-business community has been constrained by limited access to credit, limited opportunities for education and training, and nonminority stereotypes about suitable roles for minorities in society" (Bates, 1989; Bates, 1993; Bates, 1973). Indeed, as Bates points out, Gunner Myrdal observed,

> "The Negro businessman … encounters greater difficulties than whites in securing credit. This is partly due to the marginal position of Negro business. It is also partly due to prejudicial opinions among whites concerning business ability and personal reliability of Negroes. In either case a vicious circle is in operation keeping Negro business down" (Myrdal, 1944, 308).

Bates goes on to argue that commercial banks lend most easily to nonminority males who possess significant amounts of equity capital to invest in their businesses (Bates, 1991a). Apart from banks, an important source of debt capital for small business is likely to be family and friends, but the low wealth of African American households reduces the availability of debt capital that family and friends could invest in small business operations (Bates, 1993; Bates, 1991b).

Additional evidence indicates that capital constraints for African American-owned businesses are particularly large. For instance, Bates (1989) finds that racial differences in levels of financial capital do have a significant effect upon racial patterns in business failure rates. Fairlie and

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[192] Evans and Leighton (1989) and Evans and Jovanovic (1989) have argued formally that entrepreneurs face difficulties borrowing money. As in the discussion above, such individuals are labeled liquidity constrained by economists. Using data from the National Longitudinal Survey of Youth from 1966-1981 and the Current Population Surveys from 1968-1987, these authors found that, all else equal, people with greater family assets are more likely to switch to self-employment from employment. Blanchflower and Oswald (1998) studied the probability that an individual reports him or herself as self-employed. Consistent with the existence of capital constraints on potential entrepreneurs, their econometric estimates imply that the probability of being self-employed depends positively upon whether the individual ever received an inheritance or gift. Second, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Holtz-Eakin et al. (1994a, 1994b) examine flows in and out of self-employment and find that inheritances both raise entry and slow exit. Black, de Meza and Jeffreys (1996) find that housing equity plays an important role in shaping the supply of entrepreneurs. Lindh and Ohlsson (1996) suggest that the probability of being self-employed increases when people receive windfall gains in the form of lottery winnings and inheritances.

[193] *See* Chapter V, above.

[194] 298 F.Supp.2d 725 (N.D. Ill. 2003).

Meyer (1996) find that racial groups with higher levels of unearned income have higher levels of self-employment. In an important paper Fairlie (1999) uses data from the 1968-1989 Panel Study of Income Dynamics to examine why African American men are one-third as likely to be self-employed as nonminority men. The author finds that the large discrepancy is due to an African American transition rate into self-employment that is approximately one half the nonminority rate and an African American transition rate out of self-employment that is twice the nonminority rate. He finds that capital constraints—measured by interest income and lump-sum cash payments—significantly reduce the flow into self-employment from wage/salary work, with this effect being nearly seven times larger for African American self-employed than for nonminority self-employed persons. Fairlie then attempts to decompose the racial gap in the transition rate into self-employment into a part due to differences in the distributions of individual characteristics and a part due to differences in the processes generating the transitions. He finds that differences in the distributions of characteristics between African Americans and non-minorities explain only a part of the racial gap in the transition rate into self-employment. In addition, racial differences in specific variables, such as levels of assets and the likelihood of having a self-employed father provide important contributions to the gap. He concludes, however, that "the remaining part of the gap is large and is due to racial differences in the coefficients. Unfortunately, we know much less about the causes of these differences. They may be partly caused by lending or consumer discrimination against blacks" (1998, p.14).

There is also research into racial differences in access to credit among small businesses. Cavalluzzo and Cavalluzzo (1998) use data from the 1988-1989 National Survey of Small Business Finances (NSSBF), conducted by the Board of Governors of the Federal Reserve System, to analyze differences in application rates, denial rates, and other outcomes by race, ethnicity and gender in a manner similar to the econometric models reported in this Study. This paper documents that a large discrepancy exists in credit access between non-minorities and minority-owned firms that cannot be explained by a handful of firm characteristics. Unfortunately, the earlier NSSBF data did not over-sample minority-owned firms and included limited information on a firm's credit history and that of its owner, reducing the ability to provide a powerful test of the causal impact of race, ethnicity or gender on loan decisions. In an unpublished paper, Cole (1998) uses the 1993 NSSBF and estimates models of loan denials similar in nature to those discussed in this Study.

The present analysis takes advantage of the 1993 NSSBF data, the 1998 Survey of Small Business Finances (SSBF) data, and the 2003 SSBF data. All three datasets have better information on creditworthiness than did the earlier NSSBF data, and the 1993 and 1998 surveys have larger sample of minority-owned firms than did the earlier NSSBF data. These datasets are also used to conduct an extensive set of specification checks designed to weigh the possibility that our results are subject to alternative interpretations.

B. Empirical Framework and Description of the Data

1. Introduction

Disputes about discrimination typically originate in differences in the average outcomes for two groups. To determine whether a difference in the loan denial rate for African American-owned

firms compared to nonminority-owned firms is consistent with discrimination, it is necessary to compare African American- and nonminority-owned firms that have similar risks of default, that is, the fraction of the African American firms' loans that would be approved if they had the same creditworthiness as the nonminority-owned firms. A standard approach to this problem is to statistically control for firms' characteristics relevant to the loan decision. If African American-owned firms with the same likelihood of default as nonminority-owned firms are less likely to be approved, then it is appropriate to attribute such a difference to discrimination.

Following Munnell et al. (1996) we estimated the following loan denial equation:

$$(1) \qquad \text{Prob}(D_i = 1) = \Phi(\beta_0 + \beta_1 CW_i + \beta_2 X_i + \beta_3 R_i),$$

where D_i represents an indicator variable for loan denial for firm *i* (that is, 1 if the loan is denied and 0 if accepted), CW represents measures of creditworthiness, X represents other firm characteristics, R represents the race, ethnicity or gender of the firm's ownership, and Φ is the cumulative normal probability distribution.[195] This econometric model can be thought of as a reduced form version of a structural model that incorporates firms' demand for and financial institutions' supply of loan funds as a function of the interest rate and other factors.[196] Within the framework of this model, a positive estimate of β_3 is consistent with the presence of discrimination.[197]

2. 1993 NSSBF Data

The 1993 NSSBF data contain substantial information regarding credit availability on a nationally representative target sample of for-profit, non-farm, non-financial business enterprises with fewer than 500 employees. The survey was conducted during 1994 and 1995 for the Board of Governors of the Federal Reserve System and the U.S. Small Business Administration; the data relate to the years 1992 and 1993. The data file used here contains 4,637 firms.[198] In this NSSBF file, minority-owned firms were over-sampled, but sampling weights are provided to

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[195] Additional discussion of Probit regression appears in Chapter V, Section C.1.

[196] Maddala and Trost (1994) describe two variants of such a model, one in which the interest rate is exogenous and another in which the interest rate is endogenously determined, but is capped so that some firms' loan applications are approved and others are rejected. If the interest rate is exogenous, they show that a reduced form model which controls for the loan amount, such as we report below, uniquely identifies supply-side differences in the treatment of African American-owned firms. If the interest rate is endogenous, a reduced form approach requires an assumption that the determinants of demand for non-minority and African American-owned firms are identical, other things being equal. The main alternative empirical strategy is to estimate a structural supply and demand model, in which proper identification generally is not feasible. Any characteristic of the borrower that affects his/her expected rate of return on the investment will affect his/her ability to repay and should be taken into consideration by the lender as well. For instance, in their structural model of mortgage decisions, Maddala and Trost (1994) impose questionable exclusion restrictions, like omitting marital status from the loan supply equation.

[197] The Equal Credit Opportunity Act prohibits discrimination in access to credit by race and would apply to both Becker-type and statistical discrimination.

[198] The median size of firms in the sample was 5.5 and mean size was 31.6 full-time equivalent employees; 440 firms out of 4,637 had 100 or more full-time equivalent employees.

generate nationally representative estimates. Of the firms surveyed, 9.5 percent were owned by African Americans, 6.4 percent were owned by Hispanics, and 7.4 percent were owned by individuals of other races (*i.e.* Asians, Pacific Islanders, American Indians, and Alaska Natives).[199]

Table 6.1 presents population-weighted sample means from these data for all firms in the sample that applied for credit. The estimates indicate that African American-owned firms are almost 2.5 times more likely to have a loan application rejected as are non-Hispanic White-owned firms (hereafter "nonminority") (65.9 percent versus 26.9 percent).[200] Other minority groups are denied at rates higher than non-minorities as well, but the magnitude of the African American/nonminority differential is especially striking.

Minority-owned firms, however, do have characteristics that are different from those of nonminority-owned firms, and such differences may contribute to the gap in loan denial rates. For instance, minority-owned firms were younger, smaller (whether measured in terms of sales or employment), more likely to be located in urban areas, and more likely to have an owner with fewer years of experience than their nonminority counterparts. Minority firms were also less creditworthy, on average, than their nonminority counterparts, as measured by whether (a) the owner had legal judgments against him or her over the previous three years, (b) the firm had been delinquent for more than 60 days on business obligations over the preceding three years, or (c) the owner had been delinquent for more than 60 days on personal obligations over the prior three years. Additionally, compared to nonminority-owned firms, African American-owned firms were also more likely, on average to have owners who had declared bankruptcy over the preceding seven years.

Minority-owned firms also sought smaller amounts of credit than nonminority-owned firms. This was particularly true for African American-owned firms, who requested loans that were, on average, about 60 percent smaller than those requested by nonminority-owned firms; and Hispanic-owned firms, who requested loans about 42 percent smaller than those requested by nonminority-owned firms.

The NSSBF database does not identify the specific city or state where the firm is located; instead, data are reported for four census regions, nine census divisions, and urban or rural location. Table 6.2 presents evidence for the South Atlantic Census division (hereafter SATL), which includes Maryland, Delaware, the District of Columbia, Virginia, and West Virginia.[201] The 1993 SATL sample includes the owners of 773 firms, of which 342 firms said that they had applied for a loan over the preceding three-year period.

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[199] There were also two firms in the "Other race" category in 1993 that reported multiple or mixed race.

[200] Cavalluzzo and Cavalluzzo (1998) examined these outcomes using the 1987 NSSBF and similarly found that denial rates (weighted) are considerably higher for minorities. Nonminority-owned firms had a denial rate for loans of 22 percent compared with 56 percent for African Americans, 36 percent for Hispanics, and 24 percent for other races, which are broadly similar to the differences reported here. These estimates for minority groups are estimated with less precision, however, because of the smaller number of minority-owned firms in the 1987 sample.

[201] The other states in the South Atlantic division include Florida, Georgia, North Carolina, and South Carolina.

The overall denial rate in the SATL is slightly lower than the national rate reported in Table 6.1, but this difference is not statistically significant. The difference in the denial rates between African American-owned and nonminority-owned firms is also slightly larger in the SATL (39.0 percentage points nationally and 43.5 percentage points in the SATL), but again this difference is not statistically significant. Indeed, in the large majority of cases (over 80 percent), the weighted sample means are not statistically significantly different in the SATL than in the nation as a whole—either overall or by race, ethnicity or gender.

C. Qualitative Evidence

Before moving on to the results of our multivariate analysis, we first report on what business owners themselves said were their main problems. While this evidence is not conclusive in determining whether discrimination exists, it highlights firms' perceptions regarding discrimination in obtaining credit. That African American-owned firms and other minorities report greater difficulty in obtaining credit than do nonminority-owned firms, but report other types of problems no more frequently, suggests either that discrimination takes place or that perceptions of discrimination exist that are unwarranted. It therefore complements the econometric analysis provided subsequently, which can distinguish between these two hypotheses.

Table 6.3 summarizes, for the U.S. as a whole, responses to specific questions about problems that firms confronted over the 12-month period before the date of response. In the top panel, respondents were asked to what extent credit market conditions had been a problem. African Americans and Hispanics were much more likely to say that it had been a "serious" problem (31.3 percent and 22.9 percent, respectively) than non-minorities (12.7 percent). The bottom panel of the table reports the results for eight other designated problem areas—(1) training costs; (2) worker's compensation costs; (3) health insurance costs; (4) IRS regulation or penalties; (5) environmental regulations; (6) the Americans with Disabilities Act; (7) the Occupational Safety and Health Act; and (8) the Family and Medical Leave Act. Differences by race, ethnicity or gender are much less pronounced in these eight areas than they are in relation to credit market conditions.[202] The finding that African American-owned and Hispanic-owned firms are largely indistinguishable from nonminority-owned firms in reporting a variety of problems, except for the case of credit, indicates that minority-owned firms perceive credit availability to be a particular problem for them.

Results are broadly similar in Table 6.4 for the SATL region—with African American, Hispanic, and other minority-owned firms being more likely than nonminority-owned firms to say that credit market conditions had been a serious problem in the preceding 12 months.

Table 6.5 reports the views of NSSBF respondents for the U.S. as a whole and Table 6.6 reports views for the SATL on the most important issue businesses expected to face over the next 12

[202] We also estimated a series of ordered Logit equations (not reported) to control for differences across firms in their creditworthiness, location, industry, size, and the like. It is apparent from these regressions that African American-owned firms were more likely to report that credit market conditions were especially serious.

months. Nationally, credit availability and cash flow again appear to be more important issues for African American-owned firms than for nonminority-owned firms. Nonminority-owned firms were especially worried about health care costs. Hispanic and Other minority-owned firms were especially worried about general business conditions.

In the SATL, credit availability and cash flow are far more important issues for African American-owned firms than for nonminority-owned firms. Almost four times as many African American-owned firms reported credit availability as the most important issue than nonminority-owned firms. In contrast, in the SATL, health care costs were a large concern for all types of firms.

Acute credit availability problems for minorities have been reported in surveys other than the NSSBF. In the 1992 Characteristics of Business Owners (CBO) Survey, conducted by the Census Bureau, for example, when owners were asked to identify the impact of various issues on their firm's profitability, 27.0 percent of African American-owned firms reporting an answer indicated that lack of financial capital had a strong adverse impact—compared to only 17.3 percent among nonminority male-owned firms. Hispanic-owned firms and other minority-owned firms also reported higher percentages than nonminority male-owned firms—21.3 percent and 19.7 percent, respectively. Further, owners who had recently discontinued their business because it was unsuccessful were asked in the CBO survey to identify the reasons why. African American-owned firms, and to a lesser degree Hispanic-owned firms, other minority-owned firms, and women-owned firms, were much more likely than nonminority male-owned firms to report that the reason was due to lack of access to business or personal loans or credit. For unsuccessful firms that were discontinued, 7.3 percent of firms owned by nonminority males reported it was due to lack of access to business loans or credit compared to 15.5 percent for firms owned by African Americans, 8.8 percent for Hispanics, 6.1 percent for other minorities, and 9.3 percent for women. Another 2.7 percent of nonminority males said it was due to lack of personal loans or credit compared to 8.4 percent for firms owned by African Americans, 5.8 percent for Hispanics, 6.4 percent of Other minorities, and 3.3 percent for women.[203]

A recent study published by the U.S. Chamber of Commerce (2005) is also consistent with these findings from the 1993 NSSBF and the 1992 CBO.[204] The Chamber of Commerce survey was conducted in March and April 2005 and detailed the financing problems experienced by small business owners, 95 percent of whom had less than 100 employees. Over 1,000 business owners were interviewed. As detailed in Table 6.7, minority-owned businesses report that availability of credit is their top problem. The biggest difference in responses between minorities and nonminority men and women was availability of credit: 19 percent of nonminority males report credit as their top problem compared with 54 percent for minority males. There was a 15 percentage point difference between minority women and nonminority women. In no other category is there more than a 10 percentage point difference for men or women.

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[203] Bureau of the Census (1997), Table 5a, p. 46, Table 1, p. 21.

[204] Although the CBO is part of the Economic Census, it was not published in 1997. In 2002, the name was changed to the Survey of Business Owners (SBO). Unfortunately, questions relating to the importance of access to financial loans and credit to business success were not included in the 2002 survey.

In summary, African American-owned and Hispanic-owned firms in particular and to a lesser extent other minority-owned firms and women-owned firms report that they had problems with the availability of credit in the past and expected that such difficulties would continue into the future. Whether or not these perceptions reflect actual discrimination can be distinguished in the econometric analyses to follow.

D. Differences in Loan Denial Rates by Race, Ethnicity or Gender

Evidence presented to this point indicates that minority-owned firms are more likely to be denied loans and report that their lack of access to credit significantly impairs their business. Can these differences be explained by such things as differences in size, creditworthiness, location, or other factors as some have suggested in the literature on discrimination in mortgage lending (Horne, 1994; Bauer and Cromwell, 1994; and Yezer, Phillips, and Trost, 1994)? To address this question we turn to an econometric examination of whether the loan requests made by minority-owned firms are more likely to be denied, holding constant important differences among firms.

In Table 6.8 and Table 6.9, we report the results from a series of loan denial Probit regressions of the form specified in Equation (1) using data from the 1993 NSSBF for the U.S. and the SATL region.[205] As indicated earlier, the 1993-2003 datasets have the particular advantage that they include information that can be used to proxy an applicant's creditworthiness. We report estimates from these models that can be interpreted as changes or differences in loan denial probabilities depending on the type of variables considered. For indicator variables, such as race, ethnicity and gender indicators, estimates show differences in loan denial probabilities between the indicated group and the base group.[206] In Column (1) of Table 6.8 (in which the regression model contains only race and gender indicators), the estimated coefficient of 0.443 on the African American indicator can be interpreted as indicating that the denial rate for African American-owned businesses is 44.3 percentage points higher than that for nonminority male-owned firms.[207]

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[205] Firms owned 50-50 by minorities and non-minorities are excluded from this and all subsequent analyses, as are non-minority firms owned 50-50 by women and men.

[206] For "continuous" variables, such as profits and sales, estimates can be thought of as changes in loan denial probability when the continuous variable changes by one unit. For example, in Column (2) of Table 6.8, the estimated coefficient of -0.003 on owner's years of experience indicates that one additional year of owner's experience is related to -0.3 percentage point reduction in loan denial rate.

[207] This estimate largely replicates the raw difference in denial rates between African American- and non-minority-owned businesses reported in Table 6.1. The raw differential observed there (0.659 – 0.269 = 0.39) differs slightly from the 0.443 differential reported here because this specification also controls for whether the business is owned by a non-minority female and because the regressions are unweighted whereas the descriptive statistics are weighted using the sample weights. When a full set of explanatory control variables are included the unweighted estimates are insignificantly different from the weighted estimates, hence in Table 6.8 and subsequent tables we report only unweighted estimates.

The remainder of Table 6.8 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race, ethnicity or gender.[208] In Column (2) a number of controls are included that distinguish the creditworthiness of the firm and the owner. Many are statistically significant on a two-tailed test at conventional levels of significance with the expected signs. For instance, having been bankrupt or had legal judgments against the firm or owner raises the probability of denial; stronger sales lower this probability.

Even after controlling for these differences in creditworthiness, however, African American-owned firms remain 29 percentage points more likely than nonminority-owned firms to have their loan request denied.

The models reported in Columns (3) through (5) of Table 6.8 control for an array of additional characteristics of firms. Column (3) adds 39 additional characteristics of the firm and the loan application, including such factors as level of employment, change in employment, the size of the loan request, and the use of the loan. Column (4) includes variables to control for differences across regions of the country and major industry group. Column (5) adds variables indicating the month and year in which the loan was requested and the type of financial institution to which the firm applied.[209] In total these three columns add 176 variables to the more parsimonious specification reported in Column (2).[210] Nevertheless, the estimated disadvantage experienced by African American-owned firms in obtaining credit remains large and statistically significant. The estimate from each of the three additional columns indicates that African American-owned firms are 24 percentage points more likely than nonminority male-owned firms to have their loan application denied even after controlling for the multitude of factors we have taken into consideration.

The results also indicate that Asians/Pacific Islanders had significantly higher denial rates than nonminority males—12 percentage points. There is little evidence in the 1993 national data, however, that denial rates for firms owned by Native Americans or Hispanics were significantly

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[208] In preliminary analyses, these models were also estimated separately, focusing specifically on the differences in coefficient estimates between non-minorities and African Americans. The F-Test conducted to determine whether parameter estimates were the same for African Americans and non-minorities rejected this null hypothesis. Next, the estimates obtained by estimating the model separately by race were used to conduct an Oaxaca (1973) decomposition. The results from this analysis were similar to those obtained by restricting the coefficients to be the same between African Americans and non-minorities and using the coefficient on the African American indicator variable to measure the gap between groups. In this Chapter, all the results are reported in this simpler format for ease of exposition and interpretation.

[209] Approximately four out of five (80.5%) of the firms who required a loan applied to a commercial bank. Overall seventeen different types of financial institution were tabulated, although only the following accounted for more than 1% of the (weighted) total— Finance Companies (4.9%); Savings Banks (2.5%); Savings & Loans (2.3%); Leasing Companies (2.1%); and Credit Unions (2.0%).

[210] One piece of information to which we did not have access in the 1993 NSSBF or the 1998 SSBF because of confidentiality concerns was each firm's credit rating. A working paper by Cavalluzzo, Cavalluzzo, and Wolken (1999) was able to incorporate Dun & Bradstreet credit ratings for each firm because the authors' connection to the Federal Reserve Board enabled them to access the confidential firm identifiers. They added these credit rating variables in a model comparable to that reported here and found the results insensitive to the inclusion. The 2003 SSBF includes Dun & Bradstreet credit ratings for each firm. Below, we discuss the impact of incorporating them into a model similar to that presented in Table 6.8 (see Tables 6.27 and 6.28).

different from the denial rates of firms owned by non-minorities; or that denial rates for firms owned by nonminority women were significantly different from those for firms owned by nonminority men.[211]

In Table 6.9, we see results for the SATL region similar to those reported in Table 6.8 for the nation as a whole. The table shows that the results of our loan denial model in the SATL are not substantially different from the nationwide results reported in Table 6.8. The indicator variable for the SATL region is insignificantly different from zero; as are the interaction terms between race/ethnicity/gender and the SATL region.[212]

Although the results provided so far strongly indicate that financial institutions treat African American-owned and nonminority male-owned small businesses differently in lending, other considerations may limit our ability to interpret this finding as discrimination. Of perhaps greatest concern is the possibility that we may not have adequately controlled for differences in the creditworthiness of firms. If African American-owned firms are less creditworthy and we have failed to sufficiently capture those differences then we would be inadvertently attributing the racial difference in loan denial rates to discrimination. On the other hand, however, if financial institutions discriminate against African American-owned firms, then the greater likelihood of denial for African Americans in earlier years is likely to hurt the performance of these firms and appear to make them look less creditworthy. Therefore, controlling for creditworthiness will likely understate the presence of discrimination.

As a check on the foregoing results, therefore, our first approach was to identify the types of information that financial institutions collect in order to evaluate a loan application and compare that with the information available to us in the NSSBF. First, a selection of small business loan applications was collected from various banks. An Internet search of web sites that provide general business advice to small firms was also conducted. Such sites typically include descriptions of the loan application process and list the kinds of information typically requested of applicants.[213]

Bank loan applications typically request detailed information about both the firm and its owner(s). Regarding the firm, banks typically request information on: (a) type of business, (b) years in business, (c) number of full-time employees, (d) annual sales, (e) organization type (corporation or proprietorship), (f) owner share(s), (g) assets and liabilities, (h) whether the

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[211] It would be a mistake to interpret a lack of statistical significance (as opposed to substantive significance) in any of the Tables in Chapter 6 as a lack of adverse disparity. While tests for statistical significance are very useful for assessing whether chance can explain disparities that we observe, they do have important limitations. First, the fact that a disparity is not statistically significant does not mean that it *is* due to chance. It merely means that we cannot rule out chance. Second, there are circumstances under which tests for statistical significance are not helpful for distinguishing disparities due to chance from disparities due to other reasons (*e.g.*, discrimination). In the particular statistical application presented in this chapter, the chance that a test for statistical significance will incorrectly attribute to chance disparities that are due to discrimination becomes greater when relatively small sample sizes are present for an affected group.

[212] The number of Native Americans in the SATL sample was too small to yield statistical results.

[213] An example of a typical application form is presented as Appendix B in Blanchflower, Levine, and Zimmerman (2003).

business is a party to any lawsuit, and (i) whether any back taxes are owed. Regarding the owner's personal finances, banks typically ask for: (a) assets and liabilities, (b) sources and levels of income, and (c) whether the owner has any contingent liabilities. Some applications ask explicitly if the firm qualifies as a minority-owned enterprise for the purposes of certain government loan guarantee programs. The race of the applicant, however, would be readily identifiable even in the absence of such a question since most of these loans would be originated through face-to-face contact with a representative of the financial institution.

These criteria seem to match reasonably closely the information available in the 1993 NSSBF. The particular strength of the NSSBF is the detail available on the firm, which covers much of the information typically requested on loan application forms. The main shortcoming that we have identified in these data is that less detail is available on the finances of the owner of the firm.[214] Although the creditworthiness measures enable us to identify those owners who have had serious financial problems (like being delinquent on personal obligations), we have no direct information regarding the owner's assets, liabilities, and income. These factors would be necessary to identify whether the business owner has sufficient personal resources to draw upon should the business encounter difficulties and to determine the personal collateral available should the firm default on its obligation. We do have measures of the owner's human capital in the form of education and experience, which likely capture at least some of the differential in available personal wealth across firm owners. Nevertheless, our potentially incomplete characterization of the business owner's personal financial condition may introduce a bias into our analysis if African American business owners have fewer resources than nonminority business owners.

To assess the potential impact of this problem on our results, we separately examined groups of firms who differ in the degree to which personal finances should influence the loan decision and compare the estimated disadvantage experienced by African American-owned firms in different groups. First, we examine proprietorships and partnerships separately from corporations since owners of incorporated businesses are at least somewhat shielded from incurring the costs of a failed business. Second, we divide firms according to size.[215] Both larger small businesses and those that have been in existence for some time are more likely to rely on the business's funds, rather than the owner's, to repay its obligations. Third, we consider firms that have applied for loans to obtain working capital separately from those firms that seek funds for other purposes (mainly to purchase vehicles, machinery and equipment, and buildings or land). Loans made for any of these other purposes are at least partially collateralized because the financial institution could sell them, albeit at a potentially somewhat reduced rate, should the small business default.[216]

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[214] This deficiency is remedied in the 1998 SSBF and the 2003 SSBF, discussed below, both of which contain information on the owner's home equity, and personal net worth excluding home equity and business equity.

[215] As reported earlier, the mean and median size of firms is 5.5 and 31.6 full-time equivalent workers, respectively. 14 percent of firms have one or fewer employees and 27 percent have two or fewer employees. In the SATL, the figures are 6.0, 34.3, 12 percent, and 26 percent, respectively.

[216] As indicated earlier, greater personal wealth may improve a small business's chances of obtaining credit because it provides collateral should the loan go bad and because wealthy owners can use their own resources to weather

In order to determine whether the findings for the SATL region were different from those for the nation, in the second column of Table 6.10 we also report the coefficient and t-statistics on an interaction term between the SATL region and African American ownership. In only one case was the estimated coefficient on this interaction significant, implying that the national results also apply in general to the SATL.

Results from these analyses provide no indication that omitting the owner's personal wealth substantially biases the results presented above in Tables 6.8 or 6.9. Estimates presented in row numbers 1 through 9 of Table 6.10 indicate that African American-owned small businesses are significantly more likely to have their loan applications rejected regardless of the category of firm considered. In particular, when samples are restricted to corporations, larger firms, and firms seeking credit for uses other than working capital, African American-owned firms are 18, 25, and 16 percentage points more likely, respectively, to have their loan application rejected even though personal resources should be less important in these categories. Moreover, in each group where there are two types of firms (large and small, etc.), the estimates for the two types of firms are not significantly different from each other.

Another issue is whether the racial differences in loan denial rates among firms with similar characteristics can be attributed to differences in the geographic location of African American- and nonminority-owned firms. If, for example, African American-owned firms are more likely to be located in the central city, and a central city location is inversely correlated with profitability and the ability to repay debt, then financial institutions may be acting optimally in rejecting the loan applications of African American-owned firms at a higher rate. As indicated earlier, this type of behavior is labeled "statistical discrimination." In the subsequent text and tables, we present a limited analysis to address whether or not this type of behavior takes place.[217]

To identify whether lenders' behavior is consistent with this hypothesis we distinguish those firms that self-classified their sales market as being local rather than regional, national, or international. A central city location should have a greater impact on future profit expectations for those firms that operate on a local level. If minority-owned firms are more likely to locate in the central city, racial differences in loan denial rates should be greater in the firms that sell in the local market area. The results of this test, reported in row numbers 9 and 10 of Table 6.10, reject the hypothesis that differences in loan denial rates are attributable to different propensities to locate in the center of a city. Estimates for the nation as a whole indicate that African American-owned firms that sell to the local market are 11 percentage points more likely to have their loan applications denied compared to a 20 percent excess denial rate for firms selling

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bad times, improving the likelihood of repayment. Our separate analysis of corporations and proprietorships and of large and small firms does not account for this second reason because corporations and large businesses may still need to draw on the owner's personal wealth to help it survive short-term shocks. Businesses that have been in existence for several years, however, are less likely to experience these shocks, making them less likely to require infusions from the owner's personal wealth. A loan used to purchase equipment that can be sold if the firm defaults may insulate the bank from the need to seek repayment directly from the owner.

[217] A strong test to distinguish between statistical discrimination and "Becker-Type" discrimination would require a tremendous amount of detail about the specific location of the firm, characteristics of its surrounding area, characteristics of neighboring firms, and the like, which were unavailable to us. As indicated earlier, both forms of discrimination are illegal and this Chapter applies a definition that incorporates both.

primarily to regional, national, or international markets. In the SATL, however, the figures are reversed, indicating that statistical discrimination may in fact be occurring in this region.

We also estimate models that address a potential weakness in the specific functional form with which we control for differences in credit history across firms. As shown in Tables 6.1 and 6.2, African American-owned firms are considerably more likely to have had troubles in the past in the form of judgments against them, late payments by the firm or its owner, or past bankruptcies. The model specifications reported in Tables 6.8 and 6.9 implicitly assume that these past problems are additive in their effect on loan denials and one might suspect the marginal impact would rise as past problems rise. Therefore, in the final three rows of Table 6.10, we separated firms by the number of past problems experienced. In Rows 11 through 13, we restricted the sample to those firms that have never had any past credit problems, those firms that reported one problem only, and those firms that reported more than one of these problems, respectively. The results indicate that even African American-owned firms with clean credit histories are at a significant disadvantage in getting their loans approved, holding constant their other characteristics. In fact, the estimated differential in loan approval rates between African American- and nonminority-owned firms is statistically indistinguishable within each of these groups. Asian-owned firms and nonminority female-owned firms with clean credit histories, as well, are also at a significant disadvantage relative to nonminority-male owned firms.

Finally, we considered whether African American-owned firms are treated differently from nonminority-owned firms when requesting credit from other sources. The source of credit we examined is credit cards. Such an analysis provides a unique advantage because credit card applications are more likely to be filled out and mailed in, so it is less likely that the race of the applicant is known to the financial institution, at least in the case of African American-owned firms and Native American-owned firms, where surname is unlikely to provide any signal about minority status. On the other hand, for Asian and Hispanic applicants, it is possible that surname does provide such a signal, although an imperfect one. The 1993 NSSBF asked respondents whether they used either a business or personal credit card for business purposes. Although our analysis of use of credit cards does not condition on application, a finding that African American- and nonminority-owned small businesses are equally likely to use credit cards may still provide evidence supporting discrimination in small-business lending. In fact, if financial institutions discriminate against African Americans in providing small business loans, we may even expect to see African Americans use credit cards more often than non-minorities since they have fewer alternatives. Even though many institutions may offer both types of credit, they may only be aware of the race of the applicant in a small business loan.[218]

In Tables 6.11 and 6.12, we examine the probability that a firm uses either a business credit card (Row 1) or a personal credit card (Row 2) to finance business expenses holding constant other

[218] It appears that race may also rarely be known to those institutions that issue credit ratings. As we mentioned above, Cavalluzo, Cavalluzo, and Wolken (1999) show that Dun & Bradstreet Credit Ratings are not helpful in explaining racial disparities in loan denials. Although we are not privy to Dun & Bradstreet's methodology for establishing its credit ratings, we do know from long experience that the good indicators of ownership by race are lacking in Dun & Bradstreet's master business identifier file. Indeed, this is the reason why NERA's availability estimation methodology requires us to create a master directory of disadvantaged, minority, and women-owned businesses for merging with Dun & Bradstreet's data.

differences across firms.[219] There is no evidence, either for the U.S. as a whole or for the SATL, that African American-owned firms are less likely to access either business or personal credit cards for business expenses. On the other hand, there is evidence in the SATL and in the nation as a whole that Asian-owned firms are less likely to access business credit cards. Credit card use for financing business expenses may be an area where further research is warranted. Unfortunately, available data on this subject is quite limited.

E. Differences in Interest Rates Charged on Approved Loans

Although most of our analysis has addressed whether minority- and nonminority-owned firms are treated equally in terms of their probability of loan denial, another way that differential treatment may emerge is through the interest rate charged for approved loans. Discrimination may be apparent if banks approve loans to equally creditworthy minority- and nonminority-owned firms, but charge the minority-owned firms a higher interest rate. Therefore, we estimated model specifications analogous to those reported previously for loan denials, but now the dependent variable represents the interest rate charged for firms whose loans were approved and the set of explanatory variables includes characteristics of the loan. More formally, the model we estimated takes the form:

$$(2) \qquad I_i = \beta_0 + \beta_1 CW_i + \beta_2 X_i + \beta_3 R_i + \beta_4 LC_i + \varepsilon_i,$$

where I represents the interest rate charged on the loan, LC represents characteristics of the loan (see the notes to Table 6.8 for a full list of the variables included in this set), ε_i is a term capturing random factors, and all other notations are the same as in equation (1).

An important consideration is whether the interest rate may be treated as exogenous, as our reduced form model assumes. In the context of small business loans, in which it is possible that the loan terms may be negotiated in the determination process, this assumption may not be valid. As such, a model that simultaneously estimates the interest rate and the loan decision might be appropriate, except that the interest rate that would be charged to firms whose loans were denied is not available in our data. Alternatively, one could estimate an interest rate model alone for those firms whose loan was approved, adjusting for the potential bias brought about by sample selection. To properly identify such a model, however, a variable is required that is linked to the loan denial decision, but unrelated to the level of interest charged on approved loans; no such variable exists in the data.

Nevertheless, one would expect these considerations to impose a downward bias on the estimated differential in interest rates charged on loans to African American-owned firms. Those firms whose loans were rejected would have been charged higher interest rates than those approved. Since African American-owned businesses were considerably more likely to be rejected holding constant differences in creditworthiness, one would expect any differential in

[219] On average, 29 percent of all firms use business credit cards and 41 percent use personal credit cards for business use; these levels vary only modestly by race and ethnicity. In the SATL the figures are 29 percent and 36 percent, respectively.

interest rate to be even greater if those firms were included in the sample. We disregard this implication in the results reported below, but its impact should be kept in mind.

The results obtained from estimating equation (2) are reported in Row 1 of Table 6.13, which includes the complete set of control variables comparable to those in Column (5) of Table 6.8. Estimates indicated that African American-owned firms pay rates of interest that are roughly 1 full percentage point higher than similarly situated nonminority-owned firms. Row 2 shows that even African American-owned firms with good credit histories are charged higher interest rates relative to nonminority-owned firms.[220]

The remainder of the table presents similar specification checks to those reported in Table 6.10. Recall that most of these models identify firms for which the firm's own history is likely to be a more important contributor to its creditworthiness. The specifications by sales market are designed to distinguish the impact of central city location. Unfortunately, sample sizes are smaller in these specifications and reduce the power of the analysis. Nevertheless, we still find that regardless of organization type and firm age, African American-owned firms face statistically significantly higher interest rates. Overall, the evidence presented indicates that African Americans, and to a lesser extent Hispanics and Asians, do face disadvantages in the market for small business credit that does not appear to be attributable to differences in geography or creditworthiness.

Table 6.14 shows results for the SATL. Findings are comparable to those for the nation as a whole.

F. Loan Approval Rates and Access to Credit

The results presented so far may be biased toward finding too small a disparity between nonminority- and African American-owned firms because those minority-owned firms that actually apply for credit may represent a selected sample of the most creditworthy. More marginal minority-owned firms whose loans may have been accepted had they been owned by non-minorities may not even be among the pool of loan applicants. First, these firms may have gone out of business or may not have had the opportunity to commence operations because of their inability to obtain capital. Second, some existing firms may have chosen not to apply for credit because they were afraid their application would be rejected due to prejudice.

Although we have no direct evidence regarding the first proposition, data from the 1993 NSSBF provide some evidence for the second: African American- and Hispanic-owned firms are much more likely to report that they did not apply for a loan, even though they needed credit, because they thought they would be rejected. Table 6.15 reports estimates from Probit models in which the dependent variable is an indicator variable representing failure to apply for a loan fearing denial for all firms. The first row presents racial differences without controlling for any other

[220] Estimates from firms that have had past credit problems are not presented since the higher likelihood of their being denied credit restricts the size of the sample and limits the ability to provide a powerful test of the interest rates charged if they are approved.

characteristics of firms, and the results indicate that African American- and Hispanic-owned firms are 40 and 23 percentage points more likely than nonminority-owned firms to withhold an application fearing denial.

Of course, some of this difference may be attributable to differences in creditworthiness across firms since firms that are bad credit risks should be afraid that their loan would be denied. To adjust for this, the second row of Table 6.15 reports comparable models that control for differences in creditworthiness and other characteristics of firms. The results from this specification show that the greater fear of rejection among African American- and Hispanic-owned firms can partially be explained by these differences. Nevertheless, a gap of 26 and 16 percentage points still exists for African American- and Hispanic-owned firms relative to nonminority-owned firms with similar characteristics. In fact, when asked directly why they were afraid to apply for loans, minority-owned firms were far more likely to report prejudice as the reason (19 percent for African American-owned firms, 8 percent for Hispanic-owned firms, and 3 percent for nonminority-owned firms).[221] Results obtained in section (b) of Table 6.15 for the SATL region are very similar to those found for the nation as a whole. Further, as section (c) of Table 6.15 shows, African American-owned firms in construction also appear to be fearful of applying because of the possibility of their application being turned down.[222]

If these minority-owned firms had applied for credit and were rejected because of discrimination, estimates of racial disparities based only upon loan applicants (as in Tables 6.8 and 6.9) would be understated. The perception of prejudice among these firms, however, does not necessarily imply that selection bias is present. Those firms that failed to apply because they feared rejection may have had similar loan denial rates as other minority-owned firms with comparable levels of creditworthiness that did apply. If those firms chose to apply for a loan, differences by race in the combined denial rate of the actual and potential applicants would be the same as what we have estimated for the observed sample of applicants.

More formally, suppose that loan denial rates for equally creditworthy nonminority- and minority-owned firms that applied for credit are θ^w and θ^m, respectively; the measure of discrimination employed in the previous analysis is $\theta^m - \theta^w$. Now suppose that firms that are equally creditworthy, but chose not to apply for a loan because they feared rejection, would have been denied at the rates θ^w and ψ^m for nonminority- and minority-owned firms, respectively. Among the nonminority-owned firms, the denial rate is identical regardless of whether the firm chose to apply or not, conditional upon creditworthiness. Among minority-owned firms, however, those who were afraid to apply may have been denied at a higher rate (perhaps because of their greater propensity to locate in the central city or other factors that are related to their race, but unrelated to creditworthiness) compared with other minority-owned firms. Then the correct representation of the disadvantage faced by minority-owned firms is $[\eta\theta^m + (1-\eta)\psi^m] -$

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[221] Other reasons given, including "too little collateral," "poor credit history," and "poor balance sheet," are comparable across groups. Firms could report more than one reason.

[222] It was not possible to report separate construction results in earlier tables because of small sample sizes.

θ^W, where η represents the share of minority-owned firms desiring credit that submitted an application. Our earlier findings are biased if θ^m is not equal to ψ^m.

One approach that is frequently employed to address such a problem is to estimate a "Heckman-correction" that would formally model the application process in conjunction with the loan outcome for those who applied. The difficulty with this methodology in the present context is that it is only correctly implemented when some variable is present that is correlated with a firm's decision to apply for a loan, but is independent of the financial institution's decision to approve or deny the request. Unfortunately, the NSSBF data do not appear to contain any variables that would satisfy these conditions, so we are unable to implement this methodology.[223]

As an alternative that answers a different, but related, question we consider the ability of firms to get credit among those who desired it, regardless of whether or not they applied. This amounts to analyzing access to credit rather than loan approval and includes in the denominator those firms that needed credit but did not apply because they feared rejection. If differences by race in this rate among all firms who needed credit are greater than differences by race in the rate of denial among loan applicants, then this would indicate that African American- and other minority-owned firms have even less access to credit than an analysis of loan applicants would indicate.

To test this proposition, we estimate a regression model comparable to the one reported in Table 6.10 for the sample of firms that applied for a loan, except that this analysis considers all firms seeking credit and treats those who did not apply for fear of rejection as denials. The sample excludes firms that did not need additional credit in the preceding three years. The results, reported in Table 6.16, are consistent with the previous analysis; we find that selection is not much of an issue for African American-owned firms nationally or in the SATL. Regardless of whether we consider denial rates among applicants or denial rates among firms that desired additional credit, African American-owned firms are 20-30 percentage points less likely to obtain credit once control variables are included and even higher than that when they are not. For Asian- and Hispanic-owned firms, however, some selection bias is evident. Among the pool of loan applicants, Hispanic-owned firms are not statistically significantly more likely to be denied than other firms with the same characteristics (*see* Tables 6.8 and 6.9, Column 5). Among the pool of firms seeking additional credit, however, Hispanic-owned firms are 16 percentage points more likely to be denied access to credit, and this difference is statistically significant. Among the pool of loan applicants, Asian-owned firms are about 12 percentage points more likely to be denied than other firms with the same characteristics (*see* Tables 6.8 and 6.9, Column 5). Among the pool of firms seeking additional credit, however, Asian-owned firms are 18 percentage points more likely to be denied access to credit, and this difference is statistically significant.

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[223] The only variable that potentially could meet these conditions in the NSSBF data is the distance between a firm and the nearest financial institution. If greater distance reduced a firm's information regarding the availability of funds, it might be related to the decision to apply for a loan. On the other hand, the creditworthiness of the firm should be independent of its location and should be unlikely to enter into the approval process. Unfortunately, we did not find a direct relationship between distance to the nearest financial institution and the probability of applying for a loan. This may be due to the fact that few firms are located more than a very short distance from the nearest financial institution.

G. Analysis of Credit Market Discrimination in the US in 1998

We turn next to an examination of the extent to which discrimination in the credit market has changed since 1993 using data from the 1998 SSBF conducted by the Board of Governors of the Federal Reserve System.[224] This section updates the several estimates obtained above using the 1993 NSSBF. Two complications are that the overall sample size is smaller and a number of the questions have been changed. However, the result is still clear – African American-owned firms face discrimination in the credit market. In addition, there is evidence of discrimination in the credit market against other minority-owned firms as well. We present four sections of evidence, all of which are consistent with our findings from the 1993 survey.

1. Qualitative Evidence

Consistent with the 1993 survey, Table 6.17 shows that African American-owned firms in the 1998 survey report that the biggest problem their firm currently faces is "financing and interest rates." In the 1993 survey, respondents were asked to report problems in the preceding 12 months (Tables 6.3 and 6.4) and over the next 12 months (Tables 6.5 and 6.6). Interestingly, even though credit availability was by far the most important category for African Americans (21 percent in Table 6.5), interest rates were relatively unimportant (2 percent). The 1998 SSBF, however, did not report separate categories.

2. Differences in Loan Denial Rates by Race/Ethnicity

In 1998 as in 1993, in comparison with firms owned by nonminority males, minority and female-owned firms were less creditworthy, more likely to have their loan applications turned down, more likely not to apply for a loan for fear of being denied, and consistently smaller and younger. Moreover, their owners had lower amounts of both home and non-home equity. Minority-owned firms in general, and African American-owned firms in particular, were much less likely to be classified as having a "low risk" credit rating by Dun & Bradstreet.[225]

In the 1993 survey, respondents were asked "During the last three years has the firm applied for credit or asked for the renewal of terms on an existing loan?" In 1998, a narrower question

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[224] The target population of the survey was for-profit businesses with fewer than 500 employees that were either a single establishment or the headquarters of a multiple establishment company, and were not agricultural firms, financial institutions, or government entities. These firms also had to be in business during December 1998. Data were collected for fiscal year-end 1998. Like its 1993 counterpart, the purpose of this survey was to gather information about small business financial behavior and the use of financial services and financial service providers by these firms. The objectives of the survey were to collect information that can inform researchers and policy makers on the availability of credit to small businesses; the location of the sources of financial services; the types of financial services used, including checking accounts, savings accounts, various types of credit, credit cards, trade credit, and equity injections; as well as the firm's recent credit acquisition experiences. The survey also investigated the level of debt held by these firms and their accessibility to credit. Additionally, the survey collected information on firm and owner demographics, as well as the firm's recent income statement and balance sheet.

[225] Information on home and non-home equity or on the Dun & Bradstreet credit rating was not available in the 1993 survey.

limited to new loans was asked – "Did the firm apply for new loans in the last three years?" In 1993, 43 percent answered the question in the affirmative compared with 27 percent in 1998. Despite the fact that in 1993 the question was broader, the pattern of denials by race and gender is similar across the years. As can be seen below, minority-owned firms were especially likely to have their loan applications denied.

Percentage of Loan Applications Denied		
	1993	1998
Nonminority males	26.2%	24.4%
African Americans	65.9%	62.3%
Asians, Native Americans, etc.	39.9%	47.0%
Hispanics	35.9%	49.9%
Nonminority females	30.1%	23.5%
Overall	28.8%	28.6%

Similarly, the proportion of firms reporting that they did not apply for fear of being denied is similar by race, ethnicity and gender across the two years. More than half of African American owners did not apply for a loan for fear of being denied compared with only one out of five nonminority males.

Percentage Not Applying for Fear of Denial		
	1993	1998
Nonminority males	22.5%	20.2%
African Americans	60.7%	53.9%
Asians, Native Americans, etc.	27.5%	23.1%
Hispanics	41.5%	34.3%
Nonminority females	22.7%	24.2%
Overall	24.7%	23.3%

In the 1998 SSBF survey, respondents who were denied loans were asked if they believed there were reasons other than the official ones provided by their financial institution as to why their loan applications were turned down. Among numerous options provided were the following:

a) Prejudice on a racial/ethnic basis.

b) Prejudice against women.

c) Prejudice against the business location.

d) Prejudice against the business type.

e) Prejudice or discrimination (not-specified or other).

Among firm owners who had applied for credit within the last three years and were denied, 34.1 percent believed there were reasons for their denial beyond the official explanation provided by the financial institution. Among non-minorities, 7.7 percent suspected some sort of prejudice. By contrast, the figure among minorities was 25.8 percent. Among owners who needed credit but did not apply for fear of denial, a similar pattern was observed. Only 1.7 percent of non-minorities believed prejudice was the reason, whereas among minorities the figure was 6.8 percent.

In Tables 6.8 and 6.9 the determinants of loan denial rates were estimated using data from the 1993 NSSBF. It was found that African American-owned firms were almost twice as likely to have their loans denied than nonminority male-owned firms, even after controlling for a host of variables included primarily to control for the possibility that minority-owned firms are smaller and less creditworthy than those owned by nonminority men.

A similar exercise is performed below in Tables 6.18 and 6.19 using data from the 1998 SSBF. Column (1) in Table 6.18 shows that African American-owned firms in 1998 had a 42.2 percentage point higher probability of denial than nonminority male-owned firms before taking account of creditworthiness of the firm or any other characteristics. For 1993 the comparable figure was 44.3 percentage points. The addition of a large number of controls reduces the percentage point differential for African Americans to 21.8 in Column (5) as the full set of controls is added. For 1993 the comparable figure was 24.1 percentage points.

The main difference between 1993 and 1998 is that now we find evidence that the probability of denial is significantly higher for Hispanic-owned firms as well. In Table 6.18 Column (5), Hispanic-owned firms have a 17.1 percentage point higher probability of being denied than nonminority male-owned firms. In Table 6.8, by contrast, denial probabilities for Hispanic-owned firms were *not* significantly different from those of nonminority male-owned firms. If anything, discrimination in the small business credit market appears to have expanded during the late 1990s.

Table 6.19 focusing on the SATL region yields similar results—showing significantly larger denial probabilities for African American- and Hispanic-owned firms (24.3 percent and 20.9 percentage points, respectively) than for nonminority male-owned firms. The SATL indicator was not significant in Table 6.19, nor were the interaction terms between SATL and race, ethnicity or gender, indicating that the 1998 loan denial results for the SATL are not significantly different than for the nation as a whole.

Although tempered by the smaller sample size available, the quality of the experiment is somewhat better using the 1998 data than it was using the 1993 data due to the availability of an improved set of controls for the creditworthiness of the firm and its owner. In 1998, three new variables are included regarding the financial viability of the firm:

a) The value of the equity, if any, in the owner's home.

b) The owner's net worth excluding home equity and equity in the firm.

c) The firm's 1999 Dun & Bradstreet credit rating in five categories (low, moderate, average, significant and high) indicating the likelihood of loan default.[226]

[226] The D&B Commercial Credit Score Report predicts the likelihood of a company paying in a delinquent manner (90+ days past terms) during the next 12 months based on the information in D&B's file. The score is intended to help firms decide quickly whether to accept or reject accounts, adjust terms or credit limits, or conduct a more extensive review based on the report D&B provides. Firms can also determine the company's relative ranking among other businesses in the D&B database.

Despite the fact that these new variables do help to predict loan denials,[227] the estimated race differences including these variables are unchanged from those reported above.[228] This suggests that the large estimated differences in the denial probabilities that were estimated in 1993 were not biased significantly upwards by the fact that these variables were unavailable.

3. Effect of 1998 Survey Design Changes on Differences in Loan Denial Rates

The question we used to examine the 1998 data was somewhat narrower than the question used in the 1993 survey because it was changed by the survey designers. The 1998 question asked about new loans over the preceding three years, whereas the 1993 question covered all loans including renewals. Responses in 1998 were as follows:

Applied for New Loans Last Three Years	Number	Percent
Did not apply	2,599	73.0%
Always approved	713	20.0%
Always denied	166	4.7%
Sometimes approved/sometimes denied	83	2.3%
Total	3,561	100.0%

The dependent variable used in Tables 6.18 and 6.19 was set to one if the loan application was always denied and was set to zero if the application was always approved or sometimes approved/sometimes denied. An alternative dependent variable – called *denylast* – is set to one if the application is always denied, set to zero if always approved. Those responding "sometimes approved/sometimes denied" are excluded from the analysis. Column (1) of Table 6.20 replicates Column (1) of Table 6.18 using *denylast* as the dependent variable with the smaller sub-sample. African Americans, Hispanics, Asians and nonminority females are all confirmed to face higher denial rates than nonminority males using this specification. For African Americans and Hispanics, the difference is 46 and 36 percentage points, respectively. For Asians, the difference is 19 percentage points, and for nonminority females, 8 percentage points.

Results consistent with discrimination are confirmed for African Americans and Hispanics in Column (2) of Table 6.20 when a host of demographic and financial characteristics and geographic and industry indicators are included. When interaction terms for the SATL region are added to the model as in Columns (3) and (4), results for minorities and nonminority females remain statistically significant. Neither the SATL indicator nor any of the interactions between SATL and race, ethnicity or gender is significant.

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[227] The coefficients and t-statistics on the credit score variables when they were included alone in a U.S. loan denial model was as follows: moderate risk .228 (2.45), average risk= .295 (3.25); significant risk=.319 (3.28); high risk= .391 (3.53), n=924 pseudo r^2=.0253. Excluded category 'low risk'. Results were essentially unchanged when a control for SATL was included.

[228] This confirms the findings of Cavalluzzo, Cavalluzzo and Wolken (1999) who performed a similar exercise with the 1993 data.

4. Differences in Interest Rates, Credit Card Use, and Failure to Apply for Fear of Denial

Tables 6.21 through 6.23 provide confirmation from the 1998 survey of a number of other results from the 1993 survey reported above.

First, Table 6.21, which is similar to Tables 6.13 and 6.14, finds that conditional on obtaining a loan, African Americans are charged a higher price for their credit—on average 1.06 percentage points nationally. These results are not significantly different in construction and construction-related industries either.[229] African Americans in the SATL appear to be no different in this regard than elsewhere in the country.

Table 6.22, which is similar to Table 6.15, shows that African American owners are much more likely not to apply for a loan fearing they will be denied. Based on all of the foregoing evidence this is perhaps a sensible decision—if and when they do apply they are almost twice as likely as nonminority male-owned firms to have their application rejected. This is evident in the SATL as well and also in the construction and construction-related industries.[230]

Finally, Table 6.23, which is comparable to Tables 6.11 and 6.12, suggests that when the financial institution does not know the race or ethnicity of the applicant – as is often the case in an application for a credit card – there are no differences nationally by race or ethnicity in the usage for business purposes of either business or personal credit cards. There was also no evidence of any race effects in the use of business credit cards in the SATL region (row 3) or in construction (results not reported here).

Our confidence in the strength of our findings from the 1993 NSSBF survey is elevated by these findings from the 1998 SSBF survey, which strongly confirm the original results. Unfortunately, African Americans continue to be discriminated against in the market for small business credit. By 1998, this discrimination appears to be on the increase for African Americans and to be expanding to impact other minority groups, such as Hispanics and Asians, as well. This is an important market failure, and one which governments such as the State of Maryland cannot ignore if they are to avoid passive participation in a discriminatory market area.

H. Analysis of Credit Market Discrimination in the US in 2003

The most recent wave of the Survey of Small Business Finances was made available by the Board of Governors of the Federal Reserve System in 2007.[231] This is the fourth and final survey of US small businesses conducted by the Board of Governors since 1987.[232] The survey

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[229] There is some indication that non-minority females nationally pay slightly less for their loans, but this difference is not quite statistically significant.

[230] There is some evidence of this phenomenon for Hispanics nationally as well. However, the coefficient of 0.052 in Row (2) of Table 6.22 is not quite statistically significant.

[231] *See* www.federalreserve.gov/pubs/oss/oss3/ssbf03/ssbf03home.html.

[232] The Federal Reserve Board cancelled the SSBF subsequent to the completion of the 2003 wave, ostensibly for financial reasons. *See* Robb (2010).

gathered data from 4,072 firms selected to be representative of small businesses operating in the US at the end of 2003. The survey covered a nationally representative sample of U.S. for profit, non-financial, non-subsidiary, nonagricultural, and nongovernmental businesses with fewer than 500 employees that were in operation at year end 2003 and at the time of interview. Most interviews took place between June 2004 and January 2005. The sample was drawn from the Dun & Bradstreet Market Identifier file. The numbers of employees varied from zero to 486 with a weighted median of 3.0 and weighted mean of 8.6.

Unfortunately, the 2003 SSBF did not over-sample minority-owned firms, as in the first three survey waves. According to survey staff, this was due to concerns that doing so would delay the survey timeline and reduce the overall response rate.[233]

In 1998 almost 8 percent of survey respondents were African American, compared to slightly more than 3 percent in 2003. Hispanics were almost 7 percent in 1998 but less than 4 percent in 2003. Other minorities were 6.5 percent in 1998 but only 5.4 percent in 2003.[234] Although the population weights were adjusted to accommodate these changes, even these weighted percentages are significantly smaller for minorities in 2003 than in 1998.[235]

Using these data, Mach and Wolken (2006) reported that 13.1 percent of firms were owned by nonminority or Hispanic individuals; the share is statistically lower than in 1998 (14.6 percent). The shares for African Americans and Asians each held roughly constant at 4 percent and the share of American Indians and Alaska natives held at roughly 1 percent. However the share of Hispanics fell a statistically significant amount from 5.6 percent to 4.2 percent which is somewhat surprising given the evidence that Hispanics are a growing share of the US population – up from 12.5 percent in 2000 to 14.5 percent in 2005. The percentage of firms owned by females also declined from 72.0 percent to 64.8 percent.

Despite these drawbacks, our analysis of the 2003 SSBF yields results that are strongly consistent with those obtained from the 1993 and 1998 survey waves. The next section presents our findings from this analysis.[236]

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[233] *See* footnote 191, above.

[234] The impact on women was not as pronounced. Females were 23.3 percent in 1998 and 20.9 percent in 2003. For non-minority females, the figures are 17.8 percent in 1998 and 18.2 percent in 2003.

[235] Mach and Wolken (2006, Table 2) report that weighted figures for African Americans were 4.1 percent in 1998 and 3.7 percent in 2003. Hispanics were 5.6 and 4.2 percent, respectively. Asians and Pacific Islanders were 4.4 and 4.2 percent, respectively. Native Americans were 0.8 and 1.3 percent, respectively, and women were 24.3 and 22.4 percent, respectively.

[236] The data file provided by the Board of Governors includes five separate observations per firm. That is to say there are 4240*5=21,200 observations. These so-called multiple imputations are done via a randomized regression model, and are included because where there are missing observations several alternative estimates are provided. Where values are not missing the values for each of the five imputations are identical. We make use of the data from the first imputation; the results presented here are essentially identical whichever imputation is used. Overall only 1.8 percent of observations in the data file were missing.

1. Qualitative Evidence

Table 6.24 reports the results of asking business owners for the most important problem currently facing their firm. Unlike earlier surveys, "poor sales" was the top concern among all groups. Consistent with the 1993 and 1998 surveys, however, firms owned by minorities and women were more likely to say that their most important problem was "financing and interest rates." Once again the African American/nonminority difference was most pronounced—only slightly more than 5 percent of nonminority male business owners reported this as their major problem compared to almost 21 percent of African American business owners.

2. Differences in Loan Denial Rates by Race/Ethnicity

Tables 6.25 and 6.26 present estimates of loan denial probabilities for the nation as a whole and for the SATL using a regression model comparable to that which was used with the 1993 and 1998 survey waves.[237]

Column (1) in Table 6.25 (comparable to Table 6.8 for 1993 and 6.18 for 1998) shows that African American-owned firms in 2003 had a 45.9 percentage point higher probability of denial than nonminority male-owned firms before taking account of creditworthiness of the firm or any other characteristics. The addition of a large number of controls reduces the percentage point differential for African Americans to 9.4 in Column (5) as the full set of controls is added. The coefficients in Column (5) for nonminority females and other minority groups are not significant however.

Table 6.26 (comparable to Table 6.9 for 1993 and 6.19 for 1998), which focuses on the SATL region, yields similar results—showing significantly larger denial probabilities for African American-owned firms than for nonminority male-owned firms. The SATL indicator as well as the race and gender interaction terms with the SATL are also insignificant.

3. Differences in Interest Rates, Credit Card Use, and Failure to Apply for Fear of Denial

Table 6.27 models the interest rate charged for those minority-owned and nonminority female-owned firms that were able to successfully obtain a loan (comparable to Tables 6.13 and 6.14 for 1993 and Table 6.21 for 1998). As was found in earlier surveys, African American business owners are hurt here as well since they have to pay, nationally on average, 1.05 percentage points more for their loans than nonminority male business owners with identical characteristics. Hispanic business owners, as well, pay 0.99 percentage points more, nationally on average, than their nonminority male counterparts have to pay.

The loan price differential is present for African American and Hispanic business owners in the SATL as well. According to the results in Table 6.27, African American business owners in the

[237] In 2003, the credit application question was changed from 1998 to once again include requests for renewals as well as new loans, making it comparable to the 1993 version.

SATL may pay 1.1 percentage points more for their loans, on average, than comparable nonminority males. For Hispanics, the differential is 1.04 percentage points.

Table 6.28 reports the results of estimating a model where the dependent variable is whether a business or personal credit card is used to pay business expenses (comparable to Tables 6.11 and 6.12 for 1993 and Table 6.23 for 1998). As noted above, the application procedure for business and personal credit cards is usually automated and not conducted face-to-face. If there were missing variables such as creditworthiness or some such characteristic unobserved to the econometrician, then the race and ethnicity indicator variables should enter significantly in these equations. There is some evidence nationally and in the SATL in 2003 that African Americans and Hispanics are less likely to use personal credit cards for business expenses. However, this result is not observed for business credit cards.

Finally, consistent with earlier results, Table 6.29 (comparable to Tables 6.15 for 1993 and 6.22 for 1998), shows that African American owners are much more likely not to apply for a loan fearing they will be denied. Even after controlling for a host of demographic, financial, geographic, and industry factors, African American business owners are still almost 17 percentage points more likely to fail to apply for loans for fear of denial—even though they need the credit.

In the SATL the phenomenon is evident as well—African American business owners are 15 percentage points more likely to fail to apply for fear of denial. In construction and related industries, the trend is even more pronounced at 30.3 percentage points. There is evidence of this phenomenon for nonminority female business owners as well in the SATL and in the nation as a whole.

I. Further Analysis of Credit Market Discrimination: NERA Surveys 1999-2007

NERA has conducted local credit market surveys at nine other times and places across the country since 1999. These include the Chicago metropolitan area in 1999, the State of Maryland[238] in 2000 (Maryland I), the Jacksonville, Florida metropolitan area in 2002, the Baltimore-Washington, DC metropolitan area in 2003, the St. Louis metropolitan area in 2004, the Denver metropolitan area in 2005, the State of Maryland in 2005 (Maryland II),[239] the State of Massachusetts in 2005, and the Memphis, TN-MS-AR metropolitan area in 2007. The Chicago, Jacksonville, Baltimore, St. Louis, and Denver surveys focused on construction and construction-related industries, while the two Maryland surveys, the Massachusetts surveys and the Memphis surveys included other goods and services as well.

[238] Including the District of Columbia, the State of Delaware, and the portion of Virginia within the Baltimore-Washington Metropolitan Area.

[239] Including (again) the District of Columbia, the State of Delaware, and the portion of Virginia within the Baltimore-Washington Metropolitan Area.

Our Chicago, Maryland I, and Jacksonville survey questionnaires followed the format of the 1993 NSSBF while our Baltimore, St. Louis, Denver, Maryland II, Massachusetts, and Memphis surveys followed the format of the 1998 SSBF questionnaire.

As a final check on our findings in this chapter, we combined the results of these nine NERA surveys together in a consistent format and re-estimated the basic loan denial model on this larger file. These results appear below in Table 6.30, and are remarkably similar to results seen in Tables 6.8-6.9, 6.18-6.19, and 6.25-6.26. Denial probabilities for African American-owned firms compared to nonminority male-owned firms are 29 percentage points higher—even when creditworthiness controls, other firm and owner characteristics, and interaction terms are included.

Moreover, the NERA surveys found statistically significant loan denial disparities for Hispanic-owned firms and nonminority female-owned firms as well. Denial rates were 18-24 percentage points higher for Hispanic-owned firms and 5-9 percentage points higher for nonminority female-owned firms than for their nonminority male-owned counterparts. Significant loan denial disparities were also observed for Native American-owned firms in some cases (18-19 percentage points higher).

Finally, as shown in Table 6.31, we modeled the rate of interest charged, conditional upon receiving loan approval, using our nine-jurisdiction dataset. Results are very similar to that observed in Tables 6.13-6.14, 6.21 and 6.27. African Americans pay almost 1.7 percentage points more, on average, for their business credit than do nonminority males, declining to 1.5 percentage points when creditworthiness and other firm and owner controls are accounted for.

On the basis of the foregoing, we conclude that the evidence of credit discrimination from NERA's nine local credit market surveys conducted throughout the nation between 1999-2007 is entirely consistent with the results obtained using data from the 1993 NSSBF, the 1998 SSBF, and the 2003 SSBF.

J. Conclusions

The results presented in this chapter indicate that African American-owned firms face serious obstacles in obtaining credit that are unrelated to their creditworthiness, industry, or geographic location. In a number of cases this is true as well for Hispanic-owned firms, Asian-owned firms, Native American-owned firms, and nonminority female-owned firms.

As in any regression-based study, our analysis hinges upon the proposition that all the factors that are related to loan denial rates have been included in our statistical model. If, for example, African American business owners possess some unobservable characteristic that makes them less creditworthy, then our statistical finding would overstate the difference in loan denial rates. To check on this possibility, the models we have estimated include an extensive array of factors that could conceivably affect loan decisions. Moreover, we have also estimated several alternative specifications that could potentially identify the impact of such a bias. Moreover, we have conducted our own surveys on numerous occasions and in numerous places across the US. Throughout, we have consistently found that African Americans and often other minorities as

well are disadvantaged in the small business credit market and that our specification tests support the interpretation of discrimination.

Another potential criticism is that this Study has examined loan denial rates rather than loan default rates; some have claimed that the latter provides a more appropriate strategy for identifying discrimination. For example, if banks only approve loans for relatively good African American firms then African American firms should exhibit relatively low default rates. Such an approach has several significant shortcomings that are detailed in Browne and Tootell (1995) and Ladd (1998). For instance, one problem is that it relies on the distribution of default probabilities being similar for African American and nonminority applicants meeting the acceptance standard used for nonminority firms. A further problem is that it assumes that the loan originators know with a high degree of precision what determines defaults, however little hard information exists on what causes default. Additionally, it would be hard to disentangle the factors associated with differences in default rates between nonminority- and African American-owned firms given the fact that the African American-owned firms which obtain credit are typically charged higher interest rates, as we have demonstrated. Finally, such an analysis would require longitudinal data, tracking firms for several years following loan origination. Such data does not exist. While we have highlighted the potential limitations of such an analysis, we believe that it would be fruitful for this sort of longitudinal data collection to take place and for future research to investigate this question more fully.

In addition, many of the criticisms levied against the home mortgage loan discrimination study of Munnell et al. (1996) could perhaps be used here as well. Yet these criticisms appear to have been effectively countered by, for example, Browne and Tootell (1995) and Tootell 1996). What is important to keep in mind in reference to this work compared with Munnell et al. (1996) is the magnitude of the estimated racial disparity. The absolute size of the raw racial differences found in the mortgage study is considerably smaller than those observed in this Study regarding business credit.[240]

The magnitude of the racial difference in small business loan approval rates is substantial, even after controlling for observed differences in creditworthiness, and considerably larger than that found in the analysis of discrimination in mortgage markets. Why do the results for small business loans differ so markedly from those obtained from mortgage loans? First, many mortgages are sold in the secondary market and a substantial fraction of mortgage lenders have little intention of keeping the loans they make. This added "distance" in the transaction might reduce the likelihood of discrimination. As Day and Liebowitz (1998, p.6) point out, "economic self-interest, therefore, should reduce racial discrimination in this market more completely than in many others." A highly sophisticated secondary market for loans to small firms does not exist. Second, the presence of special programs and regulatory incentives to encourage banks and others to increase their mortgage lending to minorities gives these groups some advantages in obtaining a mortgage.

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[240] In the Boston Fed study 10 percent of non-minority mortgage applications were rejected compared with 28 percent for African Americans. Loan denial rates (weighted) for business credit in this study ranged from 8.3 to 26.2 percent for non-minority males and between 50.0 and 65.9 percent for African American-owned firms (depending on which NSSBF or SSBF survey is used).

Clearly, a portion of the difference in denial rates between nonminority males and other groups in both types of studies appears to be due to differences in the characteristics of the applicants. Even after controlling for these differences, however, the gap in denial rates in the small business credit market is considerably larger than that found in the mortgage market.[241]

Our analysis finds significant evidence that African American-owned businesses face impediments to obtaining credit that go beyond observable differences in their creditworthiness. These firms are more likely to report that credit availability was a problem in the past and expect it to be a problem in the future. In fact, these concerns prevented more African American-owned firms from applying for loans because they feared being turned down due to prejudice or discrimination. We also found that loan denial rates are significantly higher for African American-owned firms than for nonminority male-owned firms even after taking into account differences in an extensive array of measures of creditworthiness and other characteristics. This result appears to be largely insensitive to geographic location or to changes in econometric specification. Comparable findings are observed for other minority business owners and for nonminority women as well, although not with as much consistency as the findings for African Americans.

Overall, the evidence is strong that African American-owned firms and often other M/WBE firms as well face large and statistically significant disadvantages in the market for small business credit. The larger size and significance of the effects found in our analyses (compared to mortgage market analyses) significantly reduces the possibility that the observed differences can be explained away by some quirk of the econometric estimation procedure and, instead, strongly suggests that the observed differences are due to discrimination.

[241] The gap in denial rates between African Americans and non-minorities with similar characteristics is between 34-46 percentage points in the small business credit market compared with 7 percentage points in the mortgage market.

K. Tables

Table 6.1. Selected Population-Weighted Sample Means of Loan Applicants – USA, 1993

	All	Non-minority	African American	Hispanic	Other Races
% of Firms Denied in the Last Three Years	28.8	26.9	65.9	35.9	39.9
Credit History of Firm/Owners					
% Owners with Judgments Against Them	4.8	4.1	16.9	5.2	15.2
% Firms Delinquent in Business Obligations	24.2	23.1	49.0	25.1	31.6
% Owners Delinquent on Personal Obligations	14.0	12.6	43.4	14.8	24.5
% Owners Declared Bankruptcy in Past 7yrs	2.4	2.4	5.3	2.0	0.8
Other Firm Characteristics					
% Female-Owned	17.9	18.1	18.2	9.7	23.1
Sales (in 1,000s of 1992 $)	1795.0	1870.6	588.6	1361.3	1309.1
Profits (in 1,000s of 1992 $)	86.7	84.5	59.9	189.5	54.0
Assets (in 1,000s of 1992 $)	889.4	922.5	230.3	745.6	747.3
Liabilities (in 1,000s of 1992 $)	547.4	572.8	146.2	308.6	486.0
Owner's Years of Experience	18.3	18.7	15.3	15.9	14.9
Owner's Share of Business	77.1	76.5	86.4	83.9	77.1
% <= 8^{th} Grade Education	0.8	0.7	0.0	3.4	1.0
% 9^{th}-11^{th} Grade Education	2.2	2.2	3.7	1.8	1.2
% High School Graduate	19.6	19.7	12.8	27.7	14.9
% Some College	28.0	28.3	36.0	20.6	19.8
% College Graduate	29.2	29.2	28.0	24.1	36.5
% Postgraduate Education	20.2	19.9	19.5	22.3	26.6
% Line of credit	48.7	49.1	35.8	52.8	43.7
Total Full-time Employment in 1990	11.4	11.8	6.8	9.3	8.8
Total Full-time Employment in 1992	13.6	13.9	8.3	10.8	12.3
Firm age, in years	13.4	13.6	11.5	13.3	9.3
% New Firm Since 1990	9.4	9.4	13.0	6.4	9.5
% Firms Located in MSA	76.5	75.1	91.2	90.7	85.7
% Sole Proprietorship	32.8	32.3	48.6	38.2	24.2
% Partnership	7.8	7.8	7.7	6.7	7.9
% S Corporation	26.1	27.1	11.7	13.7	27.1
% C Corporation	33.4	32.8	32.1	41.4	40.8
% Existing Relationship with Lender	24.6	24.7	12.8	29.6	25.7
% Firms with Local Sales Market	54.1	54.7	42.9	55.0	47.4
Characteristics of Loan Application					
Amount Requested (in 1,000s of 1992$)	300.4	310.8	126.5	179.1	310.5
% Loans to be Used for Working Capital	8.4	8.8	4.9	4.6	5.5
% Loans to be Used for Equipment/Machinery	2.3	2.4	1.7	0.2	0.6
% Loans to be Used for Land/Buildings	0.4	0.4	0.9	0.0	0.0
% Loan to be Backed by Real Estate	28.3	28.6	24.7	26.2	24.7
Sample Size (unweighted)	2,007	1,648	170	96	93

Source: NERA calculations from 1993 NSSBF.

Notes: Sample weights are used to provide statistics that are nationally representative of all small businesses. Sample restricted to firms that applied for a loan over the preceding three years.

Table 6.2. Selected Sample Means of Loan Applicants – SATL 1993

	All	Non-minority	African American	Hispanic	Other Races
% of Firms Denied in the Last Three Years	29.2	26.3	69.8	50.9	33.4
Credit History of Firm/Owners					
% Owners with Judgments Against Them	4.8	3.9	14.9	0.0	22.5
% Firms Delinquent in Business Obligations	23.3	21.4	49.2	33.4	33.6
% Owners Delinquent on Personal Obligations	11.4	8.5	41.1	16.5	51.3
% Owners Declared Bankruptcy in Past 7yrs	2.3	2.2	6.6	0.0	0.0
Other Firm Characteristics					
% Female-Owned	18.3	17.8	29.9	9.7	28.6
Sales (in 1,000s of 1992 $)	1727.7	1778.4	776.3	2363.0	635.8
Profits (in 1,000s of 1992 $)	74.5	62.5	17.5	460.1	6.8
Assets (in 1,000s of 1992 $)	1022.3	1074.2	277.8	815.9	752.9
Liabilities (in 1,000s of 1992 $)	645.4	675.5	197.4	650.0	340.3
Owner's Years of Experience	19.1	19.7	15.2	10.9	16.6
Owner's Share of Business	73.8	73.5	84.8	62.3	82.9
% <= 8^{th} Grade Education	0.3	0.4	0.0	0.0	0.0
% 9^{th}-11^{th} Grade Education	1.9	1.6	6.7	3.9	0.0
% High School Graduate	16.4	16.2	21.3	27.0	0.0
% Some College	28.2	29.6	25.7	18.6	0.0
% College Graduate	32.5	31.6	31.4	29.5	67.3
% Postgraduate Education	20.7	20.6	14.8	21.0	32.7
% Line of credit	47.4	48.5	32.8	53.0	28.6
Total Full-time Employment in 1990	12.4	12.8	10.9	8.0	8.2
Total Full-time Employment in 1992	14.1	14.5	14.2	9.6	8.2
Firm age, in years	13.2	13.6	10.3	9.3	10.1
% New Firm Since 1990	4.4	3.9	11.2	12.0	0.0
% Firms Located in MSA	80.6	80.0	89.6	92.0	72.4
% Sole Proprietorship	23.1	23.0	45.0	4.5	20.8
% Partnership	6.3	6.7	0.7	3.5	5.1
% S Corporation	29.7	30.3	22.8	23.9	28.6
% C Corporation	40.9	40.0	31.4	68.0	45.5
% Existing Relationship with Lender	24.0	23.8	21.7	15.9	43.6
% Firms with Local Sales Market	49.8	50.3	42.7	30.2	72.5
Characteristics of Loan Application					
Amount Requested (in 1,000s of 1992$)	342.9	352.9	183.1	440.0	126.3
% Loans to be Used for Working Capital	6.9	7.4	1.3	3.5	5.3
% Loans to be Used for Equipment/Machinery	3.0	3.4	0.0	0.0	0.0
% Loans to be Used for Land/Buildings	0.4	0.4	0.0	0.0	0.0
% Loan to be Backed by Real Estate	24.6	23.9	38.5	34.4	14.7
Total Sample Size (unweighted)	342	270	45	19	8

Source and Notes: See Table 6.1.

Table 6.3. Problems Firms Experienced During Preceding 12 Months - USA, 1993

	All	Non-minority	African American	Hispanic	Other Races
Credit Market Conditions					
Percent reporting not a problem	66.2	67.3	43.1	58.9	65.8
Percent reporting somewhat of a problem	20.1	19.9	25.6	18.2	21.3
Percent reporting serious problem	13.7	12.7	31.3	22.9	12.9
Other Potential Problems (% reporting problem is serious)					
Training costs	6.5	6.6	7.2	6.3	4.3
Worker's compensation costs	21.7	21.0	19.3	30.6	28.7
Health insurance costs	32.5	31.6	38.1	44.3	35.0
IRS regulation or penalties	12.3	11.8	17.1	17.9	13.2
Environmental regulations	8.5	8.5	5.6	7.4	11.0
Americans with Disabilities Act	2.7	2.6	3.6	2.7	3.9
Occupational Safety and Health Act	4.5	4.5	3.9	3.6	6.2
Family and Medical Leave Act	2.7	2.5	4.5	3.1	4.8
Number of observations (unweighted)	2,007	1,648	170	96	93

Source: See Table 6.1.

Table 6.4. Problems Firms Experienced During Preceding 12 Months – SATL, 1993

	All	Non-minority	African American	Hispanic	Other Races
Credit Market Conditions					
Percent reporting not a problem	65.3	66.8	38.4	58.9	69.2
Percent reporting somewhat of a problem	20.9	20.9	28.8	14.2	18.4
Percent reporting serious problem	13.7	12.3	32.8	26.9	12.4
Other Potential Problems (% reporting problem is serious)					
Training costs	6.5	6.5	5.4	4.8	8.4
Worker's compensation costs	21.5	20.5	25.1	44.0	20.1
Health insurance costs	29.8	27.7	39.4	44.6	50.6
IRS regulation or penalties	12.7	12.3	19.1	24.3	5.0
Environmental regulations	9.3	10.1	6.1	2.9	2.5
Americans with Disabilities Act	2.1	2.0	6.6	0.0	1.2
Occupational Safety and Health Act	3.4	3.2	5.7	5.3	2.7
Family and Medical Leave Act	2.5	2.3	7.8	1.6	1.2
Number of observations (unweighted)	773	573	112	47	41

Source: See Table 6.1.

Table 6.5. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months - USA, 1993

	All	Non-minority	African American	Hispanic	Other Races
Credit availability	5.9	5.5	20.5	5.3	4.3
Health care, health insurance	21.1	22.1	12.3	13.7	14.8
Taxes, tax policy	5.7	5.7	2.6	8.7	3.3
General U.S. business conditions	11.8	11.5	8.9	14.4	17.4
High interest rates	5.4	5.7	1.8	3.5	3.4
Costs of conducting business	3.3	3.3	3.8	3.8	3.6
Labor force problems	3.5	3.3	3.9	5.5	3.6
Profits, cash flow, expansion, sales	10.3	9.9	20.3	9.8	11.9
Number of observations (unweighted)	4,388	3,383	424	262	319

Source: See Table 6.1.

Table 6.6. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months – SATL, 1993

	All	Non-minority	African American	Hispanic	Other Races
Credit availability	7.1	6.5	25.1	7.2	0.0
Health care, health insurance	19.4	19.6	13.2	17.2	21.6
Taxes, tax policy	6.8	7.2	2.1	9.5	0.0
General U.S. business conditions	10.2	10.1	5.3	15.9	13.3
High interest rates	5.5	5.8	0.7	1.6	6.1
Costs of conducting business	4.0	4.0	5.8	5.3	1.6
Labor force problems	3.9	3.7	4.3	9.3	2.9
Profits, cash flow, expansion, sales	8.5	7.9	14.0	6.1	19.0
Number of observations (unweighted)	729	544	106	41	38

Source: See Table 6.1.

Table 6.7. Types of Problems Facing Your Business, by Race and Gender – USA, 2005 (%)

	Non-minority Male	Non-minority Female	Minority Male	Minority Female	African American	Hispanic	Asian
Availability of credit	19	23	54	38	46	52	34
Rising health care costs	60	49	50	41	31	42	66
Excessive tax burden	49	46	48	42	46	34	51
Lack of qualified workers	37	28	33	17	22	20	34
Rising energy costs	37	35	36	35	29	34	44
Rising costs of materials	44	47	36	47	53	42	32
Legal reform	21	15	15	12	11	10	17
Number firms	415	356	80	81	55	50	41

Source: U.S. Chamber of Commerce (2005), Appendix tables, page 55, available at http://www.uschamber.com/publications/reports/access_to_capital.htm.

Note: Total percentages may be greater than 100% due to respondents having the option to select multiple choices. Minorities also include 14 firms owned by Native Americans.

Table 6.8. Determinants of Loan Denial Rates – USA, 1993

	(1)	(2)	(3)	(4)	(5)
African American	0.443	0.288	0.237	0.235	0.241
	(11.21)	(6.84)	(5.57)	(5.22)	(5.13)
Asian	0.225	0.171	0.140	0.121	0.119
	(4.21)	(3.18)	(2.56)	(2.15)	(2.07)
Native American	-0.016	-0.141	-0.097	-0.052	-0.083
	(0.11)	(1.06)	(0.71)	(0.35)	(0.56)
Hispanic	0.129	0.070	0.067	0.035	0.031
	(2.62)	(1.42)	(1.36)	(0.70)	(0.63)
Nonminority female	0.088	0.048	0.047	0.036	0.033
	(2.65)	(1.45)	(1.45)	(1.06)	(0.94)
Judgments		0.143	0.129	0.124	0.121
		(2.84)	(2.56)	(2.40)	(2.29)
Firm delinquent		0.176	0.178	0.195	0.208
		(6.50)	(6.43)	(6.77)	(7.00)
Personally delinquent		0.161	0.128	0.124	0.119
		(4.45)	(3.56)	(3.38)	(3.17)
Bankrupt past 7 yrs		0.208	0.179	0.162	0.167
		(3.11)	(2.68)	(2.37)	(2.33)
$1992 profits (*$10^8$)		-0.000	-0.000	-0.000	-0.000
		(0.89)	(1.64)	(1.78)	(1.83)
$1992 sales (*$10^8$)		-0.000	-0.000	-0.000	-0.000
		(3.08)	(3.38)	(3.28)	(3.38)
$1992 assets (*$10^8$)		0.000	0.000	0.000	0.000
		(0.51)	(0.60)	(0.40)	(0.37)
$1992 liabilities (*$10^8$)		0.000	0.000	0.000	0.000
		(0.61)	(1.11)	(1.04)	(1.17)
Owner years experience		-0.003	-0.001	-0.002	-0.002
		(2.59)	(1.30)	(1.55)	(1.72)
Owners' share of business		0.001	0.000	0.000	0.000
		(1.91)	(0.71)	(0.26)	(0.30)
Owner's Education (5 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (13 variables)	No	No	Yes	Yes	Yes
Region (8 indicator variables)	No	No	No	Yes	Yes
Industry (60 indicator variables)	No	No	No	Yes	Yes
Month /Year of Application (51 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (16 indicator vars.)	No	No	No	No	Yes
N	2,007	2,007	2,006	1,985	1,973
Pseudo R^2	.0608	.1412	.2276	.2539	.2725
Chi^2	143.6	333.4	537.3	595.4	635.8
Log likelihood	-1108.8	-1013.8	-911.6	-874.8	-848.7

Source: See Table 6.1.

Notes: Reported estimates are coefficients from probit models (re-expressed as percentage differences), t-Statistics are in parentheses. "Other firm characteristics" include variables indicating whether the firm had a line of credit, 1990 employment, firm age, metropolitan area, a new firm since 1990, legal form of organization (sole proprietorship, partnership, S-corporation, or C-corporation), 1990-1992 employment change, existing long run relation with lender, geographic scope of market (local, regional, national or international), the value of the firm's inventory, the level of wages and salaries paid to workers, the firm's cash holdings, and the value of land held by the firm. "Characteristics of the loan" include the size of the loan applied for, a variable indicating whether the loan was backed by real estate, and twelve variables indicating the intended use of the loan.

Table 6.9. Determinants of Loan Denial Rates – SATL Region, 1993

	(1)	(2)	(3)	(4)	(5)
African American	0.452	0.289	0.239	0.235	0.252
	(9.85)	(5.94)	(4.88)	(4.61)	(4.72)
Asian	0.223	0.180	0.142	0.123	0.125
	(3.98)	(3.19)	(2.51)	(2.11)	(2.11)
Native American	0.007	-0.132	-0.094	-0.047	-0.079
	(0.05)	(0.94)	(0.67)	(0.31)	(0.52)
Hispanic	0.104	0.047	0.051	0.021	0.014
	(1.91)	(0.88)	(0.95)	(0.40)	(0.25)
Nonminority female	0.089	0.055	0.060	0.044	0.042
	(2.45)	(1.51)	(1.65)	(1.18)	(1.10)
African American*SATL	-0.027	-0.009	-0.013	0.002	-0.030
	(0.35)	(0.11)	(0.16)	(0.02)	(0.39)
Asian/Pacific*SATL	0.011	-0.069	-0.011	-0.018	-0.052
	(0.06)	(0.44)	(0.06)	(0.10)	(0.31)
Native American*SATL					
Hispanic*SATL	0.114	0.107	0.079	0.073	0.095
	(0.94)	(0.85)	(0.61)	(0.56)	(0.71)
Nonminority female*SATL	-0.006	-0.035	-0.062	-0.042	-0.050
	(0.07)	(0.43)	(0.80)	(0.51)	(0.61)
SATL region	-0.009	0.012	0.015	0.042	0.046
	(0.270)	(0.34)	(0.43)	(0.98)	(1.07)
Creditworthiness controls (4 variables)	No	Yes	Yes	Yes	Yes
Owner's Education (5 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (13 variables)	No	No	Yes	Yes	Yes
Region (7 indicator variables)	No	No	No	Yes	Yes
Industry (60 indicator variables)	No	No	No	Yes	Yes
Month /Year of Application (51 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (16 indicator vars.)	No	No	No	No	Yes
N	2006	2,006	2,005	1,984	1,972
Pseudo R^2	.0612	.1416	.2280	.2540	.2728
Chi^2	144.54	334.27	537.91	595.43	636.45
Log likelihood	-1107.9	-1013.1	-910.9	-874.4	-848.1

Source: See Table 6.1.

Note: Creditworthiness controls are those used in Table 6.8 above.

Table 6.10. Alternative Models of Loan Denials, 1993

Specification	African American	African American* SATL	Asian	Hispanic	Non-minority Female	Sample Size
All	0.222 (4.76)	0.080 (0.85)	0.080 (1.37)	0.055 (0.97)	0.044 (1.25)	2,006
Organization Type						
1) Proprietorships and Partnerships	0.278 (3.03)	0.039 (0.24)	0.177 (1.51)	-0.021 (0.21)	-0.020 (0.29)	536
2) Corporations	0.181 (3.36)	0.175 (1.17)	0.050 (0.73)	0.092 (1.25)	0.069 (1.66)	1,457
Age of Firm						
3) 12 Years or Under	0.243 (3.80)	0.117 (1.02)	0.150 (1.41)	-0.001 (0.01)	0.029 (0.56)	1,074
4) Over 12 Years	0.180 (2.56)	-0.006 (0.54)	0.068 (0.08)	0.114 (1.39)	0.087 (1.69)	926
1993 Firm Size						
5) Fewer than 10 Employees	0.193 (2.97)	0.078 (1.71)	0.251 (0.92)	-0.019 (0.24)	-0.018 (0.34)	868
6) 10 or More Employees	0.245 (3.39)	0.077 (0.65)	-0.082 (0.85)	0.145 (1.61)	0.111 (2.18)	1,132
Intended Use of Loan						
7) Working Capital	0.241 (4.21)	0.176 (1.22)	0.035 (0.47)	0.039 (0.51)	0.041 (0.85)	1,086
8) Other Use	0.158 (1.93)	0.037 (0.27)	0.167 (1.74)	0.081 (0.94)	0.045 (0.87)	917
Scope of Sales Market						
9) Local	0.108 (1.50)	0.348 (2.06)	0.097 (1.26)	0.007 (0.10)	0.041 (0.78)	875
10) Regional, National, or international	0.199 (4.94)	-0.013 (0.24)	0.031 (0.65)	0.071 (1.34)	0.031 (1.19)	1,129
Creditworthiness						
11) No Past Problems	0.244 (4.08)	-0.005 (0.05)	0.113 (1.92)	0.039 (0.71)	0.071 (2.06)	1,386
12) One Past Problem	0.282 (2.53)	-0.072 (0.36)	-0.092 (0.53)	0.181 (1.10)	0.038 (0.37)	376
13) More Than One Problem	0.273 (2.55)	0.080 (0.85)	0.180 (0.67)	0.257 (1.70)	-0.018 (0.09)	231

Source: See Table 6.1.

Notes: Reported estimates are coefficients from probit models (re-expressed as percentage differences), , t-Statistics are in parentheses. Each line of this table represents a separate regression with the same control variables as Column (3) of Table 6.8. The dependent variable in all specifications represents an indicator for whether or not a loan application was denied. Control for SATL also included.

Table 6.11. Models of Credit Card Use – USA, 1993

Specification	African American	Asian	Native American	Hispanic	Non-minority Female	Sample Size
1) Business Credit Card	0.035 (1.35)	-0.096 (3.23)	0.085 (1.00)	0.024 (0.79)	0.018 (0.83)	4,633
2) Personal Credit Card	0.019 (0.74)	-0.019 (0.63)	0.019 (0.23)	-0.042 (1.40)	0.028 (1.28)	4,633

Source: See Table 6.1.

Notes: Reported estimates are coefficients from probit models (re-expressed as percentage differences), t-statistics are in parentheses. Each line of this table represents a separate regression with the same control variables as Column (3) of Table 6.8 but excluding the loan characteristics. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size is all firms. Other races are excluded due to sample size limitations.

Table 6.12. Models of Credit Card Use – SATL, 1993

Specification	African American	Asian	Native American	Hispanic	Non-minority Female	Sample Size
1) Business Credit Card	0.028 (0.96)	-0.087 (2.78)	0.098 (1.07)	0.028 (0.83)	0.009 (0.37)	4,633
2) Personal Credit Card	-0.014 (0.48)	-0.034 (1.08)	0.024 (0.26)	-0.029 (0.87)	0.028 (1.17)	4,633

Source: See Table 6.1.

Notes: See Table 6.11. Control for SATL included.

Table 6.13. Models of Interest Rate Charged – USA, 1993

Specification	African American	Asian	Native American	Hispanic	Non-minority Female	Sample Size
1) All loans (controls as in Column 5, Table 6.8)	1.034 (3.72)	0.413 (1.37)	-0.427 (0.63)	0.517 (1.97)	0.025 (0.14)	1,454
Creditworthiness						
2) No credit problems	1.187 (3.27)	0.485 (1.33)	0.910 (1.07)	0.435 (1.48)	0.129 (0.66)	1,137
Organization Type						
3) Proprietorships and Partnerships	1.735 (2.57)	0.826 (1.03)	2.589 (0.9)	1.008 (1.74)	-0.239 (0.53)	364
4) Corporations	0.660 (2.04)	0.359 (1.07)	-0.585 (0.86)	0.491 (1.53)	0.127 (0.66)	1,090
1993 Firm Size						
5) Fewer than 10 Employees	1.200 (2.58)	-0.247 (0.41)	-0.010 (0.01)	0.783 (1.75)	-0.311 (1.02)	574
6) 10 or More Employees	0.450 (1.15)	0.446 (1.21)	-0.197 (0.25)	0.515 (1.37)	0.164 (0.77)	880
Scope of Sales Market						
7) Local	0.751 (1.55)	-0.073 (0.13)	1.773 (1.12)	0.805 (2.05)	0.324 (1.08)	633
8) Regional, National, or International	1.544 (4.26)	1.185 (2.93)	-1.368 (1.85)	0.392 (0.96)	-0.163 (0.73)	821

Source: See Table 6.1.

Notes: Reported estimates are Ordinary Least Squares (OLS) coefficients, t-statistics in parentheses. Each line of this table represents a separate regression with all of the control variables as Column (5) of Table 6.8 (except where specified) as well as: an indicator variable for whether the loan request was for a fixed interest rate loan, the length of the loan, the size of the loan, whether the loan was guaranteed, whether the loan was secured by collateral, and 7 variables identifying the type of collateral used if the loan was secured. The sample consists of firms who had applied for a loan and had their application approved. 'No credit problems' means that neither the firm nor the owner had been delinquent on payments over 60 days, no judgments against the owner for the preceding 3 years and the owner had not been bankrupt in the preceding 7 years.

Table 6.14. Models of Interest Rate Charged – SATL, 1993

Specification	African American	African American * SATL	Asian	Native American	Hispanic	Non-minority Female	Sample Size
1) All loans (controls as in Column 5, Table 6.8)	0.974 (3.02)	0.206 (0.35)	0.528 (1.69)	-0.959 (1.32)	0.211 (0.73)	-0.017 (0.09)	1,454
Creditworthiness							
2) No credit problems	0.928 (2.20)	0.927 (1.18)	0.512 (1.39)	0.227 (0.24)	0.008 (0.03)	0.068 (0.32)	1,137
Organization Type							
3) Proprietorships and Partnerships	1.338 (1.93)	6.556 (2.23)	0.772 (0.94)	2.284 (0.80)	0.979 (1.69)	-0.391 (0.83)	364
4) Corporations	0.716 (1.76)	-0.119 (0.19)	0.399 (1.16)	-1.193 (1.63)	0.027 (0.07)	0.107 (0.50)	1,090
1993 Firm Size							
5) Fewer than 10 Employees	1.076 (2.10)	0.746 (0.64)	0.048 (0.08)	-1.371 (0.92)	0.458 (0.97)	-0.488 (1.45)	574
6) 10 or More Employees	0.369 (0.69)	0.152 (0.20)	0.454 (1.23)	-0.200 (0.25)	0.535 (1.23)	0.200 (0.87)	880
Scope of Sales Market							
7) Local	1.154 (2.10)	-1.663 (1.52)	0.189 (0.33)	-1.081 (0.48)	0.541 (1.29)	0.346 (1.06)	633
8) Regional, National, or International	1.227 (2.79)	0.943 (1.27)	1.153 (2.82)	-1.403 (1.90)	0.003 (0.01)	-0.132 (0.54)	821

Source: See Table 6.1.

Notes: See Table 6.13.

Table 6.15. Racial Differences in Failing to Apply for Loans Fearing Denial, 1993

Specification	African American	Asian	Native American	Hispanic	Non-minority Female
a) USA					
No Other Control Variables (n=4,637)	0.405 (16.65)	0.099 (3.61)	0.134 (1.72)	0.235 (8.28)	0.031 (1.54)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=4,633)	0.257 (10.02)	0.054 (1.98)	0.019 (0.27)	0.164 (5.69)	-0.008 (0.38)
b) SATL					
No Other Control Variables, except for SATL dummy and race*SATL interactions (n=4,637)	0.405 (14.53)	0.096 (3.27)	0.154 (1.83)	0.241 (7.77)	0.037 (1.67)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=4,633)	0.248 (8.52)	0.054 (1.85)	0.069 (0.85)	0.168 (5.35)	-0.002 (0.07)
c) Construction					
No Other Control Variables (n=781)	0.350 (6.74)	0.109 (1.27)	-0.087 (0.54)	0.150 (2.22)	-0.007 (0.12)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=781)	0.181 (3.67)	0.064 (0.78)	-0.132 (1.00)	0.039 (0.65)	-0.063 (1.32)

Source: See Table 6.1.

Notes: Reported estimates are coefficients from probit models (re-expressed as percentage differences), t-Statistics in parentheses. Sample consists of all firms. Dependent variable equals one if the firm said they did not apply for a loan fearing denial, zero otherwise.

Table 6.16. Models of Failure to Obtain Credit Among Firms that Desired Additional Credit, 1993

Specification	African American	Asian	Native American	Hispanic	Non-minority Female
a) USA					
No Other Control Variables (n=2,646)	0.455 (14.84)	0.298 (6.82)	0.188 (1.57)	0.297 (7.76)	0.126 (4.01)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=2,643)	0.276 (6.93)	0.180 (3.42)	-0.008 (0.06)	0.165 (3.51)	0.049 (1.38)
b) SATL					
No Other Control Variables (n=2,646)	0.461 (13.02)	0.288 (6.19)	0.191 (1.49)	0.299 (7.13)	0.142 (4.19)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=2,643)	0.268 (5.85)	0.175 (3.16)	-0.018 (0.12)	0.159 (3.10)	0.083 (2.15)
c) Construction					
No Other Control Variables (n=463)	0.413 (6.12)	0.196 (1.46)	0.128 (0.36)	0.255 (2.71)	0.043 (0.51)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=463)	0.051 (2.86)	0.015 (0.53)	-0.015 (0.41)	0.019 (1.00)	-0.010 (1.04)

Source: See Table 6.1.

Notes: Reported estimates are coefficients from probit models (re-expressed as percentage differences), t-Statistics in parentheses. The sample consists of all firms that applied for loans along with those who needed credit, but did not apply for fear of refusal. Failure to obtain credit includes those firms that were denied and those that did not apply for fear of refusal. Dependent variable is unity if the firm failed to obtain credit and zero if the firm applied for credit and had their loan application approved.

Table 6.17. Most Important Problem Facing Your Business Today – USA, 1998

	Non-minority male	African American	Other	Hispanic	Non-minority Female	Total
Financing and interest rates	5.8%	18.2%	10.6%	8.1%	6.2%	6.8%
Taxes	7.7%	1.9%	5.3%	3.1%	6.6%	6.9%
Inflation	0.4%	0.6%	0.0%	1.0%	0.4%	0.4%
Poor sales	7.0%	5.9%	11.6%	7.0%	8.3%	7.5%
Cost/availability of labor	3.9%	3.3%	2.4%	3.5%	4.5%	3.9%
Government regulations/red tape	7.1%	3.0%	4.8%	8.1%	6.5%	6.8%
Competition (from larger firms)	11.1%	10.7%	10.6%	18.4%	10.2%	11.3%
Quality of labor	14.4%	11.0%	9.4%	8.7%	9.1%	12.6%
Cost and availability of insurance	2.6%	1.0%	0.8%	0.0%	2.3%	2.2%
Other	11.4%	10.0%	8.3%	16.0%	12.7%	11.7%
Cash flow	4.6%	10.9%	6.3%	3.5%	3.3%	4.6%
Capital other than working capital	1.1%	1.7%	4.1%	0.8%	1.3%	1.3%
Acquiring and retaining new customers	3.1%	3.9%	5.0%	1.8%	3.3%	3.2%
Growth of firm/industry	0.9%	1.0%	1.2%	0.1%	0.4%	0.8%
Overcapacity of firm/industry	0.1%	0.0%	0.0%	0.3%	0.0%	0.1%
Marketing/advertising	2.1%	3.9%	2.5%	2.8%	3.6%	2.5%
Technology	1.4%	1.2%	1.6%	2.6%	1.3%	1.5%
Costs, other than labor	2.7%	1.8%	2.5%	3.6%	3.8%	2.9%
Seasonal/cyclical issues	1.3%	1.2%	0.7%	0.4%	0.7%	1.1%
Bill collection	2.8%	2.2%	2.4%	2.6%	2.8%	2.8%
Too much work/not enough time	3.6%	2.2%	4.3%	1.4%	5.7%	3.9%
No problems	4.6%	4.3%	5.6%	5.8%	6.4%	5.1%
Not ascertainable	0.4%	0.0%	0.0%	0.0%	0.7%	0.4%

Source: NERA calculations from the 1998 SSBF (n=3561).

Notes: Results are weighted.

Table 6.18. Determinants of Loan Denial Rates - USA, 1998

	(1)	(2)	(3)	(4)	(5)
African American	0.422	0.254	0.217	0.192	0.218
	(7.94)	(5.36)	(5.05)	(4.52)	(4.74)
Asian	0.148	0.129	0.049	0.023	0.028
	(2.54)	(2.52)	(1.25)	(0.65)	(0.77)
Hispanic	0.353	0.269	0.211	0.183	0.171
	(6.44)	(5.37)	(4.69)	(4.21)	(4.00)
Nonminority female	0.087	0.049	0.024	0.016	0.011
	(2.22)	(1.55)	(0.96)	(0.66)	(0.44)
Judgments		0.272	0.249	0.272	0.262
		(4.28)	(4.32)	(4.47)	(4.20)
Firm delinquent		0.081	0.115	0.103	0.111
		(2.88)	(4.20)	(3.88)	(4.01)
Personally delinquent		0.092	0.039	0.042	0.045
		(2.85)	(1.59)	(1.69)	(1.76)
Bankrupt past 7 yrs		0.504	0.406	0.392	0.395
		(4.48)	(3.83)	(3.67)	(3.64)
$1998 sales (*$10^8$)		-0.000	-0.000	0.000	0.000
		(2.47)	(0.26)	(0.02)	(0.03)
$1998 firm equity (*$10^8$)		0.000	0.000	0.000	0.000
		(1.40)	(0.46)	(0.20)	(0.06)
Owner home equity (*10^8)		0.000	0.000	0.000	0.000
		(0.52)	(1.47)	(0.96)	(0.90)
Owner net worth (*10^8)		-0.000	-0.000	-0.000	-0.000
		(1.25)	(1.28)	(1.19)	(1.24)
Owner years experience		-0.002	-0.001	-0.000	-0.000
		(1.42)	(0.49)	(0.34)	(0.21)
Owners' share of business		0.000	-0.000	0.000	-0.000
		(0.75)	(0.12)	(0.03)	(0.33)
Dun & Bradstreet credit ratings (4)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Region (8 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	924	924	924	924	905
Pseudo R^2	.1061	.2842	.3714	.3910	.4015
Chi^2	90.0	241.1	315.1	331.8	337.8
Log likelihood	-379.3	-303.7	-266.7	-258.3	-251.7

Source: See Table 6.17.

Notes: Reported estimates are coefficients from probit models (re-expressed as percentage differences), t-Statistics are in parentheses. "Other firm characteristics" include variables indicating whether the firm had a line of credit, 1998 full time equivalent employment, firm age, metropolitan area, legal form of organization (sole proprietorship, partnership, LLP, S-corporation, C-corporation, or LLC), existing long run relation with lender, geographic scope of market (regional, national, foreign, or international), the value of the firm's inventory, the firm's cash holdings, and the value of land held by the firm. "Characteristics of the loan" includes the size of the loan applied for.

Table 6.19. Determinants of Loan Denial Rates – SATL, 1998

	(1)	(2)	(3)	(4)	(5)
African American	0.471	0.318	0.236	0.217	0.243
	(7.46)	(5.38)	(4.59)	(4.16)	(4.35)
Asian	0.189	0.162	0.072	0.041	0.048
	(3.00)	(2.89)	(1.65)	(1.05)	(1.17)
Hispanic	0.381	0.309	0.251	0.223	0.209
	(6.27)	(5.46)	(4.79)	(4.32)	(4.13)
Nonminority female	0.074	0.049	0.021	0.012	0.004
	(1.69)	(1.39)	(0.75)	(0.45)	(0.16)
African American*SATL	-0.092	-0.072	-0.029	-0.028	-0.027
	(1.42)	(1.65)	(0.63)	(0.64)	(0.60)
Asian*SATL					
Hispanic*SATL	-0.080	-0.070	-0.051	-0.047	-0.046
	(0.96)	(1.32)	(1.28)	(1.20)	(1.20)
Nonminority female*SATL	0.050	-0.011	0.001	0.006	0.017
	(0.53)	(0.18)	(0.02)	(0.11)	(0.29)
SATL region	0.043	0.041	0.040	0.006	0.011
	(0.94)	(1.05)	(1.19)	(0.13)	(0.22)
Creditworthiness Controls (8 variables)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Region (7 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	918	918	918	918	899
Pseudo R^2	0.1119	0.2893	0.3750	0.3941	0.4052
Chi^2	94.67	244.85	317.33	333.51	339.91
Log likelihood	-375.8	-300.7	-264.5	-256.4	-249.5

Source: See Table 6.17.

Notes: t-statistics in parentheses. Other creditworthiness controls are the four other variables included in Column (2) of Table 6.18. Since there was no variation in the loan denial indicator for the Asian observations in the SATL sample, they dropped out of the regression analysis.

Table 6.20. More Loan Denial Probabilities, 1998

	(1)	(2)	(3)	(4)
	Denylast	*Denylast*	*Denylast*	*Denylast*
African American	0.457	0.246	0.499	0.271
	(8.00)	(4.76)	(7.42)	(4.32)
Asian	0.185	0.027	0.231	0.043
	(2.81)	(0.65)	(3.25)	(0.93)
Hispanic	0.360	0.171	0.385	0.206
	(6.28)	(3.67)	(6.07)	(3.79)
Nonminority female	0.083	0.005	0.068	0.001
	(2.00)	(0.20)	(1.48)	(0.04)
African American*SATL			-0.091	-0.028
			(1.21)	(0.53)
Asian*SATL				
Hispanic*SATL			-0.078	-0.051
			(0.82)	(1.06)
Nonminority female*SATL			0.058	0.011
			(0.57)	(0.16)
SATL			0.043	0.025
			(0.87)	(0.43)
Creditworthiness Controls	No	Yes	No	Yes
Owner's Education	No	Yes	No	Yes
Other Firm Characteristics	No	Yes	No	Yes
Characteristics of the loan	No	Yes	No	Yes
Region	No	Yes	No	Yes
Industry	No	Yes	No	Yes
N	846	846	841	841
Pseudo R^2	0.1112	0.4265	0.1168	0.4284
Chi^2	90.94	348.71	95.23	349.41
Log likelihood	-363.3	-234.5	-360.1	-233.1

Source: See Table 6.17.

Notes: t-statistics in parentheses. Other creditworthiness controls are the four other variables included in Column (2) of Table 6.18. Since there was no variation in the loan denial indicator for the Asian observations in the SATL sample, they dropped out of the regression analysis.

Table 6.21. Models of Interest Rate Charged, 1998

Specification	African American	African American * SATL	African American * Construc-tion	Asian	Hispanic	Non-minority Female
1a) All Loans (as in Column 5 of Table 6.18) n=765	1.064 (2.66)	–	–	0.559 (1.49)	-0.088 (0.23)	-0.501 (1.93)
1b) All Loans (as in Column 5 of Table 6.18) n=765	1.177 (2.22)	-0.407 (0.49)	0.251 (0.25)	0.639 (1.50)	-0.152 (0.30)	-0.272 (0.92)

Source: See Table 6.17.

Notes: Each line of this table represents a separate regression with all of the control variables. The sample consists of firms who had applied for a loan and had their application approved.

Table 6.22. Racial Differences in Failing to Apply for Loans Fearing Denial, 1998

Specification	African American	Asian	Hispanic	Nonminority female
a) U.S.				
No Other Control Variables (n=3,448)	0.353 (11.90)	0.046 (1.48)	0.173 (5.77)	0.051 (2.55)
Full Set of Control Variables (n=3,448)	0.208 (7.04)	-0.012 (0.43)	0.052 (1.87)	0.011 (0.59)
b) SATL region				
No Other Control Variables (n=618)	0.389 (7.00)	-0.001 (0.01)	0.122 (1.71)	0.080 (1.58)
Full Set of Control Variables (n=618)	0.218 (4.21)	-0.024 (0.35)	0.023 (0.40)	0.023 (0.57)
c) Construction				
No Other Control Variables (n=613)	0.371 (5.06)	0.117 (1.43)	0.020 (0.26)	0.122 (2.08)
Full Set of Control Variables (n=609)	0.273 (3.69)	0.099 (1.32)	-0.062 (1.13)	0.038 (0.74)

Source: See Table 6.17.

Note: Reported estimates are coefficients from probit models (re-expressed as percentage differences), with t-statistics in parentheses. Full set of control variables as in Column (5) of Table 6.18, except for loan amount, year of application, and type of lender.

Table 6.23. Models of Credit Card Use, 1998

Specification	African American	Asian	Hispanic	Nonminority female	Sample Size
1) Business Credit Card	-0.001 (0.02)	-0.038 (1.00)	-0.014 (0.38)	-0.018 (0.72)	3,561
2) Personal Credit Card	-0.018 (0.54)	0.016 (0.44)	-0.050 (1.42)	0.012 (0.52)	3,561
3) Business Credit Card SATL	0.034 (0.49)	-0.198 (1.73)	-0.063 (0.7)	-0.108 (1.71)	641
4) Personal Credit Card SATL	-0.031 (0.47)	0.018 (0.16)	-0.028 (0.32)	0.091 (1.54)	641
3) Business Credit Card Construction & related	0.056 (0.62)	-0.074 (0.70)	0.087 (0.86)	-0.025 (0.35)	624
4) Personal Credit Card Construction & related	0.003 (0.04)	0.047 (0.46)	-0.092 (1.01)	-0.073 (0.99)	624

Source: See Table 6.17.

Notes: Each line of this table represents a separate regression with the same control variables as Column (5) of Table 6.18, except for loan amount, year of application and type of lender. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size includes all firms. Reported estimates are coefficients from probit models (re-expressed as percentage differences), with t-statistics in parentheses.

Table 6.24. Most Important Problem Facing Your Business Today – USA, 2003

	Non-minority Male	African American	Other	Hispanic	Non-minority Female	Total
Financing and interest rates	5.4%	20.7%	9.1%	5.7%	5.8%	6.3%
Taxes	6.3%	2.4%	4.9%	7.7%	4.3%	5.7%
Inflation	2.7%	1.0%	2.3%	0.5%	1.4%	2.3%
Poor sales	17.8%	38.5%	28.9%	30.0%	22.5%	20.6%
Cost/availability of labor	1.5%	0.0%	0.6%	1.5%	1.5%	1.4%
Government regulations/red tape	4.7%	1.0%	5.4%	9.6%	2.5%	4.5%
Competition (from larger firms)	4.0%	2.7%	2.7%	3.6%	3.6%	3.8%
Quality of labor	7.9%	6.9%	5.0%	3.8%	6.5%	7.2%
Cost and availability of insurance	10.3%	1.8%	3.1%	5.2%	6.4%	8.6%
Other	2.6%	1.9%	4.0%	2.8%	1.6%	2.5%
Cash flow	5.3%	3.4%	9.4%	4.1%	8.6%	6.0%
Capital other than working capital	6.2%	5.1%	4.6%	7.1%	6.8%	6.3%
Acquiring and retaining new customers	0.9%	2.7%	0.4%	1.1%	0.8%	1.0%
Growth of firm/industry	1.3%	0.0%	1.0%	0.1%	0.7%	1.0%
Overcapacity of firm/industry	1.6%	0.8%	1.8%	0.1%	1.1%	1.4%
Marketing/advertising	0.8%	0.8%	0.6%	1.6%	1.2%	0.9%
Technology	1.2%	2.2%	0.2%	0.0%	1.3%	1.1%
Costs, other than labor	4.2%	2.5%	4.3%	1.0%	6.1%	4.4%
Seasonal/cyclical issues	1.4%	0.7%	1.6%	2.3%	2.0%	1.6%
Bill collection	2.2%	1.8%	2.4%	1.8%	3.3%	2.4%
Too much work/not enough time	4.9%	1.9%	4.0%	2.3%	6.2%	4.8%
No problems	1.5%	0.0%	0.7%	0.8%	1.4%	1.4%
Costs, other than labor	1.5%	0.0%	0.7%	3.7%	1.2%	1.4%
Seasonal/cyclical issues	2.2%	1.0%	0.1%	3.6%	1.0%	1.9%
Bill collection	0.3%	0.0%	0.0%	0.0%	0.8%	0.4%
Too much work/not enough time	0.4%	0.0%	0.7%	0.0%	0.5%	0.4%
No problems	0.3%	0.4%	0.0%	0.0%	0.4%	0.3%
Not ascertainable	0.2%	0.0%	1.3%	0.0%	0.5%	0.3%

Source: NERA calculations from the 2003 SSBF (n=4072).

Note: Results are weighted.

Table 6.25. Determinants of Loan Denial Rates - USA, 2003

	(1)	(2)	(3)	(4)	(5)
African American	0.459	0.136	0.105	0.091	0.094
	(8.38)	(5.47)	(4.80)	(5.04)	(4.95)
Asian	0.055	0.020	0.009	0.002	0.001
	(1.51)	(1.59)	(1.01)	(0.49)	(0.18)
Hispanic	0.067	0.008	0.004	0.001	0.001
	(1.74)	(0.83)	(0.58)	(0.30)	(0.25)
Native American and Other	0.184	0.061	0.032	0.021	0.021
	(2.22)	(1.95)	(1.47)	(1.43)	(1.49)
Nonminority female	0.043	0.003	0.002	0.001	0.002
	(2.17)	(0.70)	(0.49)	(0.57)	(0.76)
Judgments against owner		0.007	0.003	0.003	0.006
		(0.66)	(0.35)	(0.54)	(0.90)
Judgments against firm		0.005	0.005	0.001	0.001
		(1.16)	(1.42)	(0.54)	(0.64)
Firm delinquent		0.032	0.021	0.019	0.021
		(3.78)	(3.23)	(3.89)	(4.08)
Personally delinquent		-0.007	-0.006	-0.003	-0.002
		(0.69)	(1.02)	(0.82)	(0.58)
Owner Bankrupt past 7 yrs		0.046	0.041	0.052	0.044
		(1.36)	(1.35)	(1.81)	(1.66)
Firm Bankrupt past 7 yrs		0.000	0.003	0.001	-0.001
		(0.03)	(0.37)	(0.17)	(0.38)
$1998 sales (*$10^8$)		-0.000	0.000	0.000	0.000
		(1.68)	(0.04)	(0.29)	(0.51)
$1998 firm equity (*$10^8$)		-0.000	-0.000	-0.000	-0.000
		(2.23)	(1.03)	(1.62)	(1.63)
Owner home equity (*10^8)		0.000	0.000	-0.000	-0.000
		(0.28)	(0.02)	(0.45)	(0.26)
Owner net worth (*10^8)		-0.000	-0.000	-0.000	-0.000
		(2.97)	(2.92)	(3.06)	(3.26)
Owner years experience		0.000	0.000	0.000	0.000
		(0.31)	(1.00)	(0.82)	(0.62)
Owners' share of business		0.000	0.000	0.000	0.000
		(0.08)	(0.61)	(0.38)	(0.47)
Dun & Bradstreet credit ratings (4)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Region (8 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	1,664	1,655	1,655	1,655	1,605
Pseudo R^2	.0850	.2267	.2901	.3336	.3681
Chi^2	74.1	192.9	246.8	283.8	310.3
Log likelihood	-399.1	-328.9	-301.9	-283.4	-266.4

Source: See Table 6.24. Notes: Reported estimates are coefficients from probit models (re-expressed as percentage differences), with t-statistics in parentheses. "Other firm characteristics" include variables indicating whether the firm had a line of credit, 2003 total employment, firm age, metropolitan area, legal form of organization (sole proprietorship, partnership, LLP, S-corporation, C-corporation, or LLC), existing long run relation with lender, geographic scope of market (local, regional, national, foreign, or international), the value of the firm's inventory, the firm's cash holdings, the value of land held by the firm, and total salaries and wages paid. "Characteristics of the loan" includes the size of the loan applied for.

Table 6.26. Determinants of Loan Denial Rates – SATL, 2003

	(1)	(2)	(3)	(4)	(5)
African American	0.412	0.111	0.088	0.082	0.083
	(6.44)	(4.18)	(3.74)	(4.05)	(4.05)
Asian	0.051	0.016	0.007	0.001	-0.000
	(1.31)	(1.24)	(0.80)	(0.26)	(0.00)
Hispanic	0.030	-0.002	-0.002	-0.002	-0.002
	(0.70)	(0.22)	(0.23)	(0.59)	(0.63)
Native and Other	0.206	0.062	0.035	0.022	0.022
	(2.34)	(1.94)	(1.50)	(1.43)	(1.50)
Nonminority female	0.054	0.004	0.002	0.002	0.002
	(2.39)	(0.70)	(0.55)	(0.63)	(0.96)
African American*SATL	0.053	0.018	0.011	0.003	0.003
	(0.78)	(0.81)	(0.61)	(0.34)	(0.35)
Asian*SATL	0.025	0.018	0.010	0.009	0.009
	(0.27)	(0.55)	(0.38)	(0.49)	(0.50)
Hispanic-Other*SATL	0.093	0.067	0.032	0.032	0.034
	(1.04)	(1.55)	(1.16)	(1.39)	(1.40)
Native-Other*SATL					
Nonminority female*SATL	0.054	0.004	-0.002	-0.001	-0.002
	(2.39)	(0.70)	(0.19)	(0.25)	(0.57)
SATL region	0.010	-0.002	-0.001	-0.001	-0.001
	(0.51)	(0.35)	(0.32)	(0.32)	(0.38)
Creditworthiness (4 variables)	No	Yes	Yes	Yes	Yes
Dun & Bradstreet credit ratings (4 variables)	No	Yes	Yes	Yes	Yes
Balance Sheet (4 indicator variables)	No	Yes	Yes	Yes	Yes
Owner Experience (1 indicator variable)	No	Yes	Yes	Yes	Yes
Owner's Share of Business (1 indicator variable)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Region (7 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	1,663	1,654	1,654	1,654	1,604
Pseudo R^2	0.0897	0.2307	0.2926	0.3367	0.3719
Chi^2	78.25	196.16	248.84	286.32	313.48
Log likelihood	-397.0	-327.2	-300.8	-282.1	-264.7

Source: See Table 6.24.

Notes: Reported estimates are coefficients from probit models (re-expressed as percentage differences), with t-statistics in parentheses. Creditworthiness controls include presence of legal judgments against the firm during the previous 3 years, more than 60 days delinquent on any personal obligations the firm's owner during the previous 3 years, more than 60 days delinquent on any business obligations the firm during the previous 3 years, and declaration of owner of firm bankruptcy during the previous 7 years. Balance sheet variables include firm sales in 1998, firm equity in 1998, owner's home equity in 1998, and owner's personal net worth (exclusive of firm equity and home equity) in 1998. For other variables, see notes for Table 6.25. Since there was no variation in the loan denial indicator for the Native-Other observations in the SATL sample, they dropped out of the regression analysis.

Table 6.27. Models of Interest Rate Charged, 2003

Specification	African American	African American * SATL	African American * Construc-tion	Asian	Hispanic	Native and Other	Non-minority Female
1a) All Loans (as in Column 5 of Table 6.25) n=1,537 (US)	1.046 (2.02)			0.430 (1.20)	0.991 (2.72)	0.260 (0.35)	-0.148 (0.75)
1b) All Loans (as in Column 5 of Table 6.26) n=1,537 (SATL)	1.101 (1.72)	-0.187 (0.16)	-0.162 (0.12)	0.486 (1.16)	1.044 (2.22)	0.480 (0.51)	-0.185 (0.77)

Source: See Table 6.24.

Notes: Each line of this table represents a separate regression with all of the control variables as indicated. Additionally, controls were included for whether the loan required a co-signer or guarantor, whether collateral was required and, if so, the type of collateral required. The sample consists of firms who had applied for a loan and had their application approved. Reported estimates are coefficients from probit models (re-expressed as percentage differences), with t-statistics in parentheses.

Table 6.28. Models of Credit Card Use, 2003

Specification	African American	Asian	Hispanic	Native American and Other	Non-minority Female	Sample Size
1) Business Credit Card	-0.060 (1.13)	0.040 (0.91)	0.004 (0.08)	-0.001 (0.01)	0.002 (0.07)	3,676
2) Personal Credit Card	-0.132 (2.68)	0.036 (0.84)	-0.080 (1.77)	-0.040 (0.48)	0.036 (1.56)	3,676
3) Business Credit Card SATL	-0.057 (0.57)	0.096 (0.94)	-0.013 (0.13)	–	-0.011 (0.20)	655
4) Personal Credit Card SATL	-0.185 (2.04)	-0.149 (1.52)	-0.271 (2.86)	–	0.056 (1.00)	646

Source: See Table 6.24.

Notes: Each line of this table represents a separate regression with the same control variables as Column (5) of Table 6.27, except for loan amount, year of application, and type of lender. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size is all firms. Reported estimates are coefficients from probit models (re-expressed as percentage differences), with t-statistics in parentheses.

Table 6.29. Racial Differences in Failing to Apply for Loans Fearing Denial, 2003

Specification	African American	Asian	Hispanic	Native American and Other	Non-minority Female
a) U.S.					
No Other Control Variables (n=3,704)	0.385 (9.48)	0.059 (1.95)	0.138 (4.01)	0.138 (2.14)	0.072 (4.47)
Full Set of Control Variables (n=3,676)	0.166 (4.73)	0.038 (1.40)	0.050 (1.82)	0.052 (1.01)	0.035 (2.46)
b) SATL region					
No Other Control Variables (n=3,704)	0.357 (7.22)	0.060 (1.80)	0.115 (2.98)	0.126 (1.91)	0.088 (4.93)
Full Set of Control Variables (n=3,676)	0.152 (3.59)	0.036 (1.19)	0.033 (1.06)	0.046 (0.88)	0.046 (2.90)
c) Construction					
No Other Control Variables (n=705)	0.492 (4.34)	-0.022 (0.29)	0.090 (1.22)	0.258 (2.17)	0.026 (0.64)
Full Set of Control Variables (n=695)	0.303 (3.16)	0.002 (0.04)	-0.009 (0.34)	0.137 (1.65)	-0.002 (0.11)

Source: See Table 6.24.

Note: Reported estimates are coefficients from probit models (re-expressed as percentage differences), with t-statistics in parentheses. Full set of control variables as in Column (5) of Table 6.25, except for loan amount, year of application, and type of lender. In Panel (b), interaction terms between race, gender, and SATL were all insignificant, with the exception of the interaction between white female and SATL in the model with no other controls.

Table 6.30. Determinants of Loan Denial Rates – Nine Jurisdictions

	(1)	(2)
	Most Recent Application	*Last Three Years*
African American	0.289 (8.2)	0.293 (7.60)
Hispanic	0.178 (3.86)	0.244 (4.59)
Native American	0.087 (1.69)	0.188 (3.29)
Asian	0.042 (0.72)	0.003 (0.05)
Other race	0.313 (3.07)	0.364 (3.15)
Nonminority female	0.046 (1.83)	0.086 (2.96)
Judgments	0.051 (1.23)	0.119 (2.24)
Firm delinquent	0.022 (2.7)	0.057 (5.90)
Personally delinquent	0.076 (7.38)	0.077 (6.03)
Bankrupt past 3yrs	0.228 (3.99)	0.328 (4.74)
N	1,855	1,855
Pseudo R^2	.1905	.1721
Chi^2	336.0	363.3

Source: NERA Credit Market Surveys, 1999-2007.

Notes: Reported estimates are coefficients from probit models (re-expressed as percentage differences), with t-statistics in parentheses. Indicator variables are also included for the various jurisdictions.

Table 6.31. Determinants of Interest Rates – Nine Jurisdictions

	(1)	(2)
African American	1.683 (3.44)	1.491 (2.98)
Asian	1.221 (2.16)	0.789 (1.34)
Hispanic	0.820 (1.48)	0.895 (1.56)
Native American	1.241 (1.52)	1.008 (1.24)
Other race	-1.115 (0.63)	-1.072 (0.61)
Nonminority female	0.046 (0.16)	0.018 (0.06)
Judgments		0.537 (0.85)
Firm delinquent		-0.041 (0.36)
Personally delinquent		0.644 (3.65)
Bankrupt past 3yrs		1.184 (1.13)
Creditworthiness, Firm, and Owner Characteristics	No	Yes
Loan Characteristics	Yes	Yes
N	1,490	1,463
Adjusted R^2	.0831	.1046
F	11.4	11.05

Source: See Table 6.30.

Notes: Reported estimates are coefficients from OLS regression models, t-statistics are in parentheses. Source: NERA Credit Market Surveys, 1999-2007. Five indicators for primary owner's education level, four indicators for legal form of organization, loan amount applied for, loan amount granted, and month and year of loan application. Seven additional indicators for jurisdiction are also included.

VII. M/WBE Utilization and Disparity in the State's Markets

A. Introduction

The *Croson* decision and its progeny have held that statistical evidence of race-based or gender-based disparities in business enterprise activity is a requirement for any state or local entity that desires to establish or maintain race-conscious or gender-conscious requirements for M/WBE participation in contracting and procurement. Chapters V and VI documented the extent of disparity facing minority- and women-owned firms in the private sector of the State's market area, where contracting and procurement activity is typically *not* subject to such requirements. In this Chapter we examine whether there is statistical evidence of disparities in the public sector contracting and procurement activities supported by the State of Maryland.

To determine whether M/WBEs have been underutilized in the public sector we should ideally examine public expenditures that were *not* subject to affirmative action requirements. However, the State of Maryland has had a longstanding policy of pursuing affirmative action programs in contracting and procurement.[242]

Given the history of the State's M/WBE policy, its own data might not show evidence of underutilization, even if such underutilization exists in the private sector. The State's data is most useful for examining the effectiveness of its M/WBE policy during the study period. This is why it will usually be counterproductive to suspend or significantly curtail M/WBE programs at the first sign of the elimination of public sector disparities. Given the presence of proactive efforts to remedy discrimination, we would expect public sector disparities to lessen or even disappear. This is especially true since the benchmark used to assess disparities is current availability, which has been demonstrated to be lower than would be observed in a race- and gender-neutral market area (*see* Chapter V above). But as long as private sector disparities remain, and private sector efforts to increase utilization of M/WBEs remain limited, public sector disparities are likely to reemerge if M/WBE programs are weakened or suspended. Of course, if actual State of Maryland M/WBE utilization still turns out to be significantly less than M/WBE availability in certain procurement categories, even in the presence of a robust M/WBE program, then the State's data will still provide strong evidence of adverse disparities.

The statistical evidence reported in Chapter III has already established from which specific industries the State of Maryland buys the goods and services it requires as well as from which geographic areas it draws the majority of its prime contractors and subcontractors. In addition, the statistical evidence reported in Chapter IV has established what percentage of all firms in the State's geographic and product markets are M/WBEs.

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[242] *See* Chapter IX for an historical summary of the State's M/WBE policy.

This Chapter will document:

- To what extent the State of Maryland has utilized M/WBEs in its procurement opportunities during the study period;
- Whether M/WBEs have been utilized to the extent that they are available in the relevant market area.

We report this information for Construction, AE-CRS, Maintenance, IT, Services, and CSE, and for all six of these procurement categories combined. All results are reported by race and gender as well as for all M/WBEs combined.

B. M/WBE Utilization

For this Study, we examined 4,686 prime contracts and 19,056 associated subcontracts covering a five-year time period, with a total value of approximately $15.02B.[243] NAICS codes, M/WBE status, and detailed race and gender status for the prime contractors and subcontractors included in the master contract/subcontract database[244] were established through extensive computer-assisted cross-referencing of firms in that database with firms in (a) the master directory of M/WBEs assembled for this Study,[245] (b) Dun & Bradstreet/Hoovers[246] (c) company profiles drawn from American Business Information, Standard & Poor's, and other sources, and (d) the results of our race/gender misclassification/non-classification surveys.[247]

During the study period, M/WBEs as a group earned 24.0 percent of all State of Maryland contract and subcontract dollars awarded in Construction, 23.9 percent of all contract and subcontract dollars awarded in AE-CRS, 19.7 percent of all contract and subcontract dollars in Maintenance, 17.3 percent of all contract and subcontract dollars awarded in IT, 12.7 percent of all contract and subcontract dollars awarded in Services, and 10.6 percent of all contract dollars awarded in CSE. Combined, M/WBEs were awarded 18.7 percent of all State contract and subcontract dollars during the five-year study period.

Table 7.1A details the key results of our analysis of M/WBE participation at the State of Maryland in terms of dollars awarded. For minority-owned M/WBEs (i.e. M/WBEs other than nonminority women), utilization was 9.2 percent in Construction, 14.2 percent of all contract and subcontract dollars in AE-CRS, 7.9 percent of all contract and subcontract dollars in Maintenance, 13.6 percent of all contract and subcontract dollars in IT, 6.1 percent of all contract and subcontract dollars in Services, 1.5 percent of all contract dollars in CSE, and 8.0 percent overall. Table 7.1B presents comparable information in terms of dollars paid. A comparison of

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[243] Details of the contract universe definitions, sampling and data collection procedures, and response rates are provided in Chapter III.

[244] *See* Chapter III.

[245] *See* Chapter IV.

[246] *Ibid.*

[247] *Ibid.*

Tables 7.1A and 7.1B shows that the results, regardless of whether awarded dollars or paid dollars are used as the underlying measure, are very similar.

Overall, among M/WBEs, firms owned by nonminority women earned the largest fraction of State of Maryland contracting and subcontracting dollars awarded (10.8 percent), followed in descending order by firms owned by African Americans (4.2 percent), firms owned by Asians (2.0 percent), firms owned by Hispanics (1.3 percent), and firms owned by Native Americans (0.6 percent).

Tables 7.2 through 7.7 provide award dollar utilization statistics by NAICS Industry Sub-Sector group (three-digit NAICS code) for each race and gender group in the Study. Tables 7.8 through 7.13 provide similar utilization statistics by NAICS Industry Group (four-digit NAICS code).[248]

C. Disparity Analysis

We turn next to a comparison between our estimates of M/WBE utilization in the State's own contracting and subcontracting activities and our estimates of M/WBE availability in the State's geographic and product market area.

Table 7.14A presents the results of this comparison for the State's contracting and procurement as a whole and by major procurement category, using dollars awarded as the measure of utilization. Table 7.14B presents the same data using dollars paid as the measure of utilization.

The figures in the utilization column in these tables are the same as those from Table 7.1A and 7.1B, respectively, and include both prime contract and subcontract dollars. The figures in the availability column are the same as those in Table 4.23A.

The disparity ratio, in the final columns of Table 7.14A and Table 7.14B, is derived by dividing utilization by availability and multiplying the result by 100. A disparity ratio below 100 indicates that M/WBEs are participating in State of Maryland contracting and subcontracting at a level that is less than their estimated availability in the relevant market area. A disparity ratio of 80 or lower is considered to be large. A disparity ratio is said to be adverse and statistically significant if it is less than or equal to 80 and unlikely to be caused by chance alone.[249]

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[248] Comparable statistics were calculated in dollars paid as well at the NAICS Industry level (five-digit and six-digit NAICS). Results are generally similar to those presented above and are not reported here in the interest of space. Four-digit NAICS codes are most comparable to four-digit Standard Industrial Classification (SIC) codes, which were used prior to the advent of the NAICS system.

[249] In Tables 7.14A through 7.52, statistical significance was determined using simulation studies. Starting from the project database of contracts and subcontracts, all with differing dollar sizes, these studies simulate the award process by programming a computer to randomly assign contract and subcontract awards to the several types of M/WBEs as well as to non-M/WBEs, based on their estimated availability. For example, if African American-owned firms in a particular category had estimated availability of 10.0%, then the computer would randomly pick 10.0% of the contracts and subcontracts and assign them to African American-owned firms. The value of the randomly-assigned awards would then be totaled and compared to availability to assess whether there was a disparity. The simulation exercise is then repeated a large number of times. If utilization fell below availability in 95% or more of the runs (or 99%, or 90%, or 85%, depending on the significance level chosen), then that disparity is deemed statistically significant. For additional discussion of simulation analysis, *see* Wainwright and Holt (2010, p. 50).

In Table 7.14A, for the State of Maryland, disparity ratios are less than or equal to 80 in 44 out of 49 cases examined in Table 7.14A and statistically significant in 43 of 49 cases. The same is true in Table 7.14B.[250]

In Construction, adverse disparities are observed for African Americans, Hispanics, Asians, MBEs as a group, and M/WBEs as a group. Disparities are statistically significant for African Americans, Asians, MBEs as a group, and M/WBEs as a group.

In AE-CRS, adverse disparities are observed for African Americans, Hispanics, Asians (Table 7.14B only), Native Americans, MBEs as a group, nonminority women, and M/WBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Native Americans, MBEs as a group, nonminority females, and M/WBEs as a group.

In Maintenance, adverse disparities are observed for African Americans, Hispanics, Asians, Native Americans, MBEs as a group, nonminority women, and M/WBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Asians, Native Americans, MBEs as a group, nonminority women, and M/WBEs as a group.

In IT, adverse disparities are observed for African Americans, Hispanics, Asians (Table 7.14A only), Native Americans, MBEs as a group, nonminority women, and M/WBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Asians (Table 7.14A only), Native Americans, MBEs as a group, nonminority women, and M/WBEs as a group.

In Services, adverse disparities are observed for African Americans, Hispanics, Asians, MBEs as a group, nonminority women, and M/WBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Asians, MBEs as a group, nonminority women, and M/WBEs as a group.

In CSE, adverse disparities are observed for African Americans, Hispanics, Asians, Native Americans, MBEs as a group, nonminority women, and M/WBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Asians, Native Americans, MBEs as a group, nonminority women, and M/WBEs as a group.

Across all procurement categories in Tables 7.14A and 7.14B, adverse disparities are observed for African Americans, Hispanics, Asians, MBEs as a group, nonminority women, and M/WBEs as a group. Disparities are statistically significant for African Americans, Hispanics, Asians, MBEs as a group, nonminority women, and M/WBEs as a group.

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[250] The results for Native Americans in Tables 7.14A and 7.14B should be interpreted with caution. In Table 7.14A, for example, Native American utilization in Construction of 1.18 percent is almost entirely due to a single Native American-owned firm. Without that firm, utilization of Native Americans in Construction would have been 0.12 percent, yielding a statistically significant disparity ratio of 30.55. Similarly, in Services, just two Native American-owned firms accounted for almost all of the Native American utilization. Without these two firms, utilization would have been 0.0043 percent, yielding a statistically significant disparity ratio of 4.8. Across all procurement categories, without these few firms, Native American utilization would have been 0.053 percent, yielding a statistically significant disparity ratio of 19.67 percent.

Tables 7.15 through 7.20 present disaggregated disparity results by NAICS Industry Sub-Sector. Adverse disparities are observed among all minority and gender groups and in a wide variety of industry categories.[251]

Tables 7.21 through 7.52 present disparity results, overall and by major procurement category, for each individual state procurement agency included in the Study. Again, adverse disparities are observed among all minority and gender groups and in a wide variety of procurement categories.

It would be a mistake to interpret a lack of statistical significance (as opposed to substantive significance) in any of the categories in Tables 7.14 through 7.52 as a lack of adverse disparity. While tests for statistical significance are very useful for assessing whether chance can explain disparities that we observe, they do have important limitations. First, the fact that a disparity is not statistically significant does not mean that it *is* due to chance. It merely means that we cannot rule out chance. Second, there are circumstances under which tests for statistical significance are not helpful for distinguishing disparities due to chance from disparities due to other reasons (*e.g.*, discrimination). In the particular statistical application presented in this chapter, the chance that a test for statistical significance will incorrectly attribute to chance disparities that are due to discrimination becomes greater when (a) we examine a relatively small number of procurements involving the affected group, (b) the expected utilization of particular race/ethnic/gender groups-measured by their availability—is relatively small, and (c) there are large variations in the relative dollar size of contracts and subcontracts.

D. Current versus Expected Availability

Finally, Table 7.53 provides a comparison between current levels of M/WBE availability for the State of Maryland and levels that we would expect to observe in a race- and gender-neutral market area. The latter, referred to as "expected availability," is derived by dividing the current availability figures, as documented in Table 4.23A, by the disparity ratios documented in column (3) of Table 5.12. If no disparity is present in the relevant market area, the disparity ratio will be equal to 100 and expected availability will be equivalent to current availability. In cases where adverse disparities are present in the relevant market area, the disparity ratio will be less than 100 and, consequently, expected availability will exceed current availability. In all 49 cases examined in Table 7.53, expected M/WBE availability in the State's market area exceeds current M/WBE availability.

[251] Disparity tests were also carried out at the NAICS Industry Group and NAICS Industry level, with similar results to those observed at the Industry Sub-Sector level. In the interest of space, these results are not reported here.

E. Tables

Table 7.1A. M/WBE Utilization at State of Maryland (Dollars Awarded), 2005-2009

M/WBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	4.48	3.78	5.33	4.73	4.49	0.25	4.15
Hispanic	2.16	1.03	1.49	0.25	0.51	0.00	1.27
Asian	1.35	9.37	1.05	8.64	0.90	1.29	1.99
Native American	1.18	0.00	0.00	0.00	0.19	0.00	0.58
MBE	9.18	14.18	7.86	13.63	6.09	1.54	7.98
WBE	14.82	9.73	11.82	3.64	6.55	9.05	10.75
M/WBE	24.00	23.91	19.69	17.27	12.65	10.59	18.73
Non-M/WBE	76.00	76.09	80.31	82.73	87.35	89.41	81.27
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total ($)	*$6,512,849,297*	*$1,268,673,125*	*$594,926,095*	*$267,775,745*	*$5,259,743,333*	*$1,116,779,306*	*$15,020,746,901*

Source: NERA Master Contract/Subcontract Database.

Table 7.1B. M/WBE Utilization at State of Maryland (Dollars Paid), 2005-2009

M/WBE Type	Procurement Category						
	Construction	AE-CRS	Maintenance	IT	Services	CSE	Overall
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
African American	4.36	3.46	4.84	5.68	4.27	0.25	3.92
Hispanic	2.25	0.96	1.41	0.29	0.66	0.00	1.37
Asian	1.56	8.76	1.11	13.79	0.98	1.29	1.99
Native American	1.64	0.00	0.01	0.00	0.19	0.00	0.82
MBE	9.81	13.18	7.36	19.76	6.10	1.54	8.10
WBE	13.65	9.13	8.48	2.59	7.94	9.05	10.67
M/WBE	23.45	22.31	15.84	22.35	14.04	10.60	18.77
Non-M/WBE	76.55	77.69	84.16	77.65	85.96	89.40	81.23
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total ($)	*$5,383,793,078*	*$733,574,918*	*$458,109,202*	*$202,121,434*	*$3,828,160,042*	*$1,116,373,901*	*$11,722,132,575*

Source: NERA Master Contract/Subcontract Database.

Table 7.2. Construction—M/WBE Utilization by Industry Sub-Sector (Percentages) (Dollars Awarded), 2005-2009

Industry Sub-Sector	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Specialty Trade Contractors (NAICS 238)	9.14	4.64	1.51	3.72	12.86	31.86	68.14
Heavy and Civil Engineering Construction (NAICS 237)	0.60	2.42	0.23	0.00	8.26	11.51	88.49
Construction of Buildings (NAICS 236)	4.08	0.22	0.38	0.32	1.72	6.72	93.28
Professional, Scientific, and Technical Services (NAICS 541)	0.68	0.12	2.05	0.00	12.15	14.99	85.01
Fabricated Metal Product Manufacturing (NAICS 332)	0.02	0.11	8.01	0.96	71.12	80.22	19.78
Merchant Wholesalers, Durable Goods (NAICS 423)	3.90	0.00	0.44	0.09	34.33	38.76	61.24
Nonmetallic Mineral Product Manufacturing (NAICS 327)	0.18	0.31	0.66	0.00	2.16	3.32	96.68
Administrative and Support Services (NAICS 561)	6.80	0.27	0.00	0.00	20.58	27.65	72.35
Truck Transportation (NAICS 484)	42.90	1.14	0.00	0.00	47.98	92.02	7.98
Building Material and Garden Equipment and Supplies Dealers (NAICS 444)	2.48	0.00	0.00	0.00	49.34	51.82	48.18
Rental and Leasing Services (NAICS 532)	17.03	0.56	0.00	0.00	0.15	17.75	82.25
Repair and Maintenance (NAICS 811)	6.61	0.22	0.00	0.00	29.89	36.72	63.28
Merchant Wholesalers, Nondurable Goods (NAICS 424)	1.71	0.00	27.44	0.00	0.00	29.15	70.85
Wood Product Manufacturing (NAICS 321)	0.00	0.00	0.00	0.00	2.95	2.95	97.05
Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)	0.08	0.00	0.00	0.00	38.18	38.26	61.74
Miscellaneous Manufacturing (NAICS 339)	0.15	0.00	0.00	0.00	7.51	7.66	92.34
Real Estate (NAICS 531)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Credit Intermediation and Related Activities (NAICS 522)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813)	98.86	0.00	0.00	0.00	0.00	98.86	1.14
Furniture and Home Furnishings Stores (NAICS 442)	11.04	0.09	0.17	0.00	31.45	42.75	57.25
Petroleum and Coal Products Manufacturing (NAICS 324)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Data Processing, Hosting and Related Services (NAICS 518)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Mining (except Oil and Gas) (NAICS 212)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Sub-Sector	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Waste Management and Remediation Services (NAICS 562)	2.50	0.00	0.00	0.00	0.00	2.50	97.50
Support Activities for Transportation (NAICS 488)	0.00	0.00	0.00	0.00	72.38	72.38	27.62
Primary Metal Manufacturing (NAICS 331)	0.00	2.09	0.00	0.00	2.32	4.41	95.59
Furniture and Related Product Manufacturing (NAICS 337)	18.20	0.28	0.11	0.00	51.35	69.94	30.06
Support Activities for Agriculture and Forestry (NAICS 115)	0.00	0.00	0.00	0.00	84.12	84.12	15.88
Machinery Manufacturing (NAICS 333)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Store Retailers (NAICS 453)	0.00	0.00	0.00	0.00	49.79	49.79	50.21
Motion Picture and Sound Recording Industries (NAICS 512)	7.12	92.25	0.00	0.00	0.00	99.37	0.63
Computer and Electronic Product Manufacturing (NAICS 334)	0.00	0.00	0.00	0.00	0.15	0.15	99.85
Performing Arts, Spectator Sports, and Related Industries (NAICS 711)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electronics and Appliance Stores (NAICS 443)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Printing and Related Support Activities (NAICS 323)	0.00	0.00	0.00	0.00	94.18	94.18	5.82
Gasoline Stations (NAICS 447)	84.49	0.00	0.00	0.00	0.00	84.49	15.51
Telecommunications (NAICS 517)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Ambulatory Health Care Services (NAICS 621)	0.00	0.00	0.00	0.00	79.98	79.98	20.02
Nonstore Retailers (NAICS 454)	0.47	0.00	0.00	0.00	75.61	76.08	23.92
Insurance Carriers and Related Activities (NAICS 524)	0.00	0.00	0.00	0.00	61.76	61.76	38.24
Personal and Laundry Services (NAICS 812)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Chemical Manufacturing (NAICS 325)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Food Services and Drinking Places (NAICS 722)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Transportation Equipment Manufacturing (NAICS 336)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Securities, Commodity Contracts, and Other Financial Investments and Related Activities (NAICS 523)	5.10	0.00	0.00	0.00	0.00	5.10	94.90
Plastics and Rubber Products Manufacturing (NAICS 326)	20.82	0.00	0.00	0.00	43.11	63.92	36.08

Industry Sub-Sector	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Food and Beverage Stores (NAICS 445)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Textile Product Mills (NAICS 314)	0.00	0.00	0.00	0.00	67.61	67.61	32.39
Utilities (NAICS 221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Water Transportation (NAICS 483)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Educational Services (NAICS 611)	51.10	0.00	0.00	0.00	0.00	51.10	48.90
Crop Production (NAICS 111)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Textile Mills (NAICS 313)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Air Transportation (NAICS 481)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Paper Manufacturing (NAICS 322)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Motor Vehicle and Parts Dealers (NAICS 441)	7.57	0.00	0.00	0.00	0.00	7.57	92.43
Health and Personal Care Stores (NAICS 446)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Sporting Goods, Hobby, Book, and Music Stores (NAICS 451)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Warehousing and Storage (NAICS 493)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Couriers and Messengers (NAICS 492)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Broadcasting (except Internet) (NAICS 515)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Source: See Table 7.1A.

Table 7.3. AE-CRS—M/WBE Utilization by Industry Sub-Sector (Percentages) (Dollars Awarded) , 2005-2009

Industry Sub-Sector	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Professional, Scientific, and Technical Services (NAICS 541)	3.10	0.55	9.89	0.00	9.88	23.42	76.58
Specialty Trade Contractors (NAICS 238)	9.84	25.84	0.00	0.00	1.62	37.29	62.71
Administrative and Support Services (NAICS 561)	32.47	0.76	0.00	0.00	10.55	43.78	56.22
Utilities (NAICS 221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Heavy and Civil Engineering Construction (NAICS 237)	39.71	0.44	0.73	0.00	11.08	51.96	48.04
Construction of Buildings (NAICS 236)	3.25	0.00	0.00	0.52	1.23	5.00	95.00
Computer and Electronic Product Manufacturing (NAICS 334)	4.27	0.00	0.00	0.00	0.00	4.27	95.73
Waste Management and Remediation Services (NAICS 562)	76.91	0.00	0.00	0.00	0.00	76.91	23.09
Merchant Wholesalers, Durable Goods (NAICS 423)	0.00	0.00	12.40	0.00	10.99	23.39	76.61
Machinery Manufacturing (NAICS 333)	0.00	0.00	0.00	0.00	99.34	99.34	0.66
Rental and Leasing Services (NAICS 532)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Primary Metal Manufacturing (NAICS 331)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Printing and Related Support Activities (NAICS 323)	0.00	0.00	0.00	0.00	83.25	83.25	16.75
Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Merchant Wholesalers, Nondurable Goods (NAICS 424)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Support Activities for Transportation (NAICS 488)	0.00	0.00	0.00	0.00	77.94	77.94	22.06
Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Repair and Maintenance (NAICS 811)	0.00	0.00	0.00	0.00	18.98	18.98	81.02
Food Manufacturing (NAICS 311)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Truck Transportation (NAICS 484)	0.00	0.00	0.00	0.00	70.20	70.20	29.80
Other Information Services (NAICS 519)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Store Retailers (NAICS 453)	0.00	0.00	0.00	0.00	100.00	100.00	0.00

Industry Sub-Sector	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Data Processing, Hosting and Related Services (NAICS 518)	0.00	0.00	55.64	0.00	0.00	55.64	44.36
Rail Transportation (NAICS 482)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Manufacturing (NAICS 339)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Air Transportation (NAICS 481)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Electronics and Appliance Stores (NAICS 443)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nonmetallic Mineral Product Manufacturing (NAICS 327)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Securities, Commodity Contracts, and Other Financial Investments and Related Activities (NAICS 523)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Ambulatory Health Care Services (NAICS 621)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Fabricated Metal Product Manufacturing (NAICS 332)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Furniture and Home Furnishings Stores (NAICS 442)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Real Estate (NAICS 531)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Insurance Carriers and Related Activities (NAICS 524)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Museums, Historical Sites, and Similar Institutions (NAICS 712)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Publishing Industries (except Internet) (NAICS 511)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Motion Picture and Sound Recording Industries (NAICS 512)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Performing Arts, Spectator Sports, and Related Industries (NAICS 711)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Furniture and Related Product Manufacturing (NAICS 337)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Educational Services (NAICS 611)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Mining (except Oil and Gas) (NAICS 212)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nonstore Retailers (NAICS 454)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Support Activities for Agriculture and Forestry (NAICS 115)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Food Services and Drinking Places (NAICS 722)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Plastics and Rubber Products Manufacturing (NAICS 326)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Sub-Sector	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Motor Vehicle and Parts Dealers (NAICS 441)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Support Activities for Mining (NAICS 213)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Transit and Ground Passenger Transportation (NAICS 485)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Wood Product Manufacturing (NAICS 321)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Building Material and Garden Equipment and Supplies Dealers (NAICS 444)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Couriers and Messengers (NAICS 492)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Source: See Table 7.1A.

Table 7.4. Maintenance—M/WBE Utilization by Industry Sub-Sector (Percentages) (Dollars Awarded), 2005-2009

Industry Sub-Sector	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Administrative and Support Services (NAICS 561)	10.38	0.02	2.11	0.00	8.82	21.33	78.67
Specialty Trade Contractors (NAICS 238)	6.62	7.61	0.43	0.00	30.50	45.15	54.85
Heavy and Civil Engineering Construction (NAICS 237)	0.50	0.01	0.00	0.00	18.94	19.46	80.54
Professional, Scientific, and Technical Services (NAICS 541)	2.91	0.35	5.38	0.00	2.09	10.73	89.27
Construction of Buildings (NAICS 236)	5.34	0.82	0.00	0.00	0.96	7.12	92.88
Repair and Maintenance (NAICS 811)	0.01	0.00	0.00	0.00	0.02	0.03	99.97
Transit and Ground Passenger Transportation (NAICS 485)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Transportation Equipment Manufacturing (NAICS 336)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Utilities (NAICS 221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Merchant Wholesalers, Durable Goods (NAICS 423)	4.88	0.00	0.83	0.00	28.92	34.64	65.36
Nonstore Retailers (NAICS 454)	0.00	0.00	0.00	0.00	0.32	0.32	99.68
Support Activities for Transportation (NAICS 488)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Waste Management and Remediation Services (NAICS 562)	6.85	0.00	0.00	0.00	3.16	10.01	89.99
Social Assistance (NAICS 624)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Manufacturing (NAICS 339)	0.00	0.00	0.00	0.00	29.52	29.52	70.48
Computer and Electronic Product Manufacturing (NAICS 334)	0.00	0.00	0.00	0.00	0.14	0.14	99.86
Ambulatory Health Care Services (NAICS 621)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Truck Transportation (NAICS 484)	54.21	1.14	0.00	0.00	4.21	59.56	40.44
Machinery Manufacturing (NAICS 333)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)	0.00	0.00	0.00	0.00	18.41	18.41	81.59
Gasoline Stations (NAICS 447)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Personal and Laundry Services (NAICS 812)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Real Estate (NAICS 531)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Store Retailers (NAICS 453)	0.00	0.00	0.00	0.00	19.94	19.94	80.06

Industry Sub-Sector	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Nonmetallic Mineral Product Manufacturing (NAICS 327)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Support Activities for Agriculture and Forestry (NAICS 115)	0.00	0.00	0.00	0.00	98.83	98.83	1.17
Merchant Wholesalers, Nondurable Goods (NAICS 424)	16.34	0.00	0.00	0.00	0.39	16.73	83.27
Chemical Manufacturing (NAICS 325)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Fabricated Metal Product Manufacturing (NAICS 332)	0.00	0.00	0.00	0.00	46.57	46.57	53.43
Rail Transportation (NAICS 482)	0.00	83.73	0.00	0.00	0.00	83.73	16.27
Rental and Leasing Services (NAICS 532)	0.00	0.00	0.00	0.00	1.39	1.39	98.61
Publishing Industries (except Internet) (NAICS 511)	0.00	0.00	0.00	0.00	86.38	86.38	13.62
Securities, Commodity Contracts, and Other Financial Investments and Related Activities (NAICS 523)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Furniture and Home Furnishings Stores (NAICS 442)	96.43	0.00	0.00	0.00	0.00	96.43	3.57
Mining (except Oil and Gas) (NAICS 212)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electronics and Appliance Stores (NAICS 443)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Telecommunications (NAICS 517)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Performing Arts, Spectator Sports, and Related Industries (NAICS 711)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Couriers and Messengers (NAICS 492)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Food and Beverage Stores (NAICS 445)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Building Material and Garden Equipment and Supplies Dealers (NAICS 444)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Insurance Carriers and Related Activities (NAICS 524)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Educational Services (NAICS 611)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Accommodation (NAICS 721)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Paper Manufacturing (NAICS 322)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Source: See Table 7.1A.

Table 7.5. IT—M/WBE Utilization by Industry Sub-Sector (Percentages) (Dollars Awarded), 2005-2009

Industry Sub-Sector	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Professional, Scientific, and Technical Services (NAICS 541)	6.19	0.40	10.61	0.00	4.87	22.07	77.93
Telecommunications (NAICS 517)	0.00	0.00	0.00	0.00	1.62	1.62	98.38
Computer and Electronic Product Manufacturing (NAICS 334)	1.09	0.00	0.00	0.00	0.00	1.09	98.91
Publishing Industries (except Internet) (NAICS 511)	0.00	0.00	1.66	0.00	0.00	1.66	98.34
Merchant Wholesalers, Durable Goods (NAICS 423)	17.99	0.00	44.07	0.00	3.16	65.22	34.78
Electronics and Appliance Stores (NAICS 443)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Administrative and Support Services (NAICS 561)	0.00	0.00	0.00	0.00	43.09	43.09	56.91
Specialty Trade Contractors (NAICS 238)	0.00	0.00	0.00	0.00	0.33	0.33	99.67
Miscellaneous Store Retailers (NAICS 453)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Printing and Related Support Activities (NAICS 323)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Credit Intermediation and Related Activities (NAICS 522)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Rail Transportation (NAICS 482)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Information Services (NAICS 519)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Construction of Buildings (NAICS 236)	0.00	0.00	67.23	0.00	0.00	67.23	32.77
Warehousing and Storage (NAICS 493)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Machinery Manufacturing (NAICS 333)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Fabricated Metal Product Manufacturing (NAICS 332)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Educational Services (NAICS 611)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Sporting Goods, Hobby, Book, and Music Stores (NAICS 451)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nonstore Retailers (NAICS 454)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Repair and Maintenance (NAICS 811)	100.00	0.00	0.00	0.00	0.00	100.00	0.00

Industry Sub-Sector	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Merchant Wholesalers, Nondurable Goods (NAICS 424)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Source: See Table 7.1A.

Table 7.6. Services—M/WBE Utilization by Industry Sub-Sector (Percentages) (Dollars Awarded), 2005-2009

Industry Sub-Sector	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Insurance Carriers and Related Activities (NAICS 524)	0.06	0.00	0.04	0.00	0.00	0.10	99.90
Professional, Scientific, and Technical Services (NAICS 541)	4.72	0.21	4.37	0.00	9.38	18.68	81.32
Ambulatory Health Care Services (NAICS 621)	0.48	0.68	0.67	0.00	2.50	4.33	95.67
Transit and Ground Passenger Transportation (NAICS 485)	6.30	2.09	0.00	0.00	0.00	8.38	91.62
Administrative and Support Services (NAICS 561)	23.04	1.39	3.45	0.00	34.15	62.02	37.98
Computer and Electronic Product Manufacturing (NAICS 334)	0.33	0.00	0.00	0.00	0.02	0.35	99.65
Rail Transportation (NAICS 482)	0.09	0.00	0.00	0.00	0.02	0.11	99.89
Social Assistance (NAICS 624)	1.01	0.00	0.19	0.00	49.69	50.90	49.10
Nursing and Residential Care Facilities (NAICS 623)	49.56	0.00	0.00	0.00	0.00	49.56	50.44
Credit Intermediation and Related Activities (NAICS 522)	0.00	0.00	0.00	0.00	91.68	91.68	8.32
Educational Services (NAICS 611)	0.00	0.00	0.00	0.00	3.86	3.86	96.14
Printing and Related Support Activities (NAICS 323)	0.93	1.22	0.00	0.00	1.70	3.86	96.14
Rental and Leasing Services (NAICS 532)	0.17	0.00	0.00	0.00	0.03	0.20	99.80
Hospitals (NAICS 622)	14.02	0.00	0.00	0.00	25.27	39.29	60.71
Merchant Wholesalers, Durable Goods (NAICS 423)	0.01	0.00	22.16	0.00	7.98	30.16	69.84
Specialty Trade Contractors (NAICS 238)	19.17	29.55	0.90	0.00	3.84	53.47	46.53
Utilities (NAICS 221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Food Services and Drinking Places (NAICS 722)	59.74	0.00	0.00	0.00	0.06	59.80	40.20
Telecommunications (NAICS 517)	5.43	0.05	0.00	0.00	0.00	5.48	94.52
Merchant Wholesalers, Nondurable Goods (NAICS 424)	64.04	2.40	0.01	27.72	0.00	94.17	5.83
Miscellaneous Manufacturing (NAICS 339)	49.45	0.00	0.00	0.13	0.38	49.96	50.04
Personal and Laundry Services (NAICS 812)	14.33	0.00	0.00	23.68	19.09	57.10	42.90
Real Estate (NAICS 531)	1.03	0.00	0.00	0.00	0.23	1.26	98.74
Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813)	7.46	0.00	0.00	0.00	0.00	7.46	92.54
Amusement, Gambling, and	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Sub-Sector	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Recreation Industries (NAICS 713)							
Other Information Services (NAICS 519)	0.84	0.00	0.00	0.00	0.00	0.84	99.16
Data Processing, Hosting and Related Services (NAICS 518)	0.00	0.00	0.00	0.00	18.89	18.89	81.11
Miscellaneous Store Retailers (NAICS 453)	6.05	0.00	0.00	0.00	29.58	35.63	64.37
Repair and Maintenance (NAICS 811)	59.01	0.00	0.00	0.00	0.01	59.02	40.98
Paper Manufacturing (NAICS 322)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Support Activities for Transportation (NAICS 488)	8.05	0.00	0.05	0.00	91.91	100.00	0.00
Funds, Trusts, and Other Financial Vehicles (NAICS 525)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Truck Transportation (NAICS 484)	20.34	0.00	0.00	0.00	1.68	22.02	77.98
Publishing Industries (except Internet) (NAICS 511)	1.64	0.60	0.00	4.08	0.48	6.80	93.20
Accommodation (NAICS 721)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Waste Management and Remediation Services (NAICS 562)	4.53	0.00	1.13	0.00	12.49	18.14	81.86
Construction of Buildings (NAICS 236)	30.53	0.00	1.36	0.00	0.08	31.97	68.03
Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)	0.00	0.00	0.42	0.00	85.94	86.35	13.65
Motion Picture and Sound Recording Industries (NAICS 512)	1.59	0.00	0.00	0.00	83.58	85.17	14.83
Heavy and Civil Engineering Construction (NAICS 237)	3.66	0.00	0.00	0.00	0.00	3.66	96.34
Broadcasting (except Internet) (NAICS 515)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Warehousing and Storage (NAICS 493)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Couriers and Messengers (NAICS 492)	0.00	3.18	0.00	0.00	4.69	7.88	92.12
Performing Arts, Spectator Sports, and Related Industries (NAICS 711)	22.51	0.00	0.00	0.00	0.73	23.24	76.76
Furniture and Related Product Manufacturing (NAICS 337)	0.00	0.00	0.00	0.00	3.07	3.07	96.93
Transportation Equipment Manufacturing (NAICS 336)	0.00	0.00	0.00	0.00	0.94	0.94	99.06
Nonstore Retailers (NAICS 454)	84.82	0.00	0.00	0.00	0.00	84.82	15.18
Food and Beverage Stores	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Sub-Sector	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
(NAICS 445)							
Gasoline Stations (NAICS 447)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Air Transportation (NAICS 481)	2.46	0.00	0.00	0.00	0.00	2.46	97.54
Health and Personal Care Stores (NAICS 446)	0.00	0.00	60.54	0.00	0.00	60.54	39.46
Machinery Manufacturing (NAICS 333)	0.00	54.90	0.00	0.00	0.00	54.90	45.10
Chemical Manufacturing (NAICS 325)	0.00	0.09	2.24	0.00	0.00	2.33	97.67
Securities, Commodity Contracts, and Other Financial Investments and Related Activities (NAICS 523)	1.78	0.00	0.00	0.00	98.22	100.00	0.00
Electronics and Appliance Stores (NAICS 443)	33.68	0.00	0.00	0.00	10.28	43.97	56.03
Motor Vehicle and Parts Dealers (NAICS 441)	69.81	0.00	0.00	0.00	0.00	69.81	30.19
Nonmetallic Mineral Product Manufacturing (NAICS 327)	0.00	0.00	0.00	3.91	0.00	3.91	96.09
Textile Mills (NAICS 313)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Food Manufacturing (NAICS 311)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Building Material and Garden Equipment and Supplies Dealers (NAICS 444)	0.00	0.00	0.00	0.00	66.61	66.61	33.39
Management of Companies and Enterprises (NAICS 551)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Sporting Goods, Hobby, Book, and Music Stores (NAICS 451)	97.34	0.00	0.00	0.00	0.00	97.34	2.66
Fabricated Metal Product Manufacturing (NAICS 332)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Textile Product Mills (NAICS 314)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Wood Product Manufacturing (NAICS 321)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Plastics and Rubber Products Manufacturing (NAICS 326)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Crop Production (NAICS 111)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Furniture and Home Furnishings Stores (NAICS 442)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Primary Metal Manufacturing (NAICS 331)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Clothing and Clothing Accessories Stores (NAICS 448)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Source: See Table 7.1A.

Table 7.7. CSE—M/WBE Utilization by Industry Sub-Sector (Percentages) (Dollars Awarded), 2005-2009

Industry Sub-Sector	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Utilities (NAICS 221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Transportation Equipment Manufacturing (NAICS 336)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Merchant Wholesalers, Nondurable Goods (NAICS 424)	0.00	0.00	0.17	0.00	50.78	50.95	49.05
Merchant Wholesalers, Durable Goods (NAICS 423)	1.16	0.00	6.69	0.00	0.28	8.13	91.87
Food Services and Drinking Places (NAICS 722)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Computer and Electronic Product Manufacturing (NAICS 334)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Motor Vehicle and Parts Dealers (NAICS 441)	0.67	0.00	0.00	0.00	0.00	0.67	99.33
Chemical Manufacturing (NAICS 325)	0.00	0.00	0.00	0.00	39.85	39.85	60.15
Professional, Scientific, and Technical Services (NAICS 541)	0.00	0.00	19.84	0.00	0.00	19.84	80.16
Printing and Related Support Activities (NAICS 323)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Machinery Manufacturing (NAICS 333)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nonstore Retailers (NAICS 454)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Rental and Leasing Services (NAICS 532)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Repair and Maintenance (NAICS 811)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Clothing and Clothing Accessories Stores (NAICS 448)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Store Retailers (NAICS 453)	0.00	0.00	0.00	0.00	52.69	52.69	47.31
Support Activities for Transportation (NAICS 488)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Publishing Industries (except Internet) (NAICS 511)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Manufacturing (NAICS 339)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electronics and Appliance Stores (NAICS 443)	0.00	0.00	0.00	0.00	2.71	2.71	97.29
Administrative and Support Services (NAICS 561)	0.64	0.00	0.00	0.00	2.37	3.00	97.00
Primary Metal Manufacturing (NAICS 331)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Sporting Goods, Hobby, Book, and Music Stores (NAICS 451)	0.00	0.00	0.00	0.00	0.86	0.86	99.14

Industry Sub-Sector	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Fabricated Metal Product Manufacturing (NAICS 332)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Furniture and Related Product Manufacturing (NAICS 337)	0.00	0.00	0.00	0.00	5.90	5.90	94.10
Furniture and Home Furnishings Stores (NAICS 442)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Telecommunications (NAICS 517)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Construction of Buildings (NAICS 236)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nonmetallic Mineral Product Manufacturing (NAICS 327)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Plastics and Rubber Products Manufacturing (NAICS 326)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Air Transportation (NAICS 481)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Personal and Laundry Services (NAICS 812)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Waste Management and Remediation Services (NAICS 562)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Insurance Carriers and Related Activities (NAICS 524)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Real Estate (NAICS 531)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Ambulatory Health Care Services (NAICS 621)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Specialty Trade Contractors (NAICS 238)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Accommodation (NAICS 721)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Support Activities for Agriculture and Forestry (NAICS 115)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Information Services (NAICS 519)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Paper Manufacturing (NAICS 322)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Building Material and Garden Equipment and Supplies Dealers (NAICS 444)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Food Manufacturing (NAICS 311)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Beverage and Tobacco Product Manufacturing (NAICS 312)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Truck Transportation (NAICS 484)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Sub-Sector	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Educational Services (NAICS 611)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Source: See Table 7.1A.

Table 7.8. Construction—M/WBE Utilization by Industry Group (Percentages) (Dollars Awarded), 2005-2009

Industry Group	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Highway, Street, and Bridge Construction (NAICS 2373)	0.54	2.30	0.10	0.00	7.97	10.92	89.08
Building Equipment Contractors (NAICS 2382)	7.48	2.55	0.29	0.00	9.95	20.28	79.72
Nonresidential Building Construction (NAICS 2362)	4.05	0.10	0.39	0.00	1.36	5.90	94.10
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	10.18	10.07	4.00	12.30	10.94	47.48	52.52
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	0.00	0.00	0.00	0.00	99.93	99.93	0.07
Architectural, Engineering, and Related Services (NAICS 5413)	0.47	0.08	3.77	0.00	4.83	9.16	90.84
Building Finishing Contractors (NAICS 2383)	7.00	2.10	1.17	0.03	31.00	41.30	58.70
Other Specialty Trade Contractors (NAICS 2389)	16.21	1.29	0.38	0.05	12.97	30.91	69.09
Computer Systems Design and Related Services (NAICS 5415)	0.00	0.00	0.00	0.00	0.04	0.04	99.96
Cement and Concrete Product Manufacturing (NAICS 3273)	0.19	0.19	0.00	0.00	2.19	2.57	97.43
Architectural and Structural Metals Manufacturing (NAICS 3323)	0.05	0.35	25.67	3.09	13.54	42.71	57.29
Utility System Construction (NAICS 2371)	0.10	4.89	2.26	0.00	15.00	22.25	77.75
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	1.86	0.00	0.18	0.28	55.14	57.47	42.53
Business Support Services (NAICS 5614)	0.00	0.00	0.00	0.00	1.20	1.20	98.80
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	7.64	0.00	1.76	0.00	26.78	36.18	63.82
Management, Scientific, and Technical Consulting Services (NAICS 5416)	4.32	0.94	0.72	0.01	57.46	63.44	36.56
Residential Building Construction (NAICS 2361)	4.68	3.37	0.00	8.37	10.88	27.30	72.70
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	0.87	0.00	0.00	0.00	33.68	34.54	65.46
Specialized Freight Trucking (NAICS 4842)	26.34	0.00	0.00	0.00	71.22	97.56	2.44
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	8.67	0.00	0.00	0.00	44.48	53.15	46.85

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Other Heavy and Civil Engineering Construction (NAICS 2379)	5.62	0.00	0.00	0.00	0.00	5.62	94.38
Advertising, Public Relations, and Related Services (NAICS 5418)	0.00	0.00	0.00	0.00	99.91	99.91	0.09
General Freight Trucking (NAICS 4841)	65.76	2.72	0.00	0.00	15.89	84.37	15.63
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	2.85	0.00	0.00	0.00	8.66	11.51	88.49
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	20.13	0.67	0.00	0.00	0.18	20.98	79.02
Services to Buildings and Dwellings (NAICS 5617)	5.96	1.66	0.00	0.00	27.36	34.98	65.02
Other Wood Product Manufacturing (NAICS 3219)	0.00	0.00	0.00	0.00	2.95	2.95	97.05
Building Material and Supplies Dealers (NAICS 4441)	3.71	0.00	0.00	0.00	73.78	77.49	22.51
Other Miscellaneous Manufacturing (NAICS 3399)	0.15	0.00	0.00	0.00	7.59	7.74	92.26
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	4.92	0.00	1.12	0.00	0.53	6.57	93.43
Employment Services (NAICS 5613)	0.00	0.00	0.00	0.00	97.66	97.66	2.34
Nondepository Credit Intermediation (NAICS 5222)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Offices of Real Estate Agents and Brokers (NAICS 5312)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	98.86	0.00	0.00	0.00	0.00	98.86	1.14
Personal and Household Goods Repair and Maintenance (NAICS 8114)	0.02	0.00	0.00	0.00	45.71	45.73	54.27
Petroleum and Coal Products Manufacturing (NAICS 3241)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Data Processing, Hosting, and Related Services (NAICS 5182)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Investigation and Security Services (NAICS 5616)	19.36	0.00	0.00	0.00	6.50	25.87	74.13

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Home Furnishings Stores (NAICS 4422)	15.27	0.12	0.23	0.00	40.66	56.29	43.71
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	0.00	0.00	0.00	0.00	0.33	0.33	99.67
Facilities Support Services (NAICS 5612)	0.00	0.00	0.00	0.00	44.19	44.19	55.81
Clay Product and Refractory Manufacturing (NAICS 3271)	0.00	3.04	14.93	0.00	1.78	19.75	80.25
Electric Lighting Equipment Manufacturing (NAICS 3351)	0.00	0.00	0.00	0.00	97.30	97.30	2.70
Support Activities for Crop Production (NAICS 1151)	0.00	0.00	0.00	0.00	84.12	84.12	15.88
Other Support Services (NAICS 5619)	75.53	0.00	0.00	0.00	0.00	75.53	24.47
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	3.98	0.00	79.18	0.00	0.00	83.17	16.83
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	12.80	0.81	0.00	0.00	20.16	33.77	66.23
Other Support Activities for Transportation (NAICS 4889)	0.00	0.00	0.00	0.00	92.40	92.40	7.60
Other Fabricated Metal Product Manufacturing (NAICS 3329)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	22.83	0.00	0.00	0.00	62.66	85.49	14.51
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)	0.00	2.97	0.00	0.00	0.00	2.97	97.03
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Remediation and Other Waste Management Services (NAICS 5629)	4.03	0.00	0.00	0.00	0.00	4.03	95.97
Motion Picture and Video Industries (NAICS 5121)	7.12	92.25	0.00	0.00	0.00	99.37	0.63
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	0.00	0.00	0.00	0.00	4.34	4.34	95.66
Other Miscellaneous Store Retailers (NAICS 4539)	0.00	0.00	0.00	0.00	47.75	47.75	52.25

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Automotive Repair and Maintenance (NAICS 8111)	21.08	0.00	0.00	0.00	0.00	21.08	78.92
Furniture Stores (NAICS 4421)	0.00	0.00	0.00	0.00	7.39	7.39	92.61
Automotive Equipment Rental and Leasing (NAICS 5321)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Waste Treatment and Disposal (NAICS 5622)	0.61	0.00	0.00	0.00	0.00	0.61	99.39
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures (NAICS 7114)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Scientific Research and Development Services (NAICS 5417)	0.00	0.00	0.00	0.00	0.31	0.31	99.69
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	1.81	0.00	0.00	0.00	0.00	1.81	98.19
Electronics and Appliance Stores (NAICS 4431)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Printing and Related Support Activities (NAICS 3231)	0.00	0.00	0.00	0.00	94.18	94.18	5.82
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	0.00	0.00	0.00	0.00	18.76	18.76	81.24
Steel Product Manufacturing from Purchased Steel (NAICS 3312)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Communications Equipment Manufacturing (NAICS 3342)	0.00	0.00	0.00	0.00	0.36	0.36	99.64
Support Activities for Water Transportation (NAICS 4883)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Specialized Design Services (NAICS 5414)	31.55	0.00	0.00	0.00	28.42	59.97	40.03
Land Subdivision (NAICS 2372)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Spring and Wire Product Manufacturing (NAICS 3326)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Professional, Scientific, and Technical Services (NAICS 5419)	0.29	0.00	0.00	0.00	15.16	15.45	84.55
Gasoline Stations (NAICS 4471)	84.49	0.00	0.00	0.00	0.00	84.49	15.51
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	0.00	0.00	0.61	0.00	2.51	3.12	96.88
Direct Selling Establishments (NAICS 4543)	0.47	0.00	0.00	0.00	75.61	76.08	23.92
Wired Telecommunications Carriers (NAICS 5171)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	0.00	0.00	0.00	0.00	57.02	57.02	42.98

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Offices of Other Health Practitioners (NAICS 6213)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Other Personal Services (NAICS 8129)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other General Purpose Machinery Manufacturing (NAICS 3339)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Consumer Goods Rental (NAICS 5322)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	0.00	0.00	0.00	0.00	87.92	87.92	12.08
Other Nonmetallic Mineral Product Manufacturing (NAICS 3279)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Special Food Services (NAICS 7223)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Waste Collection (NAICS 5621)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Hardware Manufacturing (NAICS 3325)	0.00	0.00	0.00	0.00	3.17	3.17	96.83
Railroad Rolling Stock Manufacturing (NAICS 3365)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Securities and Commodity Contracts Intermediation and Brokerage (NAICS 5231)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Lessors of Real Estate (NAICS 5311)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Insurance Carriers (NAICS 5241)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Foundries (NAICS 3315)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Grocery Stores (NAICS 4451)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Textile Product Mills (NAICS 3149)	0.00	0.00	0.00	0.00	69.49	69.49	30.51
Plastics Product Manufacturing (NAICS 3261)	27.17	0.00	0.00	0.00	56.26	83.43	16.57
Inland Water Transportation (NAICS 4832)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Offices of Physicians (NAICS 6211)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Medical Equipment and Supplies Manufacturing (NAICS 3391)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Alumina and Aluminum Production and Processing (NAICS 3313)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Support Activities for Road Transportation (NAICS 4884)	0.00	0.00	0.00	0.00	56.73	56.73	43.27
Other Furniture Related Product Manufacturing (NAICS 3379)	0.00	12.80	0.00	0.00	42.34	55.14	44.86
Electric Power Generation, Transmission and Distribution (NAICS 2211)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Fabric Mills (NAICS 3132)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Other Telecommunications (NAICS 5179)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Industrial Machinery Manufacturing (NAICS 3332)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electrical Equipment Manufacturing (NAICS 3353)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Elementary and Secondary Schools (NAICS 6111)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Educational Support Services (NAICS 6117)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nonscheduled Air Transportation (NAICS 4812)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (NAICS 3253)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Converted Paper Product Manufacturing (NAICS 3222)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Automobile Dealers (NAICS 4411)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Offices of Dentists (NAICS 6212)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Rubber Product Manufacturing (NAICS 3262)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Depository Credit Intermediation (NAICS 5221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Household Appliance Manufacturing (NAICS 3352)	23.85	0.00	0.00	0.00	0.00	23.85	76.15
Health and Personal Care Stores (NAICS 4461)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Other Crop Farming (NAICS 1119)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Natural Gas Distribution (NAICS 2212)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	84.65	0.00	0.00	0.00	0.00	84.65	15.35
Water, Sewage and Other Systems (NAICS 2213)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Financial Investment Activities (NAICS 5239)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Drycleaning and Laundry Services (NAICS 8123)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Travel Arrangement and Reservation Services (NAICS 5615)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Legal Services (NAICS 5411)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Warehousing and Storage (NAICS 4931)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Couriers and Express Delivery Services (NAICS 4921)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Coating, Engraving, Heat Treating, and Allied Activities (NAICS 3328)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Metalworking Machinery Manufacturing (NAICS 3335)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Cable and Other Subscription Programming (NAICS 5152)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Textile Furnishings Mills (NAICS 3141)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Motor Vehicle Dealers (NAICS 4412)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
General Rental Centers (NAICS 5323)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Motor Vehicle Parts Manufacturing (NAICS 3363)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Activities Related to Credit Intermediation (NAICS 5223)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Veneer, Plywood, and Engineered Wood Product Manufacturing (NAICS 3212)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Medical and Diagnostic Laboratories (NAICS 6215)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Source: See Table 7.1A.

Table 7.9. AE-CRS—M/WBE Utilization by Industry Group (Percentages) (Dollars Awarded), 2005-2009

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Architectural, Engineering, and Related Services (NAICS 5413)	2.41	0.66	11.20	0.00	8.17	22.44	77.56
Management, Scientific, and Technical Consulting Services (NAICS 5416)	8.45	0.03	3.14	0.00	21.67	33.29	66.71
Computer Systems Design and Related Services (NAICS 5415)	0.00	0.00	6.32	0.00	3.56	9.88	90.12
Building Equipment Contractors (NAICS 2382)	1.00	37.05	0.00	0.00	0.14	38.20	61.80
Advertising, Public Relations, and Related Services (NAICS 5418)	4.22	0.00	0.00	0.00	26.30	30.52	69.48
Electric Power Generation, Transmission and Distribution (NAICS 2211)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Employment Services (NAICS 5613)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Business Support Services (NAICS 5614)	72.40	0.00	0.00	0.00	23.54	95.94	4.06
Highway, Street, and Bridge Construction (NAICS 2373)	5.32	0.71	1.18	0.00	17.80	25.01	74.99
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	22.21	5.33	0.00	0.00	0.48	28.02	71.98
Nonresidential Building Construction (NAICS 2362)	3.50	0.00	0.00	0.00	1.33	4.83	95.17
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Utility System Construction (NAICS 2371)	96.34	0.00	0.00	0.00	0.00	96.34	3.66
Other Professional, Scientific, and Technical Services (NAICS 5419)	2.38	0.00	0.00	0.00	8.63	11.00	89.00
Building Finishing Contractors (NAICS 2383)	20.16	2.08	0.00	0.00	7.34	29.58	70.42
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	1.11	0.00	0.00	0.00	3.38	4.49	95.51
Other Specialty Trade Contractors (NAICS 2389)	53.46	0.00	0.00	0.00	10.85	64.31	35.69
Legal Services (NAICS 5411)	0.00	0.00	0.00	0.00	5.29	5.29	94.71
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	0.00	0.00	0.00	0.00	7.70	7.70	92.30
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	0.00	0.00	0.00	0.00	100.00	100.00	0.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Waste Treatment and Disposal (NAICS 5622)	89.74	0.00	0.00	0.00	0.00	89.74	10.26
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Remediation and Other Waste Management Services (NAICS 5629)	53.67	0.00	0.00	0.00	0.00	53.67	46.33
Other Support Services (NAICS 5619)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Specialized Design Services (NAICS 5414)	0.00	0.00	0.00	0.00	45.42	45.42	54.58
Steel Product Manufacturing from Purchased Steel (NAICS 3312)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Printing and Related Support Activities (NAICS 3231)	0.00	0.00	0.00	0.00	83.25	83.25	16.75
Civic and Social Organizations (NAICS 8134)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Freight Transportation Arrangement (NAICS 4885)	0.00	0.00	0.00	0.00	77.94	77.94	22.06
Scientific Research and Development Services (NAICS 5417)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Residential Building Construction (NAICS 2361)	0.00	0.00	0.00	7.25	0.00	7.25	92.75
Bakeries and Tortilla Manufacturing (NAICS 3118)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Personal and Household Goods Repair and Maintenance (NAICS 8114)	0.00	0.00	0.00	0.00	21.45	21.45	78.55
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	0.00	0.00	75.60	0.00	0.00	75.60	24.40
Waste Collection (NAICS 5621)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
General Freight Trucking (NAICS 4841)	0.00	0.00	0.00	0.00	70.31	70.31	29.69
Other Information Services (NAICS 5191)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Data Processing, Hosting, and Related Services (NAICS 5182)	0.00	0.00	55.64	0.00	0.00	55.64	44.36

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Rail Transportation (NAICS 4821)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Miscellaneous Manufacturing (NAICS 3399)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Services to Buildings and Dwellings (NAICS 5617)	0.00	68.79	0.00	0.00	0.00	68.79	31.21
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Investigation and Security Services (NAICS 5616)	2.31	0.00	0.00	0.00	0.00	2.31	97.69
Facilities Support Services (NAICS 5612)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Office Administrative Services (NAICS 5611)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nonscheduled Air Transportation (NAICS 4812)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electronics and Appliance Stores (NAICS 4431)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Financial Investment Activities (NAICS 5239)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Water, Sewage and Other Systems (NAICS 2213)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	0.00	0.00	0.00	0.00	68.35	68.35	31.65
Medical and Diagnostic Laboratories (NAICS 6215)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Furniture Stores (NAICS 4421)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Clay Product and Refractory Manufacturing (NAICS 3271)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Activities Related to Real Estate (NAICS 5313)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Museums, Historical Sites, and Similar Institutions (NAICS 7121)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Software Publishers (NAICS 5112)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Consumer Goods Rental (NAICS 5322)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Architectural and Structural Metals Manufacturing (NAICS 3323)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Motion Picture and Video Industries (NAICS 5121)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Independent Artists, Writers, and Performers (NAICS 7115)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	0.00	0.00	0.00	0.00	93.20	93.20	6.80
Educational Support Services (NAICS 6117)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Direct Selling Establishments (NAICS 4543)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Fabricated Metal Product Manufacturing (NAICS 3329)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Automotive Repair and Maintenance (NAICS 8111)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Support Activities for Crop Production (NAICS 1151)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Cement and Concrete Product Manufacturing (NAICS 3273)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Full-Service Restaurants (NAICS 7221)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Communications Equipment Manufacturing (NAICS 3342)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Offices of Physicians (NAICS 6211)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Plastics Product Manufacturing (NAICS 3261)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Metalworking Machinery Manufacturing (NAICS 3335)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Motor Vehicle Dealers (NAICS 4412)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Grocery and Related Product Merchant Wholesalers (NAICS 4244)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Support Activities for Mining (NAICS 2131)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
School and Employee Bus Transportation (NAICS 4854)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Wood Product Manufacturing (NAICS 3219)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Specialized Freight Trucking (NAICS 4842)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Building Material and Supplies Dealers (NAICS 4441)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Couriers and Express Delivery Services (NAICS 4921)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Source: See Table 7.1A.

Table 7.10. Maintenance—M/WBE Utilization by Industry Group (Percentages) (Dollars Awarded), 2005-2009

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Services to Buildings and Dwellings (NAICS 5617)	2.96	0.03	0.55	0.00	5.89	9.43	90.57
Highway, Street, and Bridge Construction (NAICS 2373)	0.02	0.01	0.00	0.00	18.35	18.38	81.62
Building Equipment Contractors (NAICS 2382)	8.50	0.04	0.00	0.00	40.49	49.02	50.98
Investigation and Security Services (NAICS 5616)	28.94	0.00	0.00	0.00	18.37	47.31	52.69
Management, Scientific, and Technical Consulting Services (NAICS 5416)	0.00	0.46	0.00	0.00	1.81	2.27	97.73
Urban Transit Systems (NAICS 4851)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nonresidential Building Construction (NAICS 2362)	6.68	0.63	0.00	0.00	1.15	8.47	91.53
Personal and Household Goods Repair and Maintenance (NAICS 8114)	0.00	0.00	0.00	0.00	0.03	0.03	99.97
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	4.93	40.35	2.45	0.00	8.20	55.93	44.07
Electric Power Generation, Transmission and Distribution (NAICS 2211)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Railroad Rolling Stock Manufacturing (NAICS 3365)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Building Finishing Contractors (NAICS 2383)	0.00	7.32	0.00	0.00	31.19	38.51	61.49
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	0.03	0.00	0.00	0.00	0.00	0.03	99.97
Other Specialty Trade Contractors (NAICS 2389)	5.32	2.62	0.34	0.00	1.37	9.66	90.34
Architectural, Engineering, and Related Services (NAICS 5413)	4.20	0.12	23.61	0.00	1.84	29.77	70.23
Direct Selling Establishments (NAICS 4543)	0.00	0.00	0.00	0.00	0.32	0.32	99.68
Support Activities for Air Transportation (NAICS 4881)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Miscellaneous Manufacturing (NAICS 3399)	0.00	0.00	0.00	0.00	29.52	29.52	70.48
Residential Building Construction (NAICS 2361)	0.94	1.44	0.00	0.00	0.34	2.73	97.27
Waste Treatment and Disposal (NAICS 5622)	7.53	0.00	0.00	0.00	0.00	7.53	92.47
Individual and Family Services (NAICS 6241)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
General Freight Trucking (NAICS 4841)	54.55	1.15	0.00	0.00	4.24	59.94	40.06
Employment Services (NAICS 5613)	78.90	0.00	0.00	0.00	17.14	96.04	3.96
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electric Lighting Equipment Manufacturing (NAICS 3351)	0.00	0.00	0.00	0.00	19.58	19.58	80.42
Office Administrative Services (NAICS 5611)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Facilities Support Services (NAICS 5612)	0.00	0.00	68.64	0.00	10.23	78.86	21.14
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	0.00	0.00	0.00	0.00	23.35	23.35	76.65
Offices of Physicians (NAICS 6211)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Computer Systems Design and Related Services (NAICS 5415)	26.73	0.00	0.00	0.00	0.00	26.73	73.27
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	13.82	0.00	2.28	0.00	5.51	21.62	78.38
Communications Equipment Manufacturing (NAICS 3342)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Gasoline Stations (NAICS 4471)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Offices of Dentists (NAICS 6212)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Aerospace Product and Parts Manufacturing (NAICS 3364)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	0.94	0.00	0.88	0.00	85.85	87.67	12.33
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	0.00	0.00	0.00	0.00	0.43	0.43	99.57
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	6.11	0.00	0.00	0.00	6.02	12.13	87.87
Lessors of Real Estate (NAICS 5311)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Utility System Construction (NAICS 2371)	0.00	0.00	0.00	0.00	62.44	62.44	37.56
Other Personal Services (NAICS 8129)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Used Merchandise Stores (NAICS 4533)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Other General Purpose Machinery Manufacturing (NAICS 3339)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Social Advocacy Organizations (NAICS 8133)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Clay Product and Refractory Manufacturing (NAICS 3271)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Support Activities for Crop Production (NAICS 1151)	0.00	0.00	0.00	0.00	98.83	98.83	1.17
Other Support Services (NAICS 5619)	0.00	0.00	0.00	0.00	6.46	6.46	93.54
Vocational Rehabilitation Services (NAICS 6243)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Automotive Repair and Maintenance (NAICS 8111)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Remediation and Other Waste Management Services (NAICS 5629)	0.00	0.00	0.00	0.00	39.49	39.49	60.51
Rail Transportation (NAICS 4821)	0.00	83.73	0.00	0.00	0.00	83.73	16.27
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Heavy and Civil Engineering Construction (NAICS 2379)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Drycleaning and Laundry Services (NAICS 8123)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Cement and Concrete Product Manufacturing (NAICS 3273)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Other Miscellaneous Store Retailers (NAICS 4539)	0.00	0.00	0.00	0.00	98.39	98.39	1.61
Software Publishers (NAICS 5112)	0.00	0.00	0.00	0.00	86.38	86.38	13.62
Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing (NAICS 3252)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	0.00	0.00	0.00	0.00	1.66	1.66	98.34

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Financial Investment Activities (NAICS 5239)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Architectural and Structural Metals Manufacturing (NAICS 3323)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Home Furnishings Stores (NAICS 4422)	96.43	0.00	0.00	0.00	0.00	96.43	3.57
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Specialized Design Services (NAICS 5414)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	49.23	0.00	0.00	0.00	0.00	49.23	50.77
Electronics and Appliance Stores (NAICS 4431)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Business Support Services (NAICS 5614)	0.00	0.00	0.00	0.00	80.92	80.92	19.08
Hardware Manufacturing (NAICS 3325)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Advertising, Public Relations, and Related Services (NAICS 5418)	0.00	0.00	0.00	0.00	0.10	0.10	99.90
Waste Collection (NAICS 5621)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Industrial Machinery Manufacturing (NAICS 3332)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Wired Telecommunications Carriers (NAICS 5171)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Ship and Boat Building (NAICS 3366)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures (NAICS 7114)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Couriers and Express Delivery Services (NAICS 4921)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Grocery Stores (NAICS 4451)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Building Material and Supplies Dealers (NAICS 4441)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Specialized Freight Trucking (NAICS 4842)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	91.64	0.00	0.00	0.00	8.36	100.00	0.00
Support Activities for Road Transportation (NAICS 4884)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Taxi and Limousine Service (NAICS 4853)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Colleges, Universities, and Professional Schools (NAICS 6113)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Consumer Goods Rental (NAICS 5322)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Scientific Research and Development Services (NAICS 5417)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Insurance Carriers (NAICS 5241)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Automotive Equipment Rental and Leasing (NAICS 5321)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Traveler Accommodation (NAICS 7211)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Local Messengers and Local Delivery (NAICS 4922)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electrical Equipment Manufacturing (NAICS 3353)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Telecommunications (NAICS 5179)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
General Rental Centers (NAICS 5323)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Professional, Scientific, and Technical Services (NAICS 5419)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Pulp, Paper, and Paperboard Mills (NAICS 3221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Fabricated Metal Product Manufacturing (NAICS 3329)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Source: See Table 7.1A.

Table 7.11. IT—M/WBE Utilization by Industry Group (Percentages) (Dollars Awarded), 2005-2009

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Computer Systems Design and Related Services (NAICS 5415)	4.60	0.00	6.25	0.00	6.14	17.00	83.00
Other Telecommunications (NAICS 5179)	0.00	0.00	0.00	0.00	1.66	1.66	98.34
Management, Scientific, and Technical Consulting Services (NAICS 5416)	15.59	0.00	9.60	0.00	0.18	25.38	74.62
Software Publishers (NAICS 5112)	0.00	0.00	1.68	0.00	0.00	1.68	98.32
Electronics and Appliance Stores (NAICS 4431)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Architectural, Engineering, and Related Services (NAICS 5413)	0.00	6.49	78.42	0.00	1.92	86.83	13.17
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	20.50	0.00	50.22	0.00	3.60	74.32	25.68
Scientific Research and Development Services (NAICS 5417)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Audio and Video Equipment Manufacturing (NAICS 3343)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Communications Equipment Manufacturing (NAICS 3342)	4.16	0.00	0.00	0.00	0.00	4.16	95.84
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Professional, Scientific, and Technical Services (NAICS 5419)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Wired Telecommunications Carriers (NAICS 5171)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Building Equipment Contractors (NAICS 2382)	0.00	0.00	0.00	0.00	0.33	0.33	99.67
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Investigation and Security Services (NAICS 5616)	0.00	0.00	0.00	0.00	87.92	87.92	12.08
Printing and Related Support Activities (NAICS 3231)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Activities Related to Credit Intermediation (NAICS 5223)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Facilities Support Services (NAICS 5612)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Rail Transportation (NAICS 4821)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electrical Equipment Manufacturing (NAICS 3353)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Employment Services (NAICS 5613)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Information Services (NAICS 5191)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nonresidential Building Construction (NAICS 2362)	0.00	0.00	67.23	0.00	0.00	67.23	32.77
Warehousing and Storage (NAICS 4931)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Business Support Services (NAICS 5614)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Architectural and Structural Metals Manufacturing (NAICS 3323)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	0.00	0.00	0.00	0.00	21.22	21.22	78.78
Educational Support Services (NAICS 6117)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Book, Periodical, and Music Stores (NAICS 4512)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Specialized Design Services (NAICS 5414)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Advertising, Public Relations, and Related Services (NAICS 5418)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Legal Services (NAICS 5411)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Direct Selling Establishments (NAICS 4543)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	100.00	0.00	0.00	0.00	0.00	100.00	0.00

Industry Group	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Source: See Table 7.1A.

Table 7.12. Services—M/WBE Utilization by Industry Group (Percentages) (Dollars Awarded), 2005-2009

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	0.09	0.00	0.06	0.00	0.00	0.15	99.85
Insurance Carriers (NAICS 5241)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Offices of Physicians (NAICS 6211)	0.68	0.00	0.41	0.00	0.29	1.37	98.63
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	0.35	0.00	0.00	0.00	0.00	0.35	99.65
Computer Systems Design and Related Services (NAICS 5415)	3.76	0.00	8.80	0.00	12.11	24.68	75.32
Urban Transit Systems (NAICS 4851)	12.27	0.00	0.00	0.00	0.00	12.27	87.73
Rail Transportation (NAICS 4821)	0.09	0.00	0.00	0.00	0.02	0.11	99.89
Advertising, Public Relations, and Related Services (NAICS 5418)	0.92	0.01	0.00	0.00	2.00	2.93	97.07
Individual and Family Services (NAICS 6241)	1.08	0.00	0.20	0.00	51.27	52.55	47.45
Employment Services (NAICS 5613)	30.05	1.35	0.00	0.00	57.55	88.95	11.05
Other Residential Care Facilities (NAICS 6239)	62.63	0.00	0.00	0.00	0.00	62.63	37.37
Other Transit and Ground Passenger Transportation (NAICS 4859)	0.01	0.00	0.00	0.00	0.00	0.01	99.99
Architectural, Engineering, and Related Services (NAICS 5413)	1.30	0.92	1.91	0.00	9.01	13.13	86.87
Activities Related to Credit Intermediation (NAICS 5223)	0.00	0.00	0.00	0.00	99.97	99.97	0.03
Printing and Related Support Activities (NAICS 3231)	0.93	1.22	0.00	0.00	1.70	3.86	96.14
Management, Scientific, and Technical Consulting Services (NAICS 5416)	15.94	0.00	8.62	0.00	11.83	36.39	63.61
Charter Bus Industry (NAICS 4855)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Automotive Equipment Rental and Leasing (NAICS 5321)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Ambulatory Health Care Services (NAICS 6219)	0.00	0.00	0.00	0.00	0.11	0.11	99.89
Educational Support Services (NAICS 6117)	0.00	0.00	0.00	0.00	0.47	0.47	99.53
General Medical and Surgical Hospitals (NAICS 6221)	14.88	0.00	0.00	0.00	26.82	41.70	58.30
Offices of Dentists (NAICS 6212)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Colleges, Universities, and Professional Schools (NAICS 6113)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Services to Buildings and Dwellings (NAICS 5617)	9.38	2.51	19.87	0.00	5.24	37.00	63.00
Electric Power Generation, Transmission and Distribution (NAICS 2211)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Residential Mental Retardation, Mental Health and Substance Abuse Facilities (NAICS 6232)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
School and Employee Bus Transportation (NAICS 4854)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Building Equipment Contractors (NAICS 2382)	24.85	38.55	1.18	0.00	3.83	68.41	31.59
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	0.02	0.00	36.75	0.00	3.18	39.95	60.05
Investigation and Security Services (NAICS 5616)	23.71	0.00	0.00	0.00	0.11	23.81	76.19
Legal Services (NAICS 5411)	8.41	0.16	0.00	0.00	33.84	42.41	57.59
Special Food Services (NAICS 7223)	60.10	0.00	0.00	0.00	0.06	60.17	39.83
Office Administrative Services (NAICS 5611)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Wired Telecommunications Carriers (NAICS 5171)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Professional, Scientific, and Technical Services (NAICS 5419)	0.68	1.79	0.00	0.00	9.81	12.28	87.72
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	16.31	0.00	0.00	0.00	0.55	16.86	83.14
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	0.00	0.00	0.00	0.00	0.12	0.12	99.88
Other Personal Services (NAICS 8129)	14.90	0.00	0.00	24.62	19.85	59.37	40.63
Home Health Care Services (NAICS 6216)	0.00	0.00	0.00	0.00	60.93	60.93	39.07
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	56.59	0.00	0.02	40.43	0.00	97.04	2.96
Offices of Real Estate Agents and Brokers (NAICS 5312)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Outpatient Care Centers (NAICS 6214)	0.44	0.00	0.00	0.00	0.44	0.87	99.13
Gambling Industries (NAICS 7132)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	0.00	0.00	0.00	0.00	0.49	0.49	99.51
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Schools and Instruction (NAICS 6116)	0.00	0.00	0.00	0.00	33.80	33.80	66.20
Taxi and Limousine Service (NAICS 4853)	6.39	93.61	0.00	0.00	0.00	100.00	0.00
Other Information Services (NAICS 5191)	0.84	0.00	0.00	0.00	0.00	0.84	99.16
Other Miscellaneous Manufacturing (NAICS 3399)	98.14	0.00	0.00	0.26	0.76	99.16	0.84
Medical Equipment and Supplies Manufacturing (NAICS 3391)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Depository Credit Intermediation (NAICS 5221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Offices of Other Health Practitioners (NAICS 6213)	0.00	39.38	22.48	0.00	1.05	62.92	37.08
Data Processing, Hosting, and Related Services (NAICS 5182)	0.00	0.00	0.00	0.00	18.89	18.89	81.11
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	0.66	0.00	0.00	0.00	0.00	0.66	99.34
Specialized Design Services (NAICS 5414)	2.70	0.36	0.00	0.00	8.09	11.14	88.86
Pulp, Paper, and Paperboard Mills (NAICS 3221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	7.14	0.00	0.00	0.00	33.01	40.15	59.85
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	15.53	0.00	0.00	0.00	0.00	15.53	84.47
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	97.87	0.00	0.00	0.00	0.00	97.87	2.13
Insurance and Employee Benefit Funds (NAICS 5251)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Freight Transportation Arrangement (NAICS 4885)	0.00	0.00	0.05	0.00	99.95	100.00	0.00
Business Support Services (NAICS 5614)	39.51	9.06	0.00	0.00	1.20	49.77	50.23
Software Publishers (NAICS 5112)	0.03	0.63	0.00	4.31	0.00	4.98	95.02
Traveler Accommodation (NAICS 7211)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Travel Arrangement and Reservation Services (NAICS 5615)	29.11	0.00	8.70	0.00	0.73	38.54	61.46

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Medical and Diagnostic Laboratories (NAICS 6215)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Civic and Social Organizations (NAICS 8134)	1.62	0.00	0.00	0.00	0.00	1.62	98.38
Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)	0.00	0.00	0.00	0.00	51.68	51.68	48.32
Child Day Care Services (NAICS 6244)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Telecommunications (NAICS 5179)	37.04	0.33	0.00	0.00	0.00	37.37	62.63
Nonresidential Building Construction (NAICS 2362)	31.19	0.00	0.74	0.00	0.08	32.02	67.98
Specialized Freight Trucking (NAICS 4842)	0.00	0.00	0.00	0.00	2.25	2.25	97.75
Social Advocacy Organizations (NAICS 8133)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Motion Picture and Video Industries (NAICS 5121)	1.61	0.00	0.00	0.00	84.79	86.40	13.60
Electric Lighting Equipment Manufacturing (NAICS 3351)	0.00	0.00	0.00	0.00	96.07	96.07	3.93
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Automotive Repair and Maintenance (NAICS 8111)	86.90	0.00	0.00	0.00	0.00	86.90	13.10
Waste Treatment and Disposal (NAICS 5622)	0.00	0.00	1.54	0.00	11.15	12.69	87.31
Psychiatric and Substance Abuse Hospitals (NAICS 6222)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	0.00	0.00	0.00	0.00	99.58	99.58	0.42
Cable and Other Subscription Programming (NAICS 5152)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Personal and Household Goods Repair and Maintenance (NAICS 8114)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Technical and Trade Schools (NAICS 6115)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Highway, Street, and Bridge Construction (NAICS 2373)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Warehousing and Storage (NAICS 4931)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Natural Gas Distribution (NAICS 2212)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
General Freight Trucking (NAICS 4841)	63.35	0.00	0.00	0.00	0.47	63.82	36.18
Couriers and Express Delivery Services (NAICS 4921)	0.00	3.34	0.00	0.00	0.00	3.34	96.66

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	79.62	0.00	0.00	0.00	0.00	79.62	20.38
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	0.00	0.00	0.13	0.00	5.34	5.47	94.53
Scientific Research and Development Services (NAICS 5417)	36.63	0.00	0.00	0.00	2.09	38.72	61.28
Lessors of Real Estate (NAICS 5311)	13.78	0.00	0.00	0.00	1.53	15.30	84.70
Vocational Rehabilitation Services (NAICS 6243)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Railroad Rolling Stock Manufacturing (NAICS 3365)	0.00	0.00	0.00	0.00	0.95	0.95	99.05
Grocery and Related Product Merchant Wholesalers (NAICS 4244)	11.93	51.85	0.00	0.00	0.00	63.78	36.22
Direct Selling Establishments (NAICS 4543)	84.82	0.00	0.00	0.00	0.00	84.82	15.18
Remediation and Other Waste Management Services (NAICS 5629)	0.00	0.00	0.00	0.00	19.37	19.37	80.63
Consumer Goods Rental (NAICS 5322)	13.49	0.00	0.00	0.00	0.00	13.49	86.51
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures (NAICS 7114)	8.26	0.00	0.00	0.00	0.00	8.26	91.74
Activities Related to Real Estate (NAICS 5313)	0.00	0.00	0.00	0.00	2.39	2.39	97.61
Other Specialty Trade Contractors (NAICS 2389)	0.11	0.00	0.00	0.00	7.43	7.54	92.46
Used Merchandise Stores (NAICS 4533)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Performing Arts Companies (NAICS 7111)	43.48	0.00	0.00	0.00	1.47	44.95	55.05
Grocery Stores (NAICS 4451)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Drycleaning and Laundry Services (NAICS 8123)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Gasoline Stations (NAICS 4471)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Facilities Support Services (NAICS 5612)	57.50	0.00	0.00	0.00	22.22	79.72	20.28

Industry Group	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Nonscheduled Air Transportation (NAICS 4812)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Support Activities for Transportation (NAICS 4889)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Land Subdivision (NAICS 2372)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Health and Personal Care Stores (NAICS 4461)	0.00	0.00	60.54	0.00	0.00	60.54	39.46
Business Schools and Computer and Management Training (NAICS 6114)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Elementary and Secondary Schools (NAICS 6111)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electrical Equipment Manufacturing (NAICS 3353)	0.00	0.00	4.20	0.00	0.00	4.20	95.80
Building Finishing Contractors (NAICS 2383)	0.00	1.99	0.00	0.00	77.94	79.93	20.07
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	0.00	0.00	0.00	0.00	69.77	69.77	30.23
Nondepository Credit Intermediation (NAICS 5222)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Miscellaneous Store Retailers (NAICS 4539)	0.00	0.00	0.00	0.00	35.88	35.88	64.12
Junior Colleges (NAICS 6112)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Communications Equipment Manufacturing (NAICS 3342)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	30.07	0.00	0.00	0.00	9.06	39.13	60.87
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nursing Care Facilities (NAICS 6231)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Financial Investment Activities (NAICS 5239)	1.78	0.00	0.00	0.00	98.22	100.00	0.00
Pharmaceutical and Medicine Manufacturing (NAICS 3254)	0.00	0.00	2.79	0.00	0.00	2.79	97.21
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	98.60	0.00	0.00	0.00	0.00	98.60	1.40
Waste Collection (NAICS 5621)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Electronics and Appliance Stores (NAICS 4431)	33.68	0.00	0.00	0.00	10.28	43.97	56.03
Other General Purpose Machinery Manufacturing (NAICS 3339)	0.00	99.63	0.00	0.00	0.00	99.63	0.37
Full-Service Restaurants (NAICS 7221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Clay Product and Refractory Manufacturing (NAICS 3271)	0.00	0.00	0.00	3.91	0.00	3.91	96.09

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Textile and Fabric Finishing and Fabric Coating Mills (NAICS 3133)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Automobile Dealers (NAICS 4411)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Utility System Construction (NAICS 2371)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Water, Sewage and Other Systems (NAICS 2213)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Local Messengers and Local Delivery (NAICS 4922)	0.00	0.00	0.00	0.00	99.97	99.97	0.03
Building Material and Supplies Dealers (NAICS 4441)	0.00	0.00	0.00	0.00	69.06	69.06	30.94
Residential Building Construction (NAICS 2361)	0.00	0.00	29.84	0.00	0.00	29.84	70.16
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Management of Companies and Enterprises (NAICS 5511)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Bakeries and Tortilla Manufacturing (NAICS 3118)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Manufacturing and Reproducing Magnetic and Optical Media (NAICS 3346)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	66.78	0.00	0.00	0.00	1.08	67.86	32.14
Radio and Television Broadcasting (NAICS 5151)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Scheduled Air Transportation (NAICS 4811)	26.15	0.00	0.00	0.00	0.00	26.15	73.85
General Rental Centers (NAICS 5323)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Promoters of Performing Arts, Sports, and Similar Events (NAICS 7113)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Sound Recording Industries (NAICS 5122)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	0.00	0.00	0.00	0.00	99.94	99.94	0.06

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Dairy Product Manufacturing (NAICS 3115)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Book, Periodical, and Music Stores (NAICS 4512)	97.34	0.00	0.00	0.00	0.00	97.34	2.66
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Death Care Services (NAICS 8122)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Textile Product Mills (NAICS 3149)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Fabricated Metal Product Manufacturing (NAICS 3329)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Wood Product Manufacturing (NAICS 3219)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Architectural and Structural Metals Manufacturing (NAICS 3323)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Plastics Product Manufacturing (NAICS 3261)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	0.00	3.82	0.00	0.00	0.00	3.82	96.18
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Religious Organizations (NAICS 8131)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Support Services (NAICS 5619)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Motor Vehicle Parts Manufacturing (NAICS 3363)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Home Furnishings Stores (NAICS 4422)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Independent Artists, Writers, and Performers (NAICS 7115)	0.00	0.00	0.00	0.00	100.00	100.00	0.00
Foundries (NAICS 3315)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Florists (NAICS 4531)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Shoe Stores (NAICS 4482)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Transportation Equipment Manufacturing (NAICS 3369)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Spring and Wire Product Manufacturing (NAICS 3326)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Limited-Service Eating Places (NAICS 7222)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Source: See Table 7.1A.

Table 7.13. CSE—M/WBE Utilization by Industry Group (Percentages) (Dollars Awarded), 2005-2009

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Electric Power Generation, Transmission and Distribution (NAICS 2211)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)	0.00	0.00	0.00	0.00	85.12	85.12	14.88
Railroad Rolling Stock Manufacturing (NAICS 3365)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Special Food Services (NAICS 7223)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	3.77	0.00	21.24	0.00	0.09	25.10	74.90
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	0.00	0.00	0.73	0.00	0.00	0.73	99.27
Automobile Dealers (NAICS 4411)	0.75	0.00	0.00	0.00	0.00	0.75	99.25
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Natural Gas Distribution (NAICS 2212)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Pharmaceutical and Medicine Manufacturing (NAICS 3254)	0.00	0.00	0.00	0.00	46.60	46.60	53.40
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Computer and Peripheral Equipment Manufacturing (NAICS 3341)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Printing and Related Support Activities (NAICS 3231)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Direct Selling Establishments (NAICS 4543)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Communications Equipment Manufacturing (NAICS 3342)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Clothing Stores (NAICS 4481)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Automotive Repair and Maintenance (NAICS 8111)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Architectural, Engineering, and Related Services (NAICS 5413)	0.00	0.00	37.98	0.00	0.00	37.98	62.02
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	0.00	0.00	0.00	0.00	59.96	59.96	40.04
Computer Systems Design and Related Services (NAICS 5415)	0.00	0.00	14.56	0.00	0.00	14.56	85.44
Medical Equipment and Supplies Manufacturing (NAICS 3391)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electronics and Appliance Stores (NAICS 4431)	0.00	0.00	0.00	0.00	2.71	2.71	97.29
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	0.00	0.00	6.26	0.00	0.00	6.26	93.74
Water, Sewage and Other Systems (NAICS 2213)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Support Activities for Water Transportation (NAICS 4883)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Aerospace Product and Parts Manufacturing (NAICS 3364)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Transportation Equipment Manufacturing (NAICS 3369)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	0.00	0.00	0.00	0.00	24.29	24.29	75.71
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	0.00	0.00	0.00	0.00	14.67	14.67	85.33
Facilities Support Services (NAICS 5612)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Management, Scientific, and Technical Consulting Services (NAICS 5416)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Motor Vehicle Parts Manufacturing (NAICS 3363)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Book, Periodical, and Music Stores (NAICS 4512)	0.00	0.00	0.00	0.00	1.34	1.34	98.66
Semiconductor and Other Electronic Component Manufacturing (NAICS 3344)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Furniture Stores (NAICS 4421)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Software Publishers (NAICS 5112)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Support Activities for Road Transportation (NAICS 4884)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	0.00	0.00	0.00	0.00	7.65	7.65	92.35
Other Fabricated Metal Product Manufacturing (NAICS 3329)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Telecommunications (NAICS 5179)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Scientific Research and Development Services (NAICS 5417)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Nonresidential Building Construction (NAICS 2362)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Miscellaneous Store Retailers (NAICS 4539)	0.00	0.00	0.00	0.00	12.39	12.39	87.61
Grocery and Related Product Merchant Wholesalers (NAICS 4244)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other General Purpose Machinery Manufacturing (NAICS 3339)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Architectural and Structural Metals Manufacturing (NAICS 3323)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Soap, Cleaning Compound, and Toilet Preparation Manufacturing (NAICS 3256)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Industrial Machinery Manufacturing (NAICS 3332)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Plastics Product Manufacturing (NAICS 3261)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Scheduled Air Transportation (NAICS 4811)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	100.00	0.00	0.00	0.00	0.00	100.00	0.00
Automotive Equipment Rental and Leasing (NAICS 5321)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Clay Product and Refractory Manufacturing (NAICS 3271)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Lessors of Real Estate (NAICS 5311)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Investigation and Security Services (NAICS 5616)	5.36	0.00	0.00	0.00	0.00	5.36	94.64
Drycleaning and Laundry Services (NAICS 8123)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Traveler Accommodation (NAICS 7211)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Civic and Social Organizations (NAICS 8134)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Professional, Scientific, and Technical Services (NAICS 5419)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Business Support Services (NAICS 5614)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native American	WBE	M/WBE	Non-M/WBE
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Specialty Trade Contractors (NAICS 2389)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Miscellaneous Manufacturing (NAICS 3399)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Remediation and Other Waste Management Services (NAICS 5629)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Motor Vehicle Dealers (NAICS 4412)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Support Activities for Animal Production (NAICS 1152)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Employment Services (NAICS 5613)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Lime and Gypsum Product Manufacturing (NAICS 3274)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Information Services (NAICS 5191)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Electrical Equipment Manufacturing (NAICS 3353)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Offices of Dentists (NAICS 6212)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Waste Treatment and Disposal (NAICS 5622)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Pulp, Paper, and Paperboard Mills (NAICS 3221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Religious Organizations (NAICS 8131)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Full-Service Restaurants (NAICS 7221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Drinking Places (Alcoholic Beverages) (NAICS 7224)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Medical and Diagnostic Laboratories (NAICS 6215)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Services to Buildings and Dwellings (NAICS 5617)	0.00	0.00	0.00	0.00	71.94	71.94	28.06
Beverage Manufacturing (NAICS 3121)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other Personal Services (NAICS 8129)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Personal Care Services (NAICS 8121)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Satellite Telecommunications (NAICS 5174)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Dairy Product Manufacturing (NAICS 3115)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Industry Group	African American	Hispanic	Asian	Native Amer-ican	WBE	M/WBE	Non-M/WBE
Support Activities for Air Transportation (NAICS 4881)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Building Equipment Contractors (NAICS 2382)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Bakeries and Tortilla Manufacturing (NAICS 3118)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Outpatient Care Centers (NAICS 6214)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Home Furnishings Stores (NAICS 4422)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Offices of Other Health Practitioners (NAICS 6213)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
General Freight Trucking (NAICS 4841)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Educational Support Services (NAICS 6117)	0.00	0.00	0.00	0.00	0.00	0.00	100.00

Source: See Table 7.1A.

Table 7.14A. Disparity Results for State of Maryland Contracting, Overall and By Procurement Category, 2005-2009 (Award Dollars)

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	4.48	9.69	46.25	****
Hispanic	2.16	3.48	62.11	
Asian	1.35	5.44	24.91	****
Native American	1.18	0.39	302.56	
MBE	9.18	18.99	48.33	****
WBE	14.82	13.39	110.68	
M/WBE	24.00	32.39	74.11	****
AE-CRS				
African American	3.78	10.17	37.20	****
Hispanic	1.03	3.86	26.63	****
Asian	9.37	11.35	82.52	
Native American	0.00	0.39	0.44	****
MBE	14.18	25.78	55.01	****
WBE	9.73	15.36	63.37	****
M/WBE	23.91	41.14	58.13	****
Maintenance				
African American	5.33	14.26	37.35	****
Hispanic	1.49	4.62	32.31	****
Asian	1.05	5.30	19.72	****
Native American	0.00	0.28	0.00	****
MBE	7.86	24.46	32.16	****
WBE	11.82	16.49	71.72	***
M/WBE	19.69	40.94	48.08	****
IT				
African American	4.73	13.94	33.94	****
Hispanic	0.25	3.86	6.54	****
Asian	8.64	13.94	61.97	****
Native American	0.00	0.50	0.00	****
MBE	13.63	32.25	42.25	****
WBE	3.64	15.84	23.00	****
M/WBE	17.27	48.09	35.91	****
Services				
African American	4.49	12.88	34.89	****
Hispanic	0.51	1.95	26.18	****
Asian	0.90	6.91	13.05	****
Native American	0.19	0.09	211.11	
MBE	6.09	21.83	27.91	****
WBE	6.55	22.74	28.82	****
M/WBE	12.65	44.56	28.37	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.25	9.39	2.70	****
Hispanic	0.00	2.02	0.00	****
Asian	1.29	9.05	14.23	****
Native American	0.00	0.93	0.00	****
MBE	1.54	21.39	7.21	****
WBE	9.05	17.52	51.66	****
M/WBE	10.59	38.91	27.22	****
All Procurement				
African American	4.15	11.35	36.57	****
Hispanic	1.27	2.95	42.91	****
Asian	1.99	7.24	27.44	****
Native American	0.58	0.27	214.81	
MBE	7.98	21.81	36.59	****
WBE	10.75	17.76	60.51	****
M/WBE	18.73	39.57	47.33	****

Source: calculations from NERA Master Contract/Subcontract Database and NERA Baseline Business Universe. Notes: (1) Utilization and Availability are expressed as percentages; (2) "*" indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence). "**" indicates a disparity that is significant at a 10% level or better (90% confidence). "***" indicates significance at a 5% level or better (95% confidence). "****" indicates significance at a 1% level or better (99% confidence).

Table 7.14B. Disparity Results for State of Maryland Contracting, Overall and By Procurement Category, 2005-2009 (Paid Dollars)

Major Procurement Category / M/WBE Type	Utilization (Dollars Awarded)	Availability	Disparity Ratio	
Construction				
African American	4.36	8.96	48.65	****
Hispanic	2.25	3.43	65.50	
Asian	1.56	4.42	35.35	****
Native American	1.64	0.37	446.29	
MBE	9.81	17.17	57.09	****
WBE	13.65	13.09	104.30	
M/WBE	23.45	30.26	77.51	****
AE-CRS				
African American	3.46	10.34	33.42	****
Hispanic	0.96	3.82	25.14	****
Asian	8.76	11.19	78.26	
Native American	0.00	0.39	7.72	****
MBE	13.18	25.75	51.18	****
WBE	9.13	15.59	58.58	****
M/WBE	22.31	41.34	53.97	****
Maintenance				
African American	4.84	14.86	32.55	****
Hispanic	1.41	4.49	31.30	****
Asian	1.11	5.67	19.50	****
Native American	0.01	0.29	3.47	****
MBE	7.36	25.32	29.07	****
WBE	8.48	17.97	47.18	****
M/WBE	15.84	43.29	36.59	****
IT				
African American	5.68	13.34	42.56	****
Hispanic	0.29	3.77	7.80	****
Asian	13.79	13.83	99.66	
Native American	0.00	0.48	0.00	****
MBE	19.76	31.43	62.86	****
WBE	2.59	15.88	16.29	****
M/WBE	22.35	47.31	47.23	****
Services				
African American	4.27	13.10	32.59	****
Hispanic	0.66	2.12	31.25	****
Asian	0.98	7.10	13.82	****
Native American	0.19	0.09	207.87	
MBE	6.10	22.41	27.24	****
WBE	7.94	21.91	36.23	****
M/WBE	14.04	44.32	31.68	****

Major Procurement Category / M/WBE Type	Utilization (Dollars Awarded)	Availability	Disparity Ratio	
CSE				
African American	0.25	9.39	2.70	****
Hispanic	0.00	2.02	0.00	****
Asian	1.29	9.05	14.24	****
Native American	0.00	0.93	0.00	****
MBE	1.54	21.39	7.21	****
WBE	9.05	17.52	51.67	****
M/WBE	10.60	38.91	27.23	****
All Procurement				
African American	3.92	11.21	34.98	****
Hispanic	1.37	2.96	46.27	****
Asian	1.99	6.71	29.66	****
Native American	0.82	0.26	312.34	
MBE	8.10	21.14	38.30	****
WBE	10.67	17.43	61.24	****
M/WBE	18.77	38.57	48.66	****

Source: calculations from NERA Master Contract/Subcontract Database and NERA Baseline Business Universe. Notes: (1) "*" indicates an adverse disparity that is statistically significant at the 15% level or better (85% confidence).; "**" indicates an adverse disparity that is statistically significant at the 10% level or better (90% confidence). "***" indicates a disparity is significant at a 5% level or better (95% confidence). "****" indicates significance at a 1% level or better (99% confidence).

Table 7.15. Industry Sub-Sector Disparity Results for State of Maryland Construction Contracting, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Specialty Trade Contractors (NAICS 238)				
African American	9.14	6.82	134.04	
Hispanic	4.64	3.14	147.50	
Asian	1.51	2.69	56.33	***
Native American	3.72	0.17	2250.10	
MBE	19.01	12.81	148.32	
WBE	12.86	11.00	116.86	
M/WBE	31.86	23.82	133.79	
Heavy and Civil Engineering Construction (NAICS 237)				
African American	0.60	8.83	6.76	****
Hispanic	2.42	3.63	66.49	
Asian	0.23	1.03	22.62	
Native American	0.00	0.39	0.91	****
MBE	3.25	13.88	23.41	****
WBE	8.26	9.95	83.04	
M/WBE	11.51	23.83	48.31	***
Construction of Buildings (NAICS 236)				
African American	4.08	10.90	37.42	****
Hispanic	0.22	5.18	4.28	****
Asian	0.38	3.31	11.44	****
Native American	0.32	0.90	35.57	
MBE	5.00	20.28	24.64	****
WBE	1.72	12.74	13.54	****
M/WBE	6.72	33.02	20.36	****
Professional, Scientific, and Technical Services (NAICS 541)				
African American	0.68	11.43	5.91	****
Hispanic	0.12	4.00	2.88	****
Asian	2.05	12.46	16.42	****
Native American	0.00	0.45	0.09	****
MBE	2.84	28.33	10.01	****
WBE	12.15	15.18	80.05	
M/WBE	14.99	43.51	34.44	****
Fabricated Metal Product Manufacturing (NAICS 332)				
African American	0.02	6.73	0.23	****
Hispanic	0.11	1.28	8.58	
Asian	8.01	8.37	95.73	
Native American	0.96	1.80	53.45	
MBE	9.10	18.18	50.04	
WBE	71.12	15.94	446.25	
M/WBE	80.22	34.12	235.10	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Merchant Wholesalers, Durable Goods (NAICS 423)				
African American	3.90	5.62	69.38	
Hispanic	0.00	0.23	0.00	****
Asian	0.44	8.46	5.23	****
Native American	0.09	0.88	10.03	****
MBE	4.43	15.18	29.16	****
WBE	34.33	17.78	193.05	
M/WBE	38.76	32.96	117.58	
Nonmetallic Mineral Product Manufacturing (NAICS 327)				
African American	0.18	6.16	2.99	****
Hispanic	0.31	0.34	92.79	
Asian	0.66	7.57	8.71	****
Native American	0.00	0.81	0.00	****
MBE	1.16	14.87	7.78	****
WBE	2.16	15.73	13.76	****
M/WBE	3.32	30.59	10.85	****
Administrative and Support Services (NAICS 561)				
African American	6.80	15.66	43.40	**
Hispanic	0.27	3.00	9.07	****
Asian	0.00	6.02	0.00	****
Native American	0.00	0.26	0.00	****
MBE	7.07	24.94	28.34	****
WBE	20.58	22.61	91.01	
M/WBE	27.65	47.55	58.14	***
Truck Transportation (NAICS 484)				
African American	42.90	27.02	158.74	
Hispanic	1.14	9.02	12.67	****
Asian	0.00	5.43	0.00	****
Native American	0.00	0.32	0.00	
MBE	44.04	41.80	105.36	
WBE	47.98	10.87	441.60	
M/WBE	92.02	52.67	174.73	
Building Material and Garden Equipment and Supplies Dealers (NAICS 444)				
African American	2.48	8.92	27.84	*
Hispanic	0.00	2.61	0.00	****
Asian	0.00	5.82	0.00	****
Native American	0.00	0.90	0.00	****
MBE	2.48	18.26	13.60	****
WBE	49.34	22.69	217.46	
M/WBE	51.82	40.95	126.56	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Rental and Leasing Services (NAICS 532)				
African American	17.03	14.12	120.60	
Hispanic	0.56	6.37	8.84	***
Asian	0.00	4.05	0.00	****
Native American	0.00	0.02	0.00	
MBE	17.60	24.57	71.61	
WBE	0.15	11.72	1.29	****
M/WBE	17.75	36.29	48.90	
Repair and Maintenance (NAICS 811)				
African American	6.61	14.41	45.85	
Hispanic	0.22	3.28	6.61	***
Asian	0.00	7.34	0.00	****
Native American	0.00	0.76	0.00	****
MBE	6.82	25.79	26.46	****
WBE	29.89	14.71	203.16	
M/WBE	36.72	40.50	90.66	
Merchant Wholesalers, Nondurable Goods (NAICS 424)				
African American	1.71	7.70	22.24	
Hispanic	0.00	0.23	0.00	**
Asian	27.44	8.83	310.90	
Native American	0.00	2.14	0.00	****
MBE	29.15	18.90	154.28	
WBE	0.00	18.16	0.00	****
M/WBE	29.15	37.06	78.67	
Wood Product Manufacturing (NAICS 321)				
African American	0.00	3.58	0.00	****
Hispanic	0.00	0.01	0.00	
Asian	0.00	7.31	0.00	****
Native American	0.00	0.74	0.00	*
MBE	0.00	11.65	0.00	****
WBE	2.95	22.25	13.25	****
M/WBE	2.95	33.90	8.69	****
Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)				
African American	0.08	7.77	1.07	****
Hispanic	0.00	0.22	0.00	
Asian	0.00	8.35	0.00	****
Native American	0.00	1.58	0.00	**
MBE	0.08	17.92	0.46	****
WBE	38.18	20.58	185.50	
M/WBE	38.26	38.50	99.39	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Miscellaneous Manufacturing (NAICS 339)				
African American	0.15	5.79	2.56	****
Hispanic	0.00	0.61	0.00	****
Asian	0.00	8.06	0.00	****
Native American	0.00	1.00	0.00	****
MBE	0.15	15.45	0.96	****
WBE	7.51	23.77	31.59	****
M/WBE	7.66	39.22	19.52	****
Real Estate (NAICS 531)				
African American	0.00	12.13	0.00	****
Hispanic	0.00	0.70	0.00	
Asian	0.00	5.15	0.00	****
Native American	0.00	0.02	0.00	
MBE	0.00	18.00	0.00	****
WBE	0.00	27.68	0.00	****
M/WBE	0.00	45.67	0.00	****
Credit Intermediation and Related Activities (NAICS 522)				
African American	0.00	11.56	0.00	****
Hispanic	0.00	0.08	0.00	
Asian	0.00	5.27	0.00	****
Native American	0.00	0.00		
MBE	0.00	16.91	0.00	****
WBE	0.00	24.91	0.00	****
M/WBE	0.00	41.81	0.00	****
Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813)				
African American	98.86	25.17	392.76	
Hispanic	0.00	6.20	0.00	****
Asian	0.00	6.29	0.00	****
Native American	0.00	0.00		
MBE	98.86	37.67	262.45	
WBE	0.00	12.68	0.00	****
M/WBE	98.86	50.35	196.35	
Furniture and Home Furnishings Stores (NAICS 442)				
African American	11.04	8.43	130.93	
Hispanic	0.09	2.65	3.29	****
Asian	0.17	9.43	1.80	****
Native American	0.00	0.79	0.00	****
MBE	11.30	21.31	53.03	***
WBE	31.45	22.68	138.69	
M/WBE	42.75	43.98	97.20	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Petroleum and Coal Products Manufacturing (NAICS 324)				
African American	0.00	5.04	0.00	**
Hispanic	0.00	0.63	0.00	
Asian	0.00	7.51	0.00	****
Native American	0.00	0.96	0.00	
MBE	0.00	14.15	0.00	****
WBE	0.00	17.12	0.00	****
M/WBE	0.00	31.27	0.00	****
Data Processing, Hosting and Related Services (NAICS 518)				
African American	0.00	15.48	0.00	****
Hispanic	0.00	6.45	0.00	**
Asian	0.00	7.77	0.00	****
Native American	0.00	0.30	0.00	
MBE	0.00	30.00	0.00	****
WBE	0.00	19.44	0.00	****
M/WBE	0.00	49.44	0.00	****
Mining (except Oil and Gas) (NAICS 212)				
African American	0.00	2.60	0.00	***
Hispanic	0.00	0.20	0.00	
Asian	0.00	0.00		
Native American	0.00	0.00		
MBE	0.00	2.79	0.00	***
WBE	0.00	15.04	0.00	****
M/WBE	0.00	17.83	0.00	****
Waste Management and Remediation Services (NAICS 562)				
African American	2.50	16.84	14.82	****
Hispanic	0.00	8.07	0.00	****
Asian	0.00	6.27	0.00	****
Native American	0.00	0.51	0.00	
MBE	2.50	31.69	7.88	****
WBE	0.00	14.87	0.00	****
M/WBE	2.50	46.56	5.36	****
Support Activities for Transportation (NAICS 488)				
African American	0.00	21.28	0.00	****
Hispanic	0.00	7.23	0.00	****
Asian	0.00	6.50	0.00	****
Native American	0.00	0.10	0.00	
MBE	0.00	35.12	0.00	****
WBE	72.38	10.36	698.46	
M/WBE	72.38	45.48	159.16	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Primary Metal Manufacturing (NAICS 331)				
African American	0.00	7.95	0.00	****
Hispanic	2.09	0.66	314.39	
Asian	0.00	8.80	0.00	****
Native American	0.00	2.25	0.00	
MBE	2.09	19.66	10.63	
WBE	2.32	10.31	22.51	
M/WBE	4.41	29.97	14.71	**
Furniture and Related Product Manufacturing (NAICS 337)				
African American	18.20	10.52	173.02	
Hispanic	0.28	0.78	35.89	
Asian	0.11	9.52	1.15	****
Native American	0.00	2.19	0.00	****
MBE	18.59	23.01	80.79	
WBE	51.35	12.24	419.45	
M/WBE	69.94	35.25	198.39	
Support Activities for Agriculture and Forestry (NAICS 115)				
African American	0.00	3.98	0.00	****
Hispanic	0.00	2.63	0.00	***
Asian	0.00	0.00		
Native American	0.00	0.00		
MBE	0.00	6.60	0.00	****
WBE	84.12	18.26	460.75	
M/WBE	84.12	24.86	338.36	
Machinery Manufacturing (NAICS 333)				
African American	0.00	9.57	0.00	****
Hispanic	0.00	0.60	0.00	****
Asian	0.00	9.60	0.00	****
Native American	0.00	2.12	0.00	****
MBE	0.00	21.88	0.00	****
WBE	0.00	12.08	0.00	****
M/WBE	0.00	33.96	0.00	****
Miscellaneous Store Retailers (NAICS 453)				
African American	0.00	8.63	0.00	****
Hispanic	0.00	2.54	0.00	****
Asian	0.00	13.11	0.00	****
Native American	0.00	0.76	0.00	***
MBE	0.00	25.04	0.00	****
WBE	49.79	23.62	210.82	
M/WBE	49.79	48.66	102.33	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Motion Picture and Sound Recording Industries (NAICS 512)				
African American	7.12	13.86	51.33	
Hispanic	92.25	1.77	5197.87	
Asian	0.00	5.53	0.00	****
Native American	0.00	0.24	0.00	
MBE	99.37	21.40	464.25	
WBE	0.00	30.76	0.00	****
M/WBE	99.37	52.16	190.50	
Computer and Electronic Product Manufacturing (NAICS 334)				
African American	0.00	7.44	0.00	****
Hispanic	0.00	0.33	0.00	***
Asian	0.00	9.48	0.00	****
Native American	0.00	1.16	0.00	****
MBE	0.00	18.40	0.00	****
WBE	0.15	16.76	0.88	****
M/WBE	0.15	35.16	0.42	****
Performing Arts, Spectator Sports, and Related Industries (NAICS 711)				
African American	0.00	17.52	0.00	****
Hispanic	0.00	3.02	0.00	****
Asian	0.00	7.67	0.00	****
Native American	0.00	0.28	0.00	
MBE	0.00	28.49	0.00	****
WBE	0.00	18.94	0.00	****
M/WBE	0.00	47.43	0.00	****
Electronics and Appliance Stores (NAICS 443)				
African American	0.00	8.63	0.00	****
Hispanic	0.00	3.07	0.00	****
Asian	0.00	11.17	0.00	****
Native American	0.00	0.65	0.00	
MBE	0.00	23.51	0.00	****
WBE	0.00	19.53	0.00	****
M/WBE	0.00	43.04	0.00	****
Printing and Related Support Activities (NAICS 323)				
African American	0.00	8.23	0.00	****
Hispanic	0.00	0.15	0.00	
Asian	0.00	8.87	0.00	****
Native American	0.00	2.43	0.00	****
MBE	0.00	19.67	0.00	****
WBE	94.18	22.25	423.28	
M/WBE	94.18	41.92	224.66	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Gasoline Stations (NAICS 447)				
African American	84.49	5.65	1496.10	
Hispanic	0.00	2.70	0.00	
Asian	0.00	17.60	0.00	****
Native American	0.00	0.19	0.00	
MBE	84.49	26.14	323.21	
WBE	0.00	20.43	0.00	****
M/WBE	84.49	46.57	181.43	
Telecommunications (NAICS 517)				
African American	0.00	13.47	0.00	****
Hispanic	0.00	5.07	0.00	****
Asian	0.00	5.58	0.00	****
Native American	0.00	0.03	0.00	
MBE	0.00	24.16	0.00	****
WBE	0.00	17.37	0.00	****
M/WBE	0.00	41.53	0.00	****
Ambulatory Health Care Services (NAICS 621)				
African American	0.00	14.76	0.00	****
Hispanic	0.00	2.71	0.00	****
Asian	0.00	7.34	0.00	****
Native American	0.00	0.00	0.00	
MBE	0.00	24.82	0.00	****
WBE	79.98	18.00	444.41	
M/WBE	79.98	42.81	186.82	
Nonstore Retailers (NAICS 454)				
African American	0.47	6.60	7.14	
Hispanic	0.00	2.52	0.00	****
Asian	0.00	16.11	0.00	****
Native American	0.00	0.30	0.00	
MBE	0.47	25.54	1.84	****
WBE	75.61	20.71	365.13	
M/WBE	76.08	46.25	164.51	
Insurance Carriers and Related Activities (NAICS 524)				
African American	0.00	11.39	0.00	****
Hispanic	0.00	1.06	0.00	**
Asian	0.00	5.08	0.00	****
Native American	0.00	0.00		
MBE	0.00	17.54	0.00	****
WBE	61.76	26.57	232.41	
M/WBE	61.76	44.11	140.01	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Personal and Laundry Services (NAICS 812)				
African American	0.00	25.77	0.00	****
Hispanic	0.00	5.87	0.00	****
Asian	0.00	7.36	0.00	****
Native American	0.00	0.12	0.00	
MBE	0.00	39.12	0.00	****
WBE	0.00	17.93	0.00	****
M/WBE	0.00	57.05	0.00	****
Chemical Manufacturing (NAICS 325)				
African American	0.00	6.38	0.00	****
Hispanic	0.00	0.99	0.00	**
Asian	0.00	8.40	0.00	****
Native American	0.00	0.88	0.00	**
MBE	0.00	16.65	0.00	****
WBE	0.00	19.31	0.00	****
M/WBE	0.00	35.96	0.00	****
Food Services and Drinking Places (NAICS 722)				
African American	0.00	13.12	0.00	****
Hispanic	0.00	1.46	0.00	****
Asian	0.00	4.24	0.00	****
Native American	0.00	0.38	0.00	
MBE	0.00	19.21	0.00	****
WBE	0.00	30.41	0.00	****
M/WBE	0.00	49.62	0.00	****
Transportation Equipment Manufacturing (NAICS 336)				
African American	0.00	3.21	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	6.50	0.00	****
Native American	0.00	0.66	0.00	****
MBE	0.00	10.37	0.00	****
WBE	0.00	31.48	0.00	****
M/WBE	0.00	41.86	0.00	****
Securities, Commodity Contracts, and Other Financial Investments and Related Activities (NAICS 523)				
African American	5.10	13.57	37.63	**
Hispanic	0.00	0.32	0.00	
Asian	0.00	10.23	0.00	****
Native American	0.00	0.00		
MBE	5.10	24.12	21.17	****
WBE	0.00	24.98	0.00	****
M/WBE	5.10	49.10	10.40	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Plastics and Rubber Products Manufacturing (NAICS 326)				
African American	20.82	8.42	247.23	
Hispanic	0.00	0.00		
Asian	0.00	9.03	0.00	****
Native American	0.00	2.30	0.00	
MBE	20.82	19.75	105.39	
WBE	43.11	13.60	317.00	
M/WBE	63.92	33.35	191.66	
Food and Beverage Stores (NAICS 445)				
African American	0.00	5.73	0.00	
Hispanic	0.00	2.89	0.00	
Asian	0.00	17.01	0.00	****
Native American	0.00	0.23	0.00	
MBE	0.00	25.87	0.00	****
WBE	0.00	21.60	0.00	****
M/WBE	0.00	47.46	0.00	****
Textile Product Mills (NAICS 314)				
African American	0.00	10.46	0.00	****
Hispanic	0.00	0.03	0.00	
Asian	0.00	9.32	0.00	****
Native American	0.00	2.39	0.00	
MBE	0.00	22.20	0.00	****
WBE	67.61	21.79	310.31	
M/WBE	67.61	43.99	153.70	
Utilities (NAICS 221)				
African American	0.00	3.02	0.00	****
Hispanic	0.00	2.56	0.00	****
Asian	0.00	0.00		
Native American	0.00	0.00		
MBE	0.00	5.58	0.00	****
WBE	0.00	13.16	0.00	****
M/WBE	0.00	18.75	0.00	****
Water Transportation (NAICS 483)				
African American	0.00	7.66	0.00	
Hispanic	0.00	2.76	0.00	
Asian	0.00	7.97	0.00	
Native American	0.00	0.00		
MBE	0.00	18.39	0.00	
WBE	0.00	18.49	0.00	
M/WBE	0.00	36.88	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Educational Services (NAICS 611)				
African American	51.10	17.08	299.13	
Hispanic	0.00	2.71	0.00	****
Asian	0.00	7.33	0.00	****
Native American	0.00	0.28	0.00	
MBE	51.10	27.40	186.49	
WBE	0.00	20.44	0.00	****
M/WBE	51.10	47.84	106.80	
Crop Production (NAICS 111)				
African American	0.00	2.68	0.00	
Hispanic	0.00	2.67	0.00	
Asian	0.00	0.01	0.00	
Native American	0.00	0.00		
MBE	0.00	5.36	0.00	
WBE	0.00	17.62	0.00	
M/WBE	0.00	22.98	0.00	
Textile Mills (NAICS 313)				
African American	0.00	6.66	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	8.29	0.00	****
Native American	0.00	2.43	0.00	
MBE	0.00	17.38	0.00	****
WBE	100.00	26.34	379.67	
M/WBE	100.00	43.72	228.72	
Air Transportation (NAICS 481)				
African American	0.00	10.40	0.00	****
Hispanic	0.00	5.12	0.00	*
Asian	0.00	8.77	0.00	****
Native American	0.00	0.04	0.00	
MBE	0.00	24.33	0.00	****
WBE	0.00	12.94	0.00	****
M/WBE	0.00	37.27	0.00	****
Paper Manufacturing (NAICS 322)				
African American	0.00	6.98	0.00	
Hispanic	0.00	0.00		
Asian	0.00	9.30	0.00	
Native American	0.00	2.33	0.00	
MBE	0.00	18.60	0.00	****
WBE	0.00	9.30	0.00	
M/WBE	0.00	27.91	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Motor Vehicle and Parts Dealers (NAICS 441)				
African American	7.57	8.90	85.10	
Hispanic	0.00	2.87	0.00	****
Asian	0.00	5.40	0.00	****
Native American	0.00	0.89	0.00	****
MBE	7.57	18.06	41.94	
WBE	0.00	19.71	0.00	****
M/WBE	7.57	37.77	20.05	****
Health and Personal Care Stores (NAICS 446)				
African American	0.00	7.93	0.00	****
Hispanic	0.00	2.94	0.00	****
Asian	0.00	15.01	0.00	****
Native American	0.00	0.46	0.00	
MBE	0.00	26.34	0.00	****
WBE	0.00	24.31	0.00	****
M/WBE	0.00	50.66	0.00	****
Sporting Goods, Hobby, Book, and Music Stores (NAICS 451)				
African American	0.00	9.05	0.00	****
Hispanic	0.00	2.22	0.00	
Asian	0.00	3.93	0.00	****
Native American	0.00	0.86	0.00	
MBE	0.00	16.06	0.00	****
WBE	0.00	30.61	0.00	****
M/WBE	0.00	46.67	0.00	****
Warehousing and Storage (NAICS 493)				
African American	0.00	8.89	0.00	****
Hispanic	0.00	2.69	0.00	
Asian	0.00	8.94	0.00	****
Native American	0.00	0.00		
MBE	0.00	20.52	0.00	****
WBE	0.00	14.51	0.00	****
M/WBE	0.00	35.03	0.00	****
Couriers and Messengers (NAICS 492)				
African American	0.00	15.57	0.00	****
Hispanic	0.00	3.94	0.00	****
Asian	0.00	8.93	0.00	****
Native American	0.00	0.00		
MBE	0.00	28.44	0.00	****
WBE	0.00	13.73	0.00	****
M/WBE	0.00	42.17	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Broadcasting (except Internet) (NAICS 515)				
African American	0.00	13.50	0.00	****
Hispanic	0.00	6.55	0.00	****
Asian	0.00	4.33	0.00	****
Native American	0.00	0.00		
MBE	0.00	24.38	0.00	****
WBE	0.00	10.64	0.00	****
M/WBE	0.00	35.02	0.00	****

Source and Notes: See Table 7.14A.

Table 7.16. Industry Sub-Sector Disparity Results for State of Maryland AE-CRS Contracting, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Professional, Scientific, and Technical Services (NAICS 541)				
African American	3.10	9.69	31.94	****
Hispanic	0.55	3.92	14.03	****
Asian	9.89	11.48	86.18	
Native American	0.00	0.39	0.00	****
MBE	13.54	25.48	53.12	****
WBE	9.88	15.16	65.16	***
M/WBE	23.42	40.65	57.61	****
Specialty Trade Contractors (NAICS 238)				
African American	9.84	6.79	144.92	
Hispanic	25.84	3.03	852.93	
Asian	0.00	2.70	0.00	****
Native American	0.00	0.15	0.00	****
MBE	35.68	12.67	281.58	
WBE	1.62	10.80	14.98	****
M/WBE	37.29	23.47	158.90	
Administrative and Support Services (NAICS 561)				
African American	32.47	15.32	211.91	
Hispanic	0.76	3.31	22.95	*
Asian	0.00	5.47	0.00	****
Native American	0.00	0.17	0.00	****
MBE	33.23	24.28	136.88	
WBE	10.55	22.98	45.91	***
M/WBE	43.78	47.26	92.65	
Utilities (NAICS 221)				
African American	0.00	2.56	0.00	
Hispanic	0.00	2.56	0.00	****
Asian	0.00	0.00		
Native American	0.00	0.00		
MBE	0.00	5.13	0.00	****
WBE	0.00	12.83	0.00	****
M/WBE	0.00	17.96	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Heavy and Civil Engineering Construction (NAICS 237)				
African American	39.71	7.98	497.88	
Hispanic	0.44	3.12	14.11	****
Asian	0.73	0.75	97.51	
Native American	0.00	0.44	0.00	****
MBE	40.88	12.29	332.72	
WBE	11.08	9.97	111.03	
M/WBE	51.96	22.26	233.39	
Construction of Buildings (NAICS 236)				
African American	3.25	8.87	36.66	****
Hispanic	0.00	4.32	0.00	****
Asian	0.00	2.41	0.00	****
Native American	0.52	0.66	78.81	
MBE	3.77	16.25	23.18	****
WBE	1.23	13.92	8.86	****
M/WBE	5.00	30.17	16.58	****
Computer and Electronic Product Manufacturing (NAICS 334)				
African American	4.27	10.21	41.84	
Hispanic	0.00	1.35	0.00	****
Asian	0.00	9.57	0.00	****
Native American	0.00	2.02	0.00	****
MBE	4.27	23.15	18.45	**
WBE	0.00	16.66	0.00	****
M/WBE	4.27	39.81	10.73	****
Waste Management and Remediation Services (NAICS 562)				
African American	76.91	17.71	434.26	
Hispanic	0.00	8.66	0.00	****
Asian	0.00	5.94	0.00	****
Native American	0.00	0.53	0.00	
MBE	76.91	32.84	234.19	
WBE	0.00	13.07	0.00	****
M/WBE	76.91	45.91	167.54	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Merchant Wholesalers, Durable Goods (NAICS 423)				
African American	0.00	5.69	0.00	****
Hispanic	0.00	0.32	0.00	****
Asian	12.40	8.25	150.22	
Native American	0.00	0.78	0.00	****
MBE	12.40	15.06	82.36	
WBE	10.99	18.08	60.77	****
M/WBE	23.39	33.14	70.58	****
Machinery Manufacturing (NAICS 333)				
African American	0.00	6.64	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	8.73	0.00	****
Native American	0.00	2.39	0.00	****
MBE	0.00	17.76	0.00	****
WBE	99.34	15.59	637.03	
M/WBE	99.34	33.35	297.83	
Rental and Leasing Services (NAICS 532)				
African American	0.00	14.04	0.00	****
Hispanic	0.00	6.66	0.00	****
Asian	0.00	3.90	0.00	****
Native American	0.00	0.00	0.00	
MBE	0.00	24.60	0.00	****
WBE	0.00	11.86	0.00	****
M/WBE	0.00	36.46	0.00	****
Primary Metal Manufacturing (NAICS 331)				
African American	0.00	6.98	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	9.30	0.00	****
Native American	0.00	2.33	0.00	
MBE	0.00	18.60	0.00	****
WBE	0.00	9.30	0.00	****
M/WBE	0.00	27.91	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Printing and Related Support Activities (NAICS 323)				
African American	0.00	5.22	0.00	****
Hispanic	0.00	0.27	0.00	***
Asian	0.00	9.64	0.00	
Native American	0.00	0.84	0.00	****
MBE	0.00	15.98	0.00	****
WBE	83.25	21.95	379.26	
M/WBE	83.25	37.93	219.48	
Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813)				
African American	0.00	22.13	0.00	****
Hispanic	0.00	5.15	0.00	****
Asian	0.00	6.37	0.00	****
Native American	0.00	0.23	0.00	
MBE	0.00	33.88	0.00	****
WBE	0.00	12.08	0.00	****
M/WBE	0.00	45.96	0.00	****
Merchant Wholesalers, Nondurable Goods (NAICS 424)				
African American	0.00	5.62	0.00	****
Hispanic	0.00	0.25	0.00	**
Asian	0.00	8.16	0.00	****
Native American	0.00	0.75	0.00	****
MBE	0.00	14.79	0.00	****
WBE	0.00	15.99	0.00	****
M/WBE	0.00	30.77	0.00	****
Support Activities for Transportation (NAICS 488)				
African American	0.00	13.71	0.00	****
Hispanic	0.00	3.81	0.00	***
Asian	0.00	8.94	0.00	****
Native American	0.00	0.00		
MBE	0.00	26.46	0.00	****
WBE	77.94	15.00	519.54	
M/WBE	77.94	41.47	187.95	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)				
African American	0.00	8.93	0.00	****
Hispanic	0.00	0.36	0.00	
Asian	0.00	6.63	0.00	****
Native American	0.00	0.64	0.00	
MBE	0.00	16.56	0.00	****
WBE	0.00	20.05	0.00	****
M/WBE	0.00	36.60	0.00	****
Repair and Maintenance (NAICS 811)				
African American	0.00	15.41	0.00	****
Hispanic	0.00	3.54	0.00	****
Asian	0.00	7.42	0.00	****
Native American	0.00	0.70	0.00	****
MBE	0.00	27.06	0.00	****
WBE	18.98	15.81	120.10	
M/WBE	18.98	42.87	44.28	****
Food Manufacturing (NAICS 311)				
African American	0.00	6.76	0.00	****
Hispanic	0.00	0.10	0.00	
Asian	0.00	8.74	0.00	****
Native American	0.00	2.45	0.00	
MBE	0.00	18.06	0.00	****
WBE	0.00	18.86	0.00	****
M/WBE	0.00	36.91	0.00	****
Truck Transportation (NAICS 484)				
African American	0.00	23.65	0.00	****
Hispanic	0.00	9.62	0.00	****
Asian	0.00	5.83	0.00	****
Native American	0.00	0.25	0.00	
MBE	0.00	39.33	0.00	****
WBE	70.20	10.65	658.92	
M/WBE	70.20	49.99	140.44	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Other Information Services (NAICS 519)				
African American	0.00	15.46	0.00	****
Hispanic	0.00	2.22	0.00	
Asian	0.00	7.62	0.00	****
Native American	0.00	0.00		
MBE	0.00	25.30	0.00	****
WBE	0.00	31.36	0.00	****
M/WBE	0.00	56.66	0.00	****
Miscellaneous Store Retailers (NAICS 453)				
African American	0.00	13.43	0.00	****
Hispanic	0.00	2.50	0.00	****
Asian	0.00	4.99	0.00	****
Native American	0.00	1.64	0.00	****
MBE	0.00	22.56	0.00	****
WBE	100.00	24.95	400.79	
M/WBE	100.00	47.51	210.49	
Data Processing, Hosting and Related Services (NAICS 518)				
African American	0.00	15.48	0.00	****
Hispanic	0.00	6.45	0.00	**
Asian	55.64	7.77	715.79	
Native American	0.00	0.30	0.00	
MBE	55.64	30.00	185.47	
WBE	0.00	19.44	0.00	****
M/WBE	55.64	49.44	112.54	
Rail Transportation (NAICS 482)				
African American	0.00	8.30	0.00	****
Hispanic	0.00	2.79	0.00	****
Asian	0.00	8.34	0.00	****
Native American	0.00	0.00		
MBE	0.00	19.43	0.00	****
WBE	0.00	12.12	0.00	****
M/WBE	0.00	31.55	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Miscellaneous Manufacturing (NAICS 339)				
African American	0.00	7.05	0.00	****
Hispanic	0.00	0.32	0.00	***
Asian	0.00	9.84	0.00	****
Native American	0.00	2.57	0.00	****
MBE	0.00	19.78	0.00	****
WBE	0.00	14.12	0.00	****
M/WBE	0.00	33.91	0.00	****
Air Transportation (NAICS 481)				
African American	0.00	10.40	0.00	****
Hispanic	0.00	5.12	0.00	*
Asian	0.00	8.77	0.00	****
Native American	0.00	0.04	0.00	
MBE	0.00	24.33	0.00	****
WBE	100.00	12.94	772.50	
M/WBE	100.00	37.27	268.28	
Electronics and Appliance Stores (NAICS 443)				
African American	0.00	8.79	0.00	****
Hispanic	0.00	2.98	0.00	****
Asian	0.00	16.48	0.00	****
Native American	0.00	0.74	0.00	
MBE	0.00	28.99	0.00	****
WBE	0.00	21.54	0.00	****
M/WBE	0.00	50.52	0.00	****
Nonmetallic Mineral Product Manufacturing (NAICS 327)				
African American	0.00	12.34	0.00	****
Hispanic	0.00	0.17	0.00	*
Asian	0.00	7.51	0.00	****
Native American	0.00	1.94	0.00	****
MBE	0.00	21.97	0.00	****
WBE	0.00	19.20	0.00	****
M/WBE	0.00	41.17	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Securities, Commodity Contracts, and Other Financial Investments and Related Activities (NAICS 523)				
African American	0.00	11.72	0.00	****
Hispanic	0.00	0.26	0.00	
Asian	0.00	5.73	0.00	****
Native American	0.00	0.00		
MBE	0.00	17.71	0.00	****
WBE	0.00	25.72	0.00	****
M/WBE	0.00	43.43	0.00	****
Ambulatory Health Care Services (NAICS 621)				
African American	0.00	9.27	0.00	****
Hispanic	0.00	0.79	0.00	****
Asian	0.00	5.59	0.00	****
Native American	0.00	0.20	0.00	****
MBE	0.00	15.86	0.00	****
WBE	0.00	29.99	0.00	****
M/WBE	0.00	45.85	0.00	****
Fabricated Metal Product Manufacturing (NAICS 332)				
African American	0.00	6.24	0.00	****
Hispanic	0.00	1.16	0.00	****
Asian	0.00	8.48	0.00	****
Native American	0.00	1.25	0.00	****
MBE	0.00	17.13	0.00	****
WBE	0.00	15.39	0.00	****
M/WBE	0.00	32.52	0.00	****
Furniture and Home Furnishings Stores (NAICS 442)				
African American	0.00	6.74	0.00	****
Hispanic	0.00	2.59	0.00	****
Asian	0.00	15.56	0.00	****
Native American	0.00	0.35	0.00	
MBE	0.00	25.25	0.00	****
WBE	0.00	23.38	0.00	****
M/WBE	0.00	48.64	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Real Estate (NAICS 531)				
African American	0.00	11.03	0.00	****
Hispanic	0.00	0.74	0.00	
Asian	0.00	4.84	0.00	****
Native American	0.00	0.00		
MBE	0.00	16.61	0.00	****
WBE	100.00	30.26	330.43	
M/WBE	100.00	46.87	213.35	
Insurance Carriers and Related Activities (NAICS 524)				
African American	0.00	11.21	0.00	****
Hispanic	0.00	1.51	0.00	****
Asian	0.00	4.73	0.00	****
Native American	0.00	0.34	0.00	
MBE	0.00	17.79	0.00	****
WBE	0.00	29.00	0.00	****
M/WBE	0.00	46.80	0.00	****
Museums, Historical Sites, and Similar Institutions (NAICS 712)				
African American	0.00	15.36	0.00	
Hispanic	0.00	2.44	0.00	
Asian	0.00	7.28	0.00	
Native American	0.00	0.25	0.00	
MBE	0.00	25.33	0.00	
WBE	0.00	16.70	0.00	
M/WBE	0.00	42.03	0.00	
Publishing Industries (except Internet) (NAICS 511)				
African American	0.00	14.20	0.00	****
Hispanic	0.00	6.26	0.00	****
Asian	0.00	8.86	0.00	****
Native American	0.00	0.19	0.00	
MBE	0.00	29.51	0.00	****
WBE	0.00	12.35	0.00	****
M/WBE	0.00	41.86	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Motion Picture and Sound Recording Industries (NAICS 512)				
African American	0.00	13.87	0.00	****
Hispanic	0.00	1.78	0.00	*
Asian	0.00	5.53	0.00	****
Native American	0.00	0.24	0.00	
MBE	0.00	21.41	0.00	****
WBE	0.00	30.78	0.00	****
M/WBE	0.00	52.19	0.00	****
Performing Arts, Spectator Sports, and Related Industries (NAICS 711)				
African American	0.00	16.29	0.00	****
Hispanic	0.00	2.88	0.00	****
Asian	0.00	7.51	0.00	****
Native American	0.00	0.18	0.00	
MBE	0.00	26.86	0.00	****
WBE	100.00	31.83	314.15	
M/WBE	100.00	58.69	170.38	
Furniture and Related Product Manufacturing (NAICS 337)				
African American	0.00	22.33	0.00	****
Hispanic	0.00	4.17	0.00	****
Asian	0.00	11.27	0.00	****
Native American	0.00	1.67	0.00	****
MBE	0.00	39.43	0.00	****
WBE	0.00	17.28	0.00	****
M/WBE	0.00	56.71	0.00	****
Educational Services (NAICS 611)				
African American	0.00	19.59	0.00	****
Hispanic	0.00	2.99	0.00	****
Asian	0.00	7.32	0.00	****
Native American	0.00	0.57	0.00	**
MBE	0.00	30.48	0.00	****
WBE	0.00	26.46	0.00	****
M/WBE	0.00	56.94	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Mining (except Oil and Gas) (NAICS 212)				
African American	0.00	0.26	0.00	
Hispanic	0.00	0.26	0.00	
Asian	0.00	0.00		
Native American	0.00	0.00		
MBE	0.00	0.52	0.00	
WBE	0.00	17.43	0.00	****
M/WBE	0.00	17.96	0.00	****
Nonstore Retailers (NAICS 454)				
African American	0.00	7.56	0.00	****
Hispanic	0.00	2.45	0.00	****
Asian	0.00	15.18	0.00	****
Native American	0.00	1.21	0.00	****
MBE	0.00	26.41	0.00	****
WBE	0.00	21.39	0.00	****
M/WBE	0.00	47.80	0.00	****
Support Activities for Agriculture and Forestry (NAICS 115)				
African American	0.00	3.98	0.00	****
Hispanic	0.00	2.63	0.00	***
Asian	0.00	0.00		
Native American	0.00	0.00		
MBE	0.00	6.60	0.00	****
WBE	0.00	18.26	0.00	****
M/WBE	0.00	24.86	0.00	****
Food Services and Drinking Places (NAICS 722)				
African American	0.00	14.67	0.00	****
Hispanic	0.00	2.93	0.00	****
Asian	0.00	8.40	0.00	****
Native American	0.00	0.07	0.00	
MBE	0.00	26.07	0.00	****
WBE	100.00	17.67	565.79	
M/WBE	100.00	43.75	228.59	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Plastics and Rubber Products Manufacturing (NAICS 326)				
African American	0.00	7.90	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	9.11	0.00	****
Native American	0.00	2.31	0.00	
MBE	0.00	19.33	0.00	****
WBE	0.00	14.29	0.00	****
M/WBE	0.00	33.62	0.00	****
Motor Vehicle and Parts Dealers (NAICS 441)				
African American	0.00	5.67	0.00	****
Hispanic	0.00	2.56	0.00	****
Asian	0.00	15.72	0.00	****
Native American	0.00	0.54	0.00	
MBE	0.00	24.49	0.00	****
WBE	0.00	21.23	0.00	****
M/WBE	0.00	45.72	0.00	****
Support Activities for Mining (NAICS 213)				
African American	0.00	2.66	0.00	
Hispanic	0.00	2.66	0.00	
Asian	0.00	0.00		
Native American	0.00	0.00		
MBE	0.00	5.32	0.00	
WBE	0.00	17.14	0.00	
M/WBE	0.00	22.47	0.00	
Transit and Ground Passenger Transportation (NAICS 485)				
African American	0.00	11.29	0.00	****
Hispanic	0.00	2.48	0.00	****
Asian	0.00	7.07	0.00	****
Native American	0.00	0.00		
MBE	0.00	20.84	0.00	****
WBE	0.00	21.93	0.00	****
M/WBE	0.00	42.77	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Wood Product Manufacturing (NAICS 321)				
African American	0.00	3.42	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	7.20	0.00	****
Native American	0.00	0.68	0.00	*
MBE	0.00	11.30	0.00	****
WBE	0.00	23.17	0.00	****
M/WBE	0.00	34.47	0.00	****
Building Material and Garden Equipment and Supplies Dealers (NAICS 444)				
African American	0.00	9.32	0.00	****
Hispanic	0.00	2.64	0.00	****
Asian	0.00	4.92	0.00	****
Native American	0.00	0.94	0.00	****
MBE	0.00	17.82	0.00	****
WBE	0.00	20.60	0.00	****
M/WBE	0.00	38.42	0.00	****
Couriers and Messengers (NAICS 492)				
African American	0.00	15.57	0.00	****
Hispanic	0.00	3.94	0.00	****
Asian	0.00	8.93	0.00	****
Native American	0.00	0.00		
MBE	0.00	28.44	0.00	****
WBE	0.00	13.73	0.00	****
M/WBE	0.00	42.17	0.00	****

Source and Notes: See Table 7.14A.

Table 7.17. Industry Sub-Sector Disparity Results for State of Maryland Maintenance Contracting, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Administrative and Support Services (NAICS 561)				
African American	10.38	20.23	51.31	**
Hispanic	0.02	6.83	0.31	****
Asian	2.11	5.68	37.21	
Native American	0.00	0.28	0.00	****
MBE	12.51	33.01	37.91	****
WBE	8.82	16.34	53.99	
M/WBE	21.33	49.35	43.23	****
Specialty Trade Contractors (NAICS 238)				
African American	6.62	7.21	91.77	
Hispanic	7.61	3.27	232.55	
Asian	0.43	2.70	15.74	****
Native American	0.00	0.15	0.00	****
MBE	14.65	13.34	109.87	
WBE	30.50	11.06	275.72	
M/WBE	45.15	24.40	185.06	
Heavy and Civil Engineering Construction (NAICS 237)				
African American	0.50	8.84	5.66	****
Hispanic	0.01	3.70	0.30	****
Asian	0.00	1.05	0.00	****
Native American	0.00	0.39	0.00	****
MBE	0.51	13.98	3.66	****
WBE	18.94	9.90	191.44	
M/WBE	19.46	23.88	81.48	
Professional, Scientific, and Technical Services (NAICS 541)				
African American	2.91	14.72	19.79	****
Hispanic	0.35	2.90	11.97	****
Asian	5.38	8.78	61.33	**
Native American	0.00	0.34	0.00	****
MBE	8.64	26.74	32.32	****
WBE	2.09	23.66	8.82	****
M/WBE	10.73	50.40	21.29	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction of Buildings (NAICS 236)				
African American	5.34	9.62	55.51	***
Hispanic	0.82	4.84	17.04	****
Asian	0.00	2.72	0.00	****
Native American	0.00	0.76	0.00	****
MBE	6.16	17.93	34.36	****
WBE	0.96	12.86	7.49	****
M/WBE	7.12	30.79	23.14	****
Repair and Maintenance (NAICS 811)				
African American	0.01	12.43	0.10	****
Hispanic	0.00	2.68	0.00	****
Asian	0.00	7.44	0.00	****
Native American	0.00	0.89	0.00	****
MBE	0.01	23.45	0.05	****
WBE	0.02	14.93	0.13	****
M/WBE	0.03	38.38	0.08	****
Transit and Ground Passenger Transportation (NAICS 485)				
African American	0.00	42.42	0.00	****
Hispanic	0.00	5.97	0.00	****
Asian	0.00	4.44	0.00	****
Native American	0.00	0.08	0.00	
MBE	0.00	52.91	0.00	****
WBE	0.00	8.79	0.00	****
M/WBE	0.00	61.70	0.00	****
Transportation Equipment Manufacturing (NAICS 336)				
African American	0.00	3.81	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	6.89	0.00	****
Native American	0.00	1.16	0.00	****
MBE	0.00	11.86	0.00	****
WBE	0.00	28.68	0.00	****
M/WBE	0.00	40.54	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Utilities (NAICS 221)				
African American	0.00	2.56	0.00	
Hispanic	0.00	2.56	0.00	****
Asian	0.00	0.00		
Native American	0.00	0.00		
MBE	0.00	5.13	0.00	****
WBE	0.00	12.82	0.00	****
M/WBE	0.00	17.95	0.00	****
Merchant Wholesalers, Durable Goods (NAICS 423)				
African American	4.88	5.18	94.30	
Hispanic	0.00	0.41	0.00	****
Asian	0.83	8.26	10.10	****
Native American	0.00	0.81	0.00	****
MBE	5.72	14.66	38.98	****
WBE	28.92	18.12	159.64	
M/WBE	34.64	32.78	105.67	
Nonstore Retailers (NAICS 454)				
African American	0.00	7.56	0.00	****
Hispanic	0.00	2.45	0.00	****
Asian	0.00	15.18	0.00	****
Native American	0.00	1.21	0.00	****
MBE	0.00	26.40	0.00	****
WBE	0.32	21.39	1.48	****
M/WBE	0.32	47.79	0.66	****
Support Activities for Transportation (NAICS 488)				
African American	0.00	8.19	0.00	****
Hispanic	0.00	2.82	0.00	
Asian	0.00	8.30	0.00	****
Native American	0.00	0.00		
MBE	0.00	19.31	0.00	****
WBE	0.00	14.56	0.00	****
M/WBE	0.00	33.87	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Waste Management and Remediation Services (NAICS 562)				
African American	6.85	18.17	37.70	**
Hispanic	0.00	7.74	0.00	****
Asian	0.00	3.95	0.00	****
Native American	0.00	0.06	0.00	
MBE	6.85	29.92	22.89	****
WBE	3.16	8.91	35.41	
M/WBE	10.01	38.84	25.76	****
Social Assistance (NAICS 624)				
African American	0.00	8.25	0.00	****
Hispanic	0.00	0.10	0.00	
Asian	0.00	3.87	0.00	****
Native American	0.00	0.07	0.00	
MBE	0.00	12.28	0.00	****
WBE	0.00	30.27	0.00	****
M/WBE	0.00	42.55	0.00	****
Miscellaneous Manufacturing (NAICS 339)				
African American	0.00	5.51	0.00	****
Hispanic	0.00	0.67	0.00	****
Asian	0.00	7.93	0.00	****
Native American	0.00	0.77	0.00	****
MBE	0.00	14.87	0.00	****
WBE	29.52	24.69	119.58	
M/WBE	29.52	39.56	74.62	
Computer and Electronic Product Manufacturing (NAICS 334)				
African American	0.00	7.45	0.00	****
Hispanic	0.00	0.74	0.00	****
Asian	0.00	10.07	0.00	****
Native American	0.00	0.98	0.00	****
MBE	0.00	19.24	0.00	****
WBE	0.14	16.99	0.81	****
M/WBE	0.14	36.24	0.38	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Ambulatory Health Care Services (NAICS 621)				
African American	0.00	14.97	0.00	****
Hispanic	0.00	2.69	0.00	****
Asian	0.00	7.73	0.00	****
Native American	0.00	0.02	0.00	****
MBE	0.00	25.41	0.00	****
WBE	0.00	17.70	0.00	****
M/WBE	0.00	43.10	0.00	****
Truck Transportation (NAICS 484)				
African American	54.21	23.63	229.39	
Hispanic	1.14	9.42	12.10	****
Asian	0.00	5.84	0.00	****
Native American	0.00	0.24	0.00	
MBE	55.35	39.13	141.44	
WBE	4.21	10.98	38.36	
M/WBE	59.56	50.12	118.85	
Machinery Manufacturing (NAICS 333)				
African American	0.00	8.51	0.00	****
Hispanic	0.00	0.00	0.00	
Asian	0.00	8.23	0.00	****
Native American	0.00	2.07	0.00	****
MBE	0.00	18.81	0.00	****
WBE	0.00	9.02	0.00	****
M/WBE	0.00	27.83	0.00	****
Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)				
African American	0.00	8.66	0.00	****
Hispanic	0.00	0.02	0.00	
Asian	0.00	8.37	0.00	****
Native American	0.00	2.31	0.00	****
MBE	0.00	19.36	0.00	****
WBE	18.41	18.42	99.97	
M/WBE	18.41	37.78	48.74	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Gasoline Stations (NAICS 447)				
African American	0.00	5.65	0.00	****
Hispanic	0.00	2.70	0.00	
Asian	0.00	17.60	0.00	****
Native American	0.00	0.19	0.00	
MBE	0.00	26.14	0.00	****
WBE	0.00	20.43	0.00	****
M/WBE	0.00	46.57	0.00	****
Personal and Laundry Services (NAICS 812)				
African American	0.00	25.01	0.00	****
Hispanic	0.00	5.65	0.00	****
Asian	0.00	8.14	0.00	****
Native American	0.00	0.25	0.00	
MBE	0.00	39.05	0.00	****
WBE	0.00	17.89	0.00	****
M/WBE	0.00	56.93	0.00	****
Real Estate (NAICS 531)				
African American	0.00	14.10	0.00	****
Hispanic	0.00	5.36	0.00	****
Asian	0.00	4.21	0.00	****
Native American	0.00	0.00		
MBE	0.00	23.66	0.00	****
WBE	0.00	11.44	0.00	****
M/WBE	0.00	35.10	0.00	****
Miscellaneous Store Retailers (NAICS 453)				
African American	0.00	7.14	0.00	****
Hispanic	0.00	2.22	0.00	****
Asian	0.00	14.47	0.00	****
Native American	0.00	0.81	0.00	***
MBE	0.00	24.64	0.00	****
WBE	19.94	28.25	70.58	
M/WBE	19.94	52.89	37.70	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Nonmetallic Mineral Product Manufacturing (NAICS 327)				
African American	0.00	11.80	0.00	****
Hispanic	0.00	0.26	0.00	*
Asian	0.00	7.53	0.00	****
Native American	0.00	1.85	0.00	****
MBE	0.00	21.44	0.00	****
WBE	0.00	19.23	0.00	****
M/WBE	0.00	40.67	0.00	****
Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 81				
African American	0.00	7.39	0.00	****
Hispanic	0.00	0.18	0.00	
Asian	0.00	6.77	0.00	****
Native American	0.00	1.34	0.00	****
MBE	0.00	15.68	0.00	****
WBE	0.00	9.87	0.00	****
M/WBE	0.00	25.55	0.00	****
Support Activities for Agriculture and Forestry (NAICS 115)				
African American	0.00	3.98	0.00	****
Hispanic	0.00	2.63	0.00	***
Asian	0.00	0.00		
Native American	0.00	0.00		
MBE	0.00	6.60	0.00	****
WBE	98.83	18.26	541.34	
M/WBE	98.83	24.86	397.54	
Merchant Wholesalers, Nondurable Goods (NAICS 424)				
African American	16.34	5.81	281.33	
Hispanic	0.00	0.14	0.00	
Asian	0.00	8.85	0.00	****
Native American	0.00	0.90	0.00	****
MBE	16.34	15.69	104.15	
WBE	0.39	15.61	2.47	****
M/WBE	16.73	31.30	53.44	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Chemical Manufacturing (NAICS 325)				
African American	0.00	6.59	0.00	****
Hispanic	0.00	0.65	0.00	**
Asian	0.00	8.72	0.00	****
Native American	0.00	1.38	0.00	****
MBE	0.00	17.34	0.00	****
WBE	0.00	15.77	0.00	****
M/WBE	0.00	33.11	0.00	****
Fabricated Metal Product Manufacturing (NAICS 332)				
African American	0.00	6.46	0.00	****
Hispanic	0.00	0.69	0.00	****
Asian	0.00	8.45	0.00	****
Native American	0.00	1.91	0.00	****
MBE	0.00	17.52	0.00	****
WBE	46.57	15.80	294.66	
M/WBE	46.57	33.32	139.76	
Rail Transportation (NAICS 482)				
African American	0.00	8.30	0.00	****
Hispanic	83.73	2.79	2998.27	
Asian	0.00	8.34	0.00	****
Native American	0.00	0.00		
MBE	83.73	19.43	430.94	
WBE	0.00	12.12	0.00	****
M/WBE	83.73	31.55	265.40	
Rental and Leasing Services (NAICS 532)				
African American	0.00	14.31	0.00	****
Hispanic	0.00	6.27	0.00	****
Asian	0.00	4.27	0.00	****
Native American	0.00	0.07	0.00	
MBE	0.00	24.92	0.00	****
WBE	1.39	11.75	11.79	***
M/WBE	1.39	36.67	3.78	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Publishing Industries (except Internet) (NAICS 511)				
African American	0.00	14.20	0.00	****
Hispanic	0.00	6.26	0.00	****
Asian	0.00	8.86	0.00	****
Native American	0.00	0.19	0.00	
MBE	0.00	29.51	0.00	****
WBE	86.38	12.35	699.42	
M/WBE	86.38	41.86	206.36	
Securities, Commodity Contracts, and Other Financial Investments and Related Activities (NAICS 523)				
African American	100.00	11.72	853.11	
Hispanic	0.00	0.26	0.00	
Asian	0.00	5.73	0.00	****
Native American	0.00	0.00		
MBE	100.00	17.71	564.63	
WBE	0.00	25.72	0.00	****
M/WBE	100.00	43.43	230.24	
Furniture and Home Furnishings Stores (NAICS 442)				
African American	96.43	9.57	1007.53	
Hispanic	0.00	2.68	0.00	****
Asian	0.00	5.29	0.00	****
Native American	0.00	1.01	0.00	****
MBE	96.43	18.55	519.71	
WBE	0.00	20.76	0.00	****
M/WBE	96.43	39.31	245.29	
Mining (except Oil and Gas) (NAICS 212)				
African American	0.00	2.10	0.00	***
Hispanic	0.00	0.79	0.00	
Asian	0.00	0.00		
Native American	0.00	0.00		
MBE	0.00	2.90	0.00	***
WBE	0.00	14.99	0.00	****
M/WBE	0.00	17.89	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Electronics and Appliance Stores (NAICS 443)				
African American	0.00	8.52	0.00	****
Hispanic	0.00	3.05	0.00	****
Asian	0.00	11.40	0.00	****
Native American	0.00	0.63	0.00	
MBE	0.00	23.59	0.00	****
WBE	0.00	19.67	0.00	****
M/WBE	0.00	43.26	0.00	****
Telecommunications (NAICS 517)				
African American	0.00	13.66	0.00	****
Hispanic	0.00	5.55	0.00	****
Asian	0.00	5.67	0.00	****
Native American	0.00	0.01	0.00	
MBE	0.00	24.89	0.00	****
WBE	0.00	16.30	0.00	****
M/WBE	0.00	41.19	0.00	****
Performing Arts, Spectator Sports, and Related Industries (NAICS 711)				
African American	0.00	17.52	0.00	****
Hispanic	0.00	3.02	0.00	****
Asian	0.00	7.67	0.00	****
Native American	0.00	0.28	0.00	
MBE	0.00	28.49	0.00	****
WBE	0.00	18.94	0.00	****
M/WBE	0.00	47.43	0.00	****
Couriers and Messengers (NAICS 492)				
African American	0.00	15.30	0.00	****
Hispanic	0.00	3.68	0.00	****
Asian	0.00	9.43	0.00	****
Native American	0.00	0.00		
MBE	0.00	28.41	0.00	****
WBE	0.00	13.46	0.00	****
M/WBE	0.00	41.87	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Food and Beverage Stores (NAICS 445)				
African American	0.00	5.73	0.00	
Hispanic	0.00	2.89	0.00	
Asian	0.00	17.01	0.00	****
Native American	0.00	0.23	0.00	
MBE	0.00	25.87	0.00	****
WBE	0.00	21.60	0.00	****
M/WBE	0.00	47.46	0.00	****
Building Material and Garden Equipment and Supplies Dealers (NAICS 444)				
African American	0.00	8.45	0.00	****
Hispanic	0.00	2.69	0.00	****
Asian	0.00	8.96	0.00	****
Native American	0.00	0.69	0.00	****
MBE	0.00	20.78	0.00	****
WBE	0.00	21.72	0.00	****
M/WBE	0.00	42.50	0.00	****
Insurance Carriers and Related Activities (NAICS 524)				
African American	0.00	11.48	0.00	****
Hispanic	0.00	1.33	0.00	**
Asian	0.00	4.98	0.00	****
Native American	0.00	0.00		
MBE	0.00	17.79	0.00	****
WBE	0.00	25.61	0.00	****
M/WBE	0.00	43.39	0.00	****
Educational Services (NAICS 611)				
African American	0.00	14.80	0.00	****
Hispanic	0.00	2.44	0.00	****
Asian	0.00	7.30	0.00	****
Native American	0.00	0.00		
MBE	0.00	24.54	0.00	****
WBE	0.00	14.70	0.00	****
M/WBE	0.00	39.23	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Accommodation (NAICS 721)				
African American	0.00	14.23	0.00	****
Hispanic	0.00	2.63	0.00	
Asian	0.00	10.11	0.00	****
Native American	0.00	0.07	0.00	
MBE	0.00	27.03	0.00	****
WBE	0.00	16.24	0.00	****
M/WBE	0.00	43.27	0.00	****
Paper Manufacturing (NAICS 322)				
African American	0.00	12.79	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	8.72	0.00	
Native American	0.00	2.18	0.00	
MBE	0.00	23.69	0.00	****
WBE	0.00	8.72	0.00	
M/WBE	0.00	32.41	0.00	****

Source and Notes: See Table 7.14A.

Table 7.18. Industry Sub-Sector Disparity Results for State of Maryland IT Contracting, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Professional, Scientific, and Technical Services (NAICS 541)				
African American	6.19	14.12	43.84	****
Hispanic	0.40	3.55	11.16	****
Asian	10.61	14.17	74.91	
Native American	0.00	0.49	0.00	****
MBE	17.20	32.33	53.20	****
WBE	4.87	16.85	28.88	****
M/WBE	22.07	49.18	44.87	****
Telecommunications (NAICS 517)				
African American	0.00	15.62	0.00	****
Hispanic	0.00	6.28	0.00	****
Asian	0.00	5.85	0.00	****
Native American	0.00	0.12	0.00	
MBE	0.00	27.87	0.00	****
WBE	1.62	10.82	14.96	
M/WBE	1.62	38.69	4.18	****
Computer and Electronic Product Manufacturing (NAICS 334)				
African American	1.09	9.17	11.85	**
Hispanic	0.00	1.24	0.00	****
Asian	0.00	10.21	0.00	****
Native American	0.00	1.98	0.00	****
MBE	1.09	22.59	4.81	****
WBE	0.00	15.27	0.00	****
M/WBE	1.09	37.86	2.87	****
Publishing Industries (except Internet) (NAICS 511)				
African American	0.00	14.17	0.00	****
Hispanic	0.00	6.18	0.00	****
Asian	1.66	8.82	18.77	****
Native American	0.00	0.19	0.00	
MBE	1.66	29.36	5.64	****
WBE	0.00	12.58	0.00	****
M/WBE	1.66	41.94	3.95	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Merchant Wholesalers, Durable Goods (NAICS 423)				
African American	17.99	8.19	219.57	
Hispanic	0.00	1.53	0.00	****
Asian	44.07	11.62	379.31	
Native American	0.00	1.04	0.00	****
MBE	62.07	22.38	277.37	
WBE	3.16	18.35	17.20	****
M/WBE	65.22	40.73	160.14	
Electronics and Appliance Stores (NAICS 443)				
African American	0.00	8.79	0.00	****
Hispanic	0.00	2.98	0.00	****
Asian	0.00	16.48	0.00	****
Native American	0.00	0.74	0.00	
MBE	0.00	28.99	0.00	****
WBE	0.00	21.54	0.00	****
M/WBE	0.00	50.52	0.00	****
Administrative and Support Services (NAICS 561)				
African American	0.00	19.41	0.00	****
Hispanic	0.00	4.42	0.00	****
Asian	0.00	7.16	0.00	****
Native American	0.00	0.73	0.00	****
MBE	0.00	31.73	0.00	****
WBE	43.09	19.70	218.70	
M/WBE	43.09	51.43	83.79	
Specialty Trade Contractors (NAICS 238)				
African American	0.00	7.63	0.00	****
Hispanic	0.00	2.81	0.00	****
Asian	0.00	2.77	0.00	****
Native American	0.00	0.19	0.00	****
MBE	0.00	13.40	0.00	****
WBE	0.33	10.89	3.02	****
M/WBE	0.33	24.29	1.35	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Miscellaneous Store Retailers (NAICS 453)				
African American	0.00	13.43	0.00	****
Hispanic	0.00	2.50	0.00	****
Asian	0.00	4.99	0.00	****
Native American	0.00	1.64	0.00	****
MBE	0.00	22.56	0.00	****
WBE	0.00	24.95	0.00	****
M/WBE	0.00	47.51	0.00	****
Printing and Related Support Activities (NAICS 323)				
African American	0.00	5.17	0.00	****
Hispanic	0.00	0.27	0.00	***
Asian	0.00	9.65	0.00	****
Native American	0.00	0.82	0.00	****
MBE	0.00	15.91	0.00	****
WBE	0.00	22.02	0.00	****
M/WBE	0.00	37.93	0.00	****
Credit Intermediation and Related Activities (NAICS 522)				
African American	0.00	12.15	0.00	****
Hispanic	0.00	0.30	0.00	
Asian	0.00	5.62	0.00	****
Native American	0.00	0.00		
MBE	0.00	18.08	0.00	****
WBE	0.00	25.85	0.00	****
M/WBE	0.00	43.94	0.00	****
Rail Transportation (NAICS 482)				
African American	0.00	8.30	0.00	****
Hispanic	0.00	2.79	0.00	****
Asian	0.00	8.34	0.00	****
Native American	0.00	0.00		
MBE	0.00	19.43	0.00	****
WBE	0.00	12.12	0.00	****
M/WBE	0.00	31.55	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)				
African American	0.00	5.21	0.00	****
Hispanic	0.00	0.93	0.00	**
Asian	0.00	8.07	0.00	****
Native American	0.00	0.68	0.00	**
MBE	0.00	14.89	0.00	****
WBE	0.00	17.90	0.00	****
M/WBE	0.00	32.79	0.00	****
Other Information Services (NAICS 519)				
African American	0.00	16.56	0.00	****
Hispanic	0.00	4.86	0.00	****
Asian	0.00	7.08	0.00	****
Native American	0.00	0.21	0.00	
MBE	0.00	28.72	0.00	****
WBE	0.00	17.65	0.00	****
M/WBE	0.00	46.37	0.00	****
Construction of Buildings (NAICS 236)				
African American	0.00	12.10	0.00	****
Hispanic	0.00	5.64	0.00	****
Asian	67.23	3.81	1766.40	
Native American	0.00	1.03	0.00	****
MBE	67.23	22.58	297.76	
WBE	0.00	12.16	0.00	****
M/WBE	67.23	34.74	193.54	
Warehousing and Storage (NAICS 493)				
African American	0.00	8.69	0.00	****
Hispanic	0.00	2.75	0.00	
Asian	0.00	8.48	0.00	****
Native American	0.00	0.00		
MBE	0.00	19.91	0.00	****
WBE	0.00	12.96	0.00	****
M/WBE	0.00	32.87	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Machinery Manufacturing (NAICS 333)				
African American	0.00	7.90	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	8.30	0.00	****
Native American	0.00	2.30	0.00	****
MBE	0.00	18.51	0.00	****
WBE	0.00	15.58	0.00	****
M/WBE	0.00	34.08	0.00	****
Fabricated Metal Product Manufacturing (NAICS 332)				
African American	0.00	5.58	0.00	****
Hispanic	0.00	1.15	0.00	****
Asian	0.00	8.28	0.00	****
Native American	0.00	1.08	0.00	****
MBE	0.00	16.09	0.00	****
WBE	0.00	18.14	0.00	****
M/WBE	0.00	34.23	0.00	****
Educational Services (NAICS 611)				
African American	0.00	19.59	0.00	****
Hispanic	0.00	2.99	0.00	****
Asian	0.00	7.32	0.00	****
Native American	0.00	0.57	0.00	**
MBE	0.00	30.48	0.00	****
WBE	0.00	26.46	0.00	****
M/WBE	0.00	56.94	0.00	****
Sporting Goods, Hobby, Book, and Music Stores (NAICS 451)				
African American	0.00	9.76	0.00	****
Hispanic	0.00	2.68	0.00	
Asian	0.00	4.59	0.00	****
Native American	0.00	0.84	0.00	
MBE	0.00	17.86	0.00	****
WBE	0.00	24.69	0.00	****
M/WBE	0.00	42.55	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Nonstore Retailers (NAICS 454)				
African American	0.00	10.51	0.00	****
Hispanic	0.00	2.52	0.00	****
Asian	0.00	4.50	0.00	****
Native American	0.00	0.72	0.00	
MBE	0.00	18.25	0.00	****
WBE	0.00	27.99	0.00	****
M/WBE	0.00	46.24	0.00	****
Repair and Maintenance (NAICS 811)				
African American	100.00	28.71	348.35	
Hispanic	0.00	6.23	0.00	****
Asian	0.00	9.93	0.00	****
Native American	0.00	0.05	0.00	
MBE	100.00	44.92	222.62	
WBE	0.00	14.91	0.00	****
M/WBE	100.00	59.83	167.15	
Merchant Wholesalers, Nondurable Goods (NAICS 424)				
African American	0.00	12.55	0.00	****
Hispanic	0.00	0.69	0.00	****
Asian	0.00	9.24	0.00	****
Native American	0.00	0.80	0.00	****
MBE	0.00	23.28	0.00	****
WBE	0.00	24.43	0.00	****
M/WBE	0.00	47.71	0.00	****

Source and Notes: See Table 7.14A.

Table 7.19. Industry Sub-Sector Disparity Results for State of Maryland Services Contracting, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Insurance Carriers and Related Activities (NAICS 524)				
African American	0.06	12.09	0.46	
Hispanic	0.00	2.63	0.00	****
Asian	0.04	4.94	0.85	
Native American	0.00	0.00	0.00	
MBE	0.10	19.66	0.50	**
WBE	0.00	22.16	0.00	****
M/WBE	0.10	41.83	0.23	****
Professional, Scientific, and Technical Services (NAICS 541)				
African American	4.72	12.32	38.30	****
Hispanic	0.21	3.51	6.00	****
Asian	4.37	10.32	42.39	****
Native American	0.00	0.35	0.00	****
MBE	9.30	26.50	35.11	****
WBE	9.38	19.90	47.13	****
M/WBE	18.68	46.40	40.27	****
Ambulatory Health Care Services (NAICS 621)				
African American	0.48	14.97	3.23	****
Hispanic	0.68	2.63	25.75	
Asian	0.67	7.65	8.77	****
Native American	0.00	0.04	0.00	****
MBE	1.83	25.29	7.24	****
WBE	2.50	18.17	13.77	****
M/WBE	4.33	43.46	9.97	****
Transit and Ground Passenger Transportation (NAICS 485)				
African American	6.30	34.86	18.06	****
Hispanic	2.09	6.28	33.26	
Asian	0.00	5.48	0.00	****
Native American	0.00	0.08	0.00	
MBE	8.38	46.70	17.95	****
WBE	0.00	10.81	0.00	****
M/WBE	8.38	57.50	14.58	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Administrative and Support Services (NAICS 561)				
African American	23.04	19.46	118.39	
Hispanic	1.39	6.21	22.42	***
Asian	3.45	6.07	56.82	
Native American	0.00	0.35	0.00	****
MBE	27.88	32.09	86.87	
WBE	34.15	17.48	195.37	
M/WBE	62.02	49.57	125.13	
Computer and Electronic Product Manufacturing (NAICS 334)				
African American	0.33	9.78	3.39	****
Hispanic	0.00	0.51	0.00	***
Asian	0.00	9.04	0.00	****
Native American	0.00	2.29	0.00	****
MBE	0.33	21.61	1.53	****
WBE	0.02	11.61	0.19	****
M/WBE	0.35	33.22	1.06	****
Rail Transportation (NAICS 482)				
African American	0.09	8.30	1.10	
Hispanic	0.00	2.79	0.06	****
Asian	0.00	8.34	0.00	****
Native American	0.00	0.00		
MBE	0.09	19.43	0.48	
WBE	0.02	12.12	0.17	**
M/WBE	0.11	31.55	0.36	**
Social Assistance (NAICS 624)				
African American	1.01	8.76	11.58	***
Hispanic	0.00	0.16	0.00	
Asian	0.19	4.01	4.74	***
Native American	0.00	0.04	9.80	
MBE	1.21	12.97	9.32	****
WBE	49.69	29.37	169.18	
M/WBE	50.90	42.34	120.21	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Nursing and Residential Care Facilities (NAICS 623)				
African American	49.56	10.32	480.07	
Hispanic	0.00	0.15	0.00	
Asian	0.00	4.05	0.00	****
Native American	0.00	0.03	0.00	
MBE	49.56	14.55	340.61	
WBE	0.00	28.54	0.00	****
M/WBE	49.56	43.09	115.01	
Credit Intermediation and Related Activities (NAICS 522)				
African American	0.00	11.46	0.00	****
Hispanic	0.00	0.49	0.00	
Asian	0.00	5.42	0.00	****
Native American	0.00	0.00		
MBE	0.00	17.38	0.00	****
WBE	91.68	26.70	343.33	
M/WBE	91.68	44.08	207.97	
Educational Services (NAICS 611)				
African American	0.00	17.34	0.00	****
Hispanic	0.00	2.75	0.00	****
Asian	0.00	7.46	0.00	****
Native American	0.00	0.30	0.00	
MBE	0.00	27.84	0.00	****
WBE	3.86	21.06	18.34	
M/WBE	3.86	48.90	7.90	****
Printing and Related Support Activities (NAICS 323)				
African American	0.93	8.86	10.53	*
Hispanic	1.22	0.29	413.80	
Asian	0.00	8.54	0.00	****
Native American	0.00	2.18	0.00	****
MBE	2.15	19.88	10.83	****
WBE	1.70	20.24	8.41	****
M/WBE	3.86	40.12	9.61	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Rental and Leasing Services (NAICS 532)				
African American	0.17	11.90	1.45	****
Hispanic	0.00	2.01	0.00	****
Asian	0.00	5.06	0.00	****
Native American	0.00	0.01	0.00	
MBE	0.17	18.97	0.91	****
WBE	0.03	21.46	0.14	****
M/WBE	0.20	40.43	0.50	****
Hospitals (NAICS 622)				
African American	14.02	14.91	94.00	
Hispanic	0.00	2.44	0.00	****
Asian	0.00	7.45	0.00	****
Native American	0.00	0.01	0.00	
MBE	14.02	24.81	56.49	
WBE	25.27	15.45	163.55	
M/WBE	39.29	40.26	97.57	
Merchant Wholesalers, Durable Goods (NAICS 423)				
African American	0.01	7.97	0.13	****
Hispanic	0.00	0.81	0.00	****
Asian	22.16	9.87	224.50	
Native American	0.00	0.87	0.00	****
MBE	22.17	19.51	113.62	
WBE	7.98	17.95	44.46	****
M/WBE	30.16	37.47	80.48	**
Specialty Trade Contractors (NAICS 238)				
African American	19.17	6.86	279.31	
Hispanic	29.55	3.08	960.03	
Asian	0.90	2.78	32.44	****
Native American	0.00	0.14	1.14	****
MBE	49.63	12.87	385.76	
WBE	3.84	10.63	36.08	****
M/WBE	53.47	23.50	227.53	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Utilities (NAICS 221)				
African American	0.00	2.67	0.00	****
Hispanic	0.00	2.56	0.00	****
Asian	0.00	0.00		
Native American	0.00	0.00		
MBE	0.00	5.23	0.00	****
WBE	0.00	12.85	0.00	****
M/WBE	0.00	18.08	0.00	****
Food Services and Drinking Places (NAICS 722)				
African American	59.74	21.51	277.75	
Hispanic	0.00	2.21	0.00	****
Asian	0.00	8.83	0.00	****
Native American	0.00	0.02	0.00	
MBE	59.74	32.57	183.42	
WBE	0.06	21.62	0.29	****
M/WBE	59.80	54.19	110.35	
Telecommunications (NAICS 517)				
African American	5.43	13.66	39.79	
Hispanic	0.05	5.28	0.92	***
Asian	0.00	5.61	0.00	****
Native American	0.00	0.04	0.00	
MBE	5.48	24.58	22.31	
WBE	0.00	16.59	0.00	****
M/WBE	5.48	41.17	13.32	****
Merchant Wholesalers, Nondurable Goods (NAICS 424)				
African American	64.04	10.56	606.25	
Hispanic	2.40	0.45	533.86	
Asian	0.01	8.91	0.16	****
Native American	27.72	0.84	3289.16	
MBE	94.17	20.76	453.60	
WBE	0.00	21.02	0.00	****
M/WBE	94.17	41.78	225.42	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Miscellaneous Manufacturing (NAICS 339)				
African American	49.45	7.49	660.53	
Hispanic	0.00	0.14	0.00	
Asian	0.00	9.61	0.00	****
Native American	0.13	2.54	5.26	****
MBE	49.58	19.77	250.76	
WBE	0.38	17.33	2.20	****
M/WBE	49.96	37.10	134.68	
Personal and Laundry Services (NAICS 812)				
African American	14.33	26.73	53.61	
Hispanic	0.00	6.37	0.00	****
Asian	0.00	6.62	0.00	****
Native American	23.68	0.06	42429.75	
MBE	38.01	39.79	95.55	
WBE	19.09	15.04	126.89	
M/WBE	57.10	54.83	104.15	
Real Estate (NAICS 531)				
African American	1.03	12.19	8.46	
Hispanic	0.00	0.90	0.00	
Asian	0.00	5.09	0.00	****
Native American	0.00	0.02	0.00	
MBE	1.03	18.20	5.67	
WBE	0.23	27.27	0.85	****
M/WBE	1.26	45.47	2.78	****
Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813)				
African American	7.46	19.88	37.51	
Hispanic	0.00	4.40	0.00	****
Asian	0.00	6.43	0.00	****
Native American	0.00	0.40	0.00	****
MBE	7.46	31.12	23.96	****
WBE	0.00	11.81	0.00	****
M/WBE	7.46	42.93	17.37	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Amusement, Gambling, and Recreation Industries (NAICS 713)				
African American	0.00	17.74	0.00	
Hispanic	0.00	2.38	0.00	
Asian	0.00	7.02	0.00	
Native American	0.00	0.00		
MBE	0.00	27.14	0.00	****
WBE	0.00	15.78	0.00	
M/WBE	0.00	42.92	0.00	****
Other Information Services (NAICS 519)				
African American	0.84	15.24	5.54	
Hispanic	0.00	2.16	0.00	
Asian	0.00	7.56	0.00	****
Native American	0.00	0.00		
MBE	0.84	24.96	3.38	****
WBE	0.00	31.24	0.00	****
M/WBE	0.84	56.19	1.50	****
Data Processing, Hosting and Related Services (NAICS 518)				
African American	0.00	15.48	0.00	****
Hispanic	0.00	6.45	0.00	**
Asian	0.00	7.77	0.00	****
Native American	0.00	0.30	0.00	
MBE	0.00	30.00	0.00	****
WBE	18.89	19.44	97.15	
M/WBE	18.89	49.44	38.20	
Miscellaneous Store Retailers (NAICS 453)				
African American	6.05	10.61	57.01	
Hispanic	0.00	2.37	0.00	****
Asian	0.00	5.92	0.00	****
Native American	0.00	1.13	0.00	***
MBE	6.05	20.03	30.21	***
WBE	29.58	28.74	102.92	
M/WBE	35.63	48.77	73.06	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Repair and Maintenance (NAICS 811)				
African American	59.01	21.93	269.11	
Hispanic	0.00	4.85	0.00	****
Asian	0.00	7.45	0.00	****
Native American	0.00	0.38	0.00	**
MBE	59.01	34.60	170.54	
WBE	0.01	13.37	0.07	****
M/WBE	59.02	47.97	123.03	
Paper Manufacturing (NAICS 322)				
African American	0.00	12.79	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	8.72	0.00	
Native American	0.00	2.18	0.00	
MBE	0.00	23.69	0.00	****
WBE	0.00	8.72	0.00	
M/WBE	0.00	32.41	0.00	****
Support Activities for Transportation (NAICS 488)				
African American	8.05	14.55	55.31	
Hispanic	0.00	4.15	0.00	***
Asian	0.05	8.71	0.52	****
Native American	0.00	0.01	0.00	
MBE	8.09	27.42	29.52	**
WBE	91.91	14.59	630.11	
M/WBE	100.00	42.00	238.09	
Funds, Trusts, and Other Financial Vehicles (NAICS 525)				
African American	0.00	9.70	0.00	
Hispanic	0.00	0.79	0.00	
Asian	0.00	7.39	0.00	
Native American	0.00	0.00		
MBE	0.00	17.89	0.00	
WBE	0.00	31.56	0.00	
M/WBE	0.00	49.44	0.00	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Truck Transportation (NAICS 484)				
African American	20.34	24.41	83.32	
Hispanic	0.00	8.59	0.00	****
Asian	0.00	6.18	0.00	****
Native American	0.00	0.16	0.00	
MBE	20.34	39.34	51.70	***
WBE	1.68	11.78	14.26	****
M/WBE	22.02	51.11	43.07	****
Publishing Industries (except Internet) (NAICS 511)				
African American	1.64	14.06	11.64	****
Hispanic	0.60	5.99	10.04	****
Asian	0.00	8.74	0.00	****
Native American	4.08	0.18	2254.90	
MBE	6.32	28.96	21.82	****
WBE	0.48	13.17	3.67	****
M/WBE	6.80	42.14	16.14	****
Accommodation (NAICS 721)				
African American	0.00	14.23	0.00	****
Hispanic	0.00	2.63	0.00	
Asian	0.00	10.11	0.00	****
Native American	0.00	0.07	0.00	
MBE	0.00	27.03	0.00	****
WBE	0.00	16.24	0.00	****
M/WBE	0.00	43.27	0.00	****
Waste Management and Remediation Services (NAICS 562)				
African American	4.53	17.39	26.03	***
Hispanic	0.00	6.90	0.00	****
Asian	1.13	4.26	26.41	
Native American	0.00	0.27	0.00	
MBE	5.65	28.82	19.61	****
WBE	12.49	11.14	112.15	
M/WBE	18.14	39.96	45.40	***

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction of Buildings (NAICS 236)				
African American	30.53	10.54	289.71	
Hispanic	0.00	5.01	0.00	****
Asian	1.36	3.16	43.00	*
Native American	0.00	0.86	0.00	****
MBE	31.89	19.57	162.99	
WBE	0.08	13.01	0.59	****
M/WBE	31.97	32.58	98.12	
Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)				
African American	0.00	5.92	0.00	****
Hispanic	0.00	0.09	0.00	
Asian	0.42	10.71	3.88	****
Native American	0.00	2.78	0.00	****
MBE	0.42	19.50	2.13	****
WBE	85.94	20.98	409.69	
M/WBE	86.35	40.47	213.35	
Motion Picture and Sound Recording Industries (NAICS 512)				
African American	1.59	13.95	11.38	
Hispanic	0.00	1.78	0.00	*
Asian	0.00	5.54	0.00	****
Native American	0.00	0.23	0.00	
MBE	1.59	21.50	7.39	***
WBE	83.58	30.75	271.86	
M/WBE	85.17	52.24	163.02	
Heavy and Civil Engineering Construction (NAICS 237)				
African American	3.66	8.49	43.10	*
Hispanic	0.00	3.27	0.00	****
Asian	0.00	0.85	0.00	****
Native American	0.00	0.33	0.00	****
MBE	3.66	12.94	28.26	****
WBE	0.00	9.48	0.00	****
M/WBE	3.66	22.42	16.31	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Broadcasting (except Internet) (NAICS 515)				
African American	0.00	13.47	0.00	****
Hispanic	0.00	6.42	0.00	****
Asian	0.00	4.43	0.00	
Native American	0.00	0.00		
MBE	0.00	24.32	0.00	****
WBE	0.00	11.15	0.00	****
M/WBE	0.00	35.48	0.00	****
Warehousing and Storage (NAICS 493)				
African American	0.00	8.79	0.00	****
Hispanic	0.00	2.72	0.00	
Asian	0.00	8.72	0.00	****
Native American	0.00	0.00		
MBE	0.00	20.23	0.00	****
WBE	0.00	13.78	0.00	****
M/WBE	0.00	34.01	0.00	****
Couriers and Messengers (NAICS 492)				
African American	0.00	15.50	0.00	****
Hispanic	3.18	3.88	82.16	
Asian	0.00	9.06	0.00	****
Native American	0.00	0.00		
MBE	3.18	28.44	11.20	****
WBE	4.69	13.66	34.35	
M/WBE	7.88	42.10	18.71	***
Performing Arts, Spectator Sports, and Related Industries (NAICS 711)				
African American	22.51	17.79	126.57	
Hispanic	0.00	3.13	0.00	****
Asian	0.00	7.59	0.00	****
Native American	0.00	0.26	0.00	
MBE	22.51	28.77	78.26	
WBE	0.73	19.75	3.68	***
M/WBE	23.24	48.52	47.90	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Furniture and Related Product Manufacturing (NAICS 337)				
African American	0.00	9.34	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	8.13	0.00	****
Native American	0.00	2.34	0.00	****
MBE	0.00	19.81	0.00	****
WBE	3.07	18.32	16.77	****
M/WBE	3.07	38.13	8.06	****
Transportation Equipment Manufacturing (NAICS 336)				
African American	0.00	3.02	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	6.46	0.00	****
Native American	0.00	0.61	0.00	****
MBE	0.00	10.08	0.00	****
WBE	0.94	31.83	2.97	****
M/WBE	0.94	41.91	2.25	****
Nonstore Retailers (NAICS 454)				
African American	84.82	7.51	1130.01	
Hispanic	0.00	2.46	0.00	****
Asian	0.00	15.22	0.00	****
Native American	0.00	1.14	0.00	****
MBE	84.82	26.33	322.12	
WBE	0.00	21.36	0.00	****
M/WBE	84.82	47.69	177.86	
Food and Beverage Stores (NAICS 445)				
African American	0.00	5.73	0.00	
Hispanic	0.00	2.89	0.00	
Asian	0.00	17.01	0.00	****
Native American	0.00	0.23	0.00	
MBE	0.00	25.87	0.00	****
WBE	0.00	21.60	0.00	****
M/WBE	0.00	47.46	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Gasoline Stations (NAICS 447)				
African American	0.00	5.65	0.00	****
Hispanic	0.00	2.70	0.00	
Asian	0.00	17.60	0.00	****
Native American	0.00	0.19	0.00	
MBE	0.00	26.14	0.00	****
WBE	0.00	20.43	0.00	****
M/WBE	0.00	46.57	0.00	****
Air Transportation (NAICS 481)				
African American	2.46	10.33	23.86	
Hispanic	0.00	4.91	0.00	*
Asian	0.00	8.74	0.00	****
Native American	0.00	0.04	0.00	
MBE	2.46	24.01	10.27	****
WBE	0.00	12.79	0.00	****
M/WBE	2.46	36.80	6.70	****
Health and Personal Care Stores (NAICS 446)				
African American	0.00	7.49	0.00	****
Hispanic	0.00	2.61	0.00	****
Asian	60.54	13.21	458.34	
Native American	0.00	0.64	0.00	
MBE	60.54	23.95	252.81	
WBE	0.00	25.09	0.00	****
M/WBE	60.54	49.04	123.46	
Machinery Manufacturing (NAICS 333)				
African American	0.00	8.30	0.00	****
Hispanic	54.90	0.24	22432.91	
Asian	0.00	9.53	0.00	****
Native American	0.00	6.44	0.00	****
MBE	54.90	24.51	224.03	
WBE	0.00	16.13	0.00	****
M/WBE	54.90	40.63	135.12	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Chemical Manufacturing (NAICS 325)				
African American	0.00	7.39	0.00	****
Hispanic	0.09	0.20	44.99	
Asian	2.24	8.87	25.23	
Native American	0.00	1.63	0.00	****
MBE	2.33	18.09	12.88	***
WBE	0.00	17.71	0.00	****
M/WBE	2.33	35.80	6.51	****
Securities, Commodity Contracts, and Other Financial Investments and Related Activities (NAICS 523)				
African American	1.78	11.75	15.16	*
Hispanic	0.00	0.26	0.00	
Asian	0.00	5.73	0.00	****
Native American	0.00	0.00		
MBE	1.78	17.73	10.04	****
WBE	98.22	25.70	382.17	
M/WBE	100.00	43.43	230.25	
Electronics and Appliance Stores (NAICS 443)				
African American	33.68	8.05	418.66	
Hispanic	0.00	2.92	0.00	****
Asian	0.00	14.92	0.00	****
Native American	0.00	0.59	0.00	
MBE	33.68	26.47	127.26	
WBE	10.28	21.26	48.36	
M/WBE	43.97	47.73	92.11	
Motor Vehicle and Parts Dealers (NAICS 441)				
African American	69.81	8.32	838.96	
Hispanic	0.00	2.82	0.00	****
Asian	0.00	7.93	0.00	****
Native American	0.00	0.72	0.00	
MBE	69.81	19.79	352.74	
WBE	0.00	19.88	0.00	****
M/WBE	69.81	39.67	175.97	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Nonmetallic Mineral Product Manufacturing (NAICS 327)				
African American	0.00	6.98	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	9.30	0.00	
Native American	3.91	2.33	167.92	
MBE	3.91	18.60	20.99	***
WBE	0.00	9.30	0.00	****
M/WBE	3.91	27.91	13.99	****
Textile Mills (NAICS 313)				
African American	0.00	7.80	0.00	****
Hispanic	0.00	0.38	0.00	
Asian	0.00	8.05	0.00	****
Native American	0.00	2.49	0.00	
MBE	0.00	18.73	0.00	****
WBE	0.00	29.78	0.00	****
M/WBE	0.00	48.51	0.00	****
Food Manufacturing (NAICS 311)				
African American	0.00	6.77	0.00	****
Hispanic	0.00	0.08	0.00	
Asian	0.00	8.84	0.00	****
Native American	0.00	2.41	0.00	
MBE	0.00	18.09	0.00	****
WBE	0.00	16.28	0.00	****
M/WBE	0.00	34.37	0.00	****
Building Material and Garden Equipment and Supplies Dealers (NAICS 444)				
African American	0.00	8.31	0.00	****
Hispanic	0.00	2.67	0.00	****
Asian	0.00	9.10	0.00	****
Native American	0.00	0.74	0.00	****
MBE	0.00	20.83	0.00	****
WBE	66.61	21.64	307.85	
M/WBE	66.61	42.46	156.86	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Management of Companies and Enterprises (NAICS 551)				
African American	0.00	11.14	0.00	
Hispanic	0.00	0.10	0.00	
Asian	0.00	5.94	0.00	
Native American	0.00	0.00		
MBE	0.00	17.17	0.00	
WBE	0.00	24.98	0.00	
M/WBE	0.00	42.15	0.00	
Sporting Goods, Hobby, Book, and Music Stores (NAICS 451)				
African American	97.34	9.70	1003.47	
Hispanic	0.00	2.68	0.00	
Asian	0.00	4.88	0.00	****
Native American	0.00	0.83	0.00	
MBE	97.34	18.09	538.12	
WBE	0.00	24.59	0.00	****
M/WBE	97.34	42.67	228.09	
Fabricated Metal Product Manufacturing (NAICS 332)				
African American	0.00	5.57	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	8.89	0.00	****
Native American	0.00	2.04	0.00	****
MBE	0.00	16.50	0.00	****
WBE	0.00	16.88	0.00	****
M/WBE	0.00	33.38	0.00	****
Textile Product Mills (NAICS 314)				
African American	0.00	10.72	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	9.46	0.00	****
Native American	0.00	2.44	0.00	
MBE	0.00	22.61	0.00	****
WBE	0.00	21.25	0.00	****
M/WBE	0.00	43.86	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Wood Product Manufacturing (NAICS 321)				
African American	0.00	3.65	0.00	****
Hispanic	0.00	0.02	0.00	
Asian	0.00	7.29	0.00	****
Native American	0.00	0.78	0.00	*
MBE	0.00	11.75	0.00	****
WBE	0.00	22.74	0.00	****
M/WBE	0.00	34.48	0.00	****
Plastics and Rubber Products Manufacturing (NAICS 326)				
African American	0.00	7.90	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	9.11	0.00	****
Native American	0.00	2.31	0.00	
MBE	0.00	19.33	0.00	****
WBE	0.00	14.29	0.00	****
M/WBE	0.00	33.62	0.00	****
Crop Production (NAICS 111)				
African American	0.00	3.22	0.00	
Hispanic	0.00	3.22	0.00	
Asian	0.00	0.00		
Native American	0.00	0.00		
MBE	0.00	6.45	0.00	
WBE	0.00	15.58	0.00	
M/WBE	0.00	22.02	0.00	
Furniture and Home Furnishings Stores (NAICS 442)				
African American	0.00	6.72	0.00	****
Hispanic	0.00	2.45	0.00	****
Asian	0.00	14.45	0.00	****
Native American	0.00	0.68	0.00	****
MBE	0.00	24.30	0.00	****
WBE	0.00	27.63	0.00	****
M/WBE	0.00	51.94	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Primary Metal Manufacturing (NAICS 331)				
African American	0.00	6.98	0.00	****
Hispanic	0.00	0.00		
Asian	0.00	9.30	0.00	
Native American	0.00	2.33	0.00	
MBE	0.00	18.60	0.00	****
WBE	0.00	9.30	0.00	****
M/WBE	0.00	27.91	0.00	****
Clothing and Clothing Accessories Stores (NAICS 448)				
African American	0.00	5.98	0.00	****
Hispanic	0.00	2.70	0.00	
Asian	0.00	15.91	0.00	****
Native American	0.00	0.15	0.00	
MBE	0.00	24.74	0.00	****
WBE	0.00	20.72	0.00	****
M/WBE	0.00	45.46	0.00	****

Source and Notes: See Table 7.14A.

Table 7.20. Industry Sub-Sector Disparity Results for State of Maryland CSE Contracting, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Utilities (NAICS 221)				
African American	0.00	2.71	0.00	**
Hispanic	0.00	2.52	0.00	****
Asian	0.00	0.00	0.00	
Native American	0.00	0.00		****
MBE	0.00	5.23	0.00	****
WBE	0.00	12.85	0.00	
M/WBE	0.00	18.09	0.00	****
Transportation Equipment Manufacturing (NAICS 336)				
African American	0.00	10.29	0.00	**
Hispanic	0.00	0.01	0.00	****
Asian	0.00	7.60	0.00	
Native American	0.00	1.53	0.00	****
MBE	0.00	19.43	0.00	****
WBE	0.00	17.97	0.00	
M/WBE	0.00	37.40	0.00	****
Merchant Wholesalers, Nondurable Goods (NAICS 424)				
African American	0.00	8.19	0.00	**
Hispanic	0.00	0.23	0.00	****
Asian	0.17	9.00	1.91	
Native American	0.00	2.32	0.00	****
MBE	0.17	19.73	0.87	****
WBE	50.78	17.80	285.28	
M/WBE	50.95	37.53	135.76	****
Merchant Wholesalers, Durable Goods (NAICS 423)				
African American	1.16	6.45	17.99	**
Hispanic	0.00	0.68	0.00	****
Asian	6.69	8.71	76.85	
Native American	0.00	0.86	0.00	****
MBE	7.85	16.69	47.03	****
WBE	0.28	18.09	1.53	
M/WBE	8.13	34.79	23.36	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Food Services and Drinking Places (NAICS 722)				
African American	0.00	21.71	0.00	**
Hispanic	0.00	2.16	0.00	****
Asian	0.00	8.91	0.00	
Native American	0.00	0.00	0.00	****
MBE	0.00	32.78	0.00	****
WBE	0.00	21.61	0.00	
M/WBE	0.00	54.40	0.00	****
Computer and Electronic Product Manufacturing (NAICS 334)				
African American	0.00	7.30	0.00	**
Hispanic	0.00	0.98	0.00	****
Asian	0.00	11.62	0.00	
Native American	0.00	2.06	0.00	****
MBE	0.00	21.95	0.00	****
WBE	0.00	14.13	0.00	
M/WBE	0.00	36.08	0.00	****
Motor Vehicle and Parts Dealers (NAICS 441)				
African American	0.67	8.87	7.59	**
Hispanic	0.00	2.87	0.00	****
Asian	0.00	5.69	0.00	
Native American	0.00	0.85	0.00	****
MBE	0.67	18.28	3.68	****
WBE	0.00	19.67	0.00	
M/WBE	0.67	37.95	1.77	****
Chemical Manufacturing (NAICS 325)				
African American	0.00	6.76	0.00	**
Hispanic	0.00	0.34	0.00	****
Asian	0.00	9.04	0.00	
Native American	0.00	1.40	0.00	****
MBE	0.00	17.54	0.00	****
WBE	39.85	17.18	231.99	
M/WBE	39.85	34.72	114.78	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Professional, Scientific, and Technical Services (NAICS 541)				
African American	0.00	12.17	0.00	**
Hispanic	0.00	3.58	0.00	****
Asian	19.84	11.99	165.44	
Native American	0.00	0.40	0.00	****
MBE	19.84	28.15	70.50	****
WBE	0.00	16.77	0.00	
M/WBE	19.84	44.92	44.18	****
Printing and Related Support Activities (NAICS 323)				
African American	0.00	5.57	0.00	**
Hispanic	0.00	0.28	0.00	****
Asian	0.00	9.52	0.00	
Native American	0.00	0.99	0.00	****
MBE	0.00	16.36	0.00	****
WBE	0.00	21.88	0.00	
M/WBE	0.00	38.24	0.00	****
Machinery Manufacturing (NAICS 333)				
African American	0.00	7.80	0.00	**
Hispanic	0.00	0.30	0.00	****
Asian	0.00	9.41	0.00	
Native American	0.00	1.90	0.00	****
MBE	0.00	19.40	0.00	****
WBE	0.00	13.72	0.00	
M/WBE	0.00	33.12	0.00	****
Nonstore Retailers (NAICS 454)				
African American	0.00	7.46	0.00	**
Hispanic	0.00	2.46	0.00	****
Asian	0.00	15.31	0.00	
Native American	0.00	1.11	0.00	****
MBE	0.00	26.34	0.00	****
WBE	0.00	21.30	0.00	
M/WBE	0.00	47.64	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Rental and Leasing Services (NAICS 532)				
African American	0.00	13.71	0.00	**
Hispanic	0.00	5.81	0.00	****
Asian	0.00	4.08	0.00	
Native American	0.00	0.09	0.00	****
MBE	0.00	23.70	0.00	****
WBE	0.00	13.47	0.00	
M/WBE	0.00	37.17	0.00	****
Repair and Maintenance (NAICS 811)				
African American	0.00	7.36	0.00	**
Hispanic	0.00	0.98	0.00	****
Asian	0.00	7.47	0.00	
Native American	0.00	1.36	0.00	****
MBE	0.00	17.16	0.00	****
WBE	0.00	11.23	0.00	
M/WBE	0.00	28.39	0.00	****
Clothing and Clothing Accessories Stores (NAICS 448)				
African American	0.00	10.56	0.00	**
Hispanic	0.00	2.65	0.00	****
Asian	0.00	6.53	0.00	
Native American	0.00	0.90	0.00	****
MBE	0.00	20.64	0.00	****
WBE	0.00	27.06	0.00	
M/WBE	0.00	47.70	0.00	****
Miscellaneous Store Retailers (NAICS 453)				
African American	0.00	12.46	0.00	**
Hispanic	0.00	2.51	0.00	****
Asian	0.00	6.58	0.00	
Native American	0.00	1.46	0.00	****
MBE	0.00	23.01	0.00	****
WBE	52.69	24.70	213.29	
M/WBE	52.69	47.71	110.43	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Support Activities for Transportation (NAICS 488)				
African American	0.00	12.45	0.00	**
Hispanic	0.00	4.62	0.00	****
Asian	0.00	7.88	0.00	
Native American	0.00	0.00		****
MBE	0.00	24.95	0.00	****
WBE	0.00	11.98	0.00	
M/WBE	0.00	36.93	0.00	****
Publishing Industries (except Internet) (NAICS 511)				
African American	0.00	14.27	0.00	**
Hispanic	0.00	5.46	0.00	****
Asian	0.00	5.55	0.00	
Native American	0.00	0.22	0.00	****
MBE	0.00	25.50	0.00	****
WBE	0.00	16.72	0.00	
M/WBE	0.00	42.22	0.00	****
Miscellaneous Manufacturing (NAICS 339)				
African American	0.00	6.88	0.00	**
Hispanic	0.00	0.05	0.00	****
Asian	0.00	10.47	0.00	
Native American	0.00	2.32	0.00	****
MBE	0.00	19.73	0.00	****
WBE	0.00	15.10	0.00	
M/WBE	0.00	34.82	0.00	****
Electronics and Appliance Stores (NAICS 443)				
African American	0.00	8.79	0.00	**
Hispanic	0.00	2.98	0.00	****
Asian	0.00	16.48	0.00	
Native American	0.00	0.74	0.00	****
MBE	0.00	28.99	0.00	****
WBE	2.71	21.54	12.60	
M/WBE	2.71	50.52	5.37	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Administrative and Support Services (NAICS 561)				
African American	0.64	23.06	2.77	**
Hispanic	0.00	6.01	0.00	****
Asian	0.00	9.22	0.00	
Native American	0.00	0.79	0.00	****
MBE	0.64	39.09	1.64	****
WBE	2.37	15.51	15.25	
M/WBE	3.00	54.59	5.50	****
Primary Metal Manufacturing (NAICS 331)				
African American	0.00	8.39	0.00	**
Hispanic	0.00	0.94	0.00	****
Asian	0.00	8.66	0.00	
Native American	0.00	2.21	0.00	****
MBE	0.00	20.20	0.00	****
WBE	0.00	10.03	0.00	
M/WBE	0.00	30.23	0.00	****
Sporting Goods, Hobby, Book, and Music Stores (NAICS 451)				
African American	0.00	8.50	0.00	**
Hispanic	0.00	2.69	0.00	****
Asian	0.00	8.57	0.00	
Native American	0.00	0.62	0.00	****
MBE	0.00	20.38	0.00	****
WBE	0.86	23.69	3.61	
M/WBE	0.86	44.07	1.94	****
Fabricated Metal Product Manufacturing (NAICS 332)				
African American	0.00	6.06	0.00	**
Hispanic	0.00	0.08	0.00	****
Asian	0.00	7.01	0.00	
Native American	0.00	1.85	0.00	****
MBE	0.00	15.00	0.00	****
WBE	0.00	28.22	0.00	
M/WBE	0.00	43.22	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Furniture and Related Product Manufacturing (NAICS 337)				
African American	0.00	12.61	0.00	**
Hispanic	0.00	1.23	0.00	****
Asian	0.00	9.99	0.00	
Native American	0.00	2.23	0.00	****
MBE	0.00	26.05	0.00	****
WBE	5.90	15.64	37.73	
M/WBE	5.90	41.70	14.16	****
Furniture and Home Furnishings Stores (NAICS 442)				
African American	0.00	6.80	0.00	**
Hispanic	0.00	2.60	0.00	****
Asian	0.00	15.36	0.00	
Native American	0.00	0.37	0.00	****
MBE	0.00	25.12	0.00	****
WBE	0.00	23.33	0.00	
M/WBE	0.00	48.45	0.00	****
Religious, Grantmaking, Civic, Professional, and Similar Organizations (NAICS 813)				
African American	0.00	24.27	0.00	**
Hispanic	0.00	5.94	0.00	****
Asian	0.00	6.33	0.00	
Native American	0.00	0.06	0.00	****
MBE	0.00	36.61	0.00	****
WBE	0.00	12.47	0.00	
M/WBE	0.00	49.08	0.00	****
Telecommunications (NAICS 517)				
African American	0.00	13.09	0.00	**
Hispanic	0.00	0.97	0.00	****
Asian	0.00	5.49	0.00	
Native American	0.00	0.07	0.00	****
MBE	0.00	19.62	0.00	****
WBE	0.00	26.65	0.00	
M/WBE	0.00	46.28	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction of Buildings (NAICS 236)				
African American	0.00	12.10	0.00	**
Hispanic	0.00	5.64	0.00	****
Asian	0.00	3.81	0.00	
Native American	0.00	1.03	0.00	****
MBE	0.00	22.58	0.00	****
WBE	0.00	12.16	0.00	
M/WBE	0.00	34.74	0.00	****
Electrical Equipment, Appliance, and Component Manufacturing (NAICS 335)				
African American	0.00	8.10	0.00	**
Hispanic	0.00	0.26	0.00	****
Asian	0.00	7.63	0.00	
Native American	0.00	0.69	0.00	****
MBE	0.00	16.68	0.00	****
WBE	0.00	19.22	0.00	
M/WBE	0.00	35.90	0.00	****
Nonmetallic Mineral Product Manufacturing (NAICS 327)				
African American	0.00	11.48	0.00	**
Hispanic	0.00	0.00		****
Asian	0.00	8.15	0.00	
Native American	0.00	2.28	0.00	****
MBE	0.00	21.91	0.00	****
WBE	0.00	15.85	0.00	
M/WBE	0.00	37.75	0.00	****
Plastics and Rubber Products Manufacturing (NAICS 326)				
African American	0.00	7.90	0.00	**
Hispanic	0.00	0.00		****
Asian	0.00	9.11	0.00	
Native American	0.00	2.31	0.00	****
MBE	0.00	19.33	0.00	****
WBE	0.00	14.29	0.00	
M/WBE	0.00	33.62	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Air Transportation (NAICS 481)				
African American	0.00	9.65	0.00	**
Hispanic	0.00	2.82	0.00	****
Asian	0.00	8.47	0.00	
Native American	0.00	0.00		****
MBE	0.00	20.94	0.00	****
WBE	0.00	11.29	0.00	
M/WBE	0.00	32.24	0.00	****
Personal and Laundry Services (NAICS 812)				
African American	0.00	24.06	0.00	**
Hispanic	0.00	5.57	0.00	****
Asian	0.00	8.45	0.00	
Native American	0.00	0.04	0.00	****
MBE	0.00	38.13	0.00	****
WBE	0.00	18.45	0.00	
M/WBE	0.00	56.58	0.00	****
Waste Management and Remediation Services (NAICS 562)				
African American	0.00	16.06	0.00	**
Hispanic	0.00	6.82	0.00	****
Asian	0.00	4.28	0.00	
Native American	0.00	0.26	0.00	****
MBE	0.00	27.42	0.00	****
WBE	0.00	10.26	0.00	
M/WBE	0.00	37.68	0.00	****
Insurance Carriers and Related Activities (NAICS 524)				
African American	100.00	11.27	887.39	**
Hispanic	0.00	0.64	0.00	****
Asian	0.00	5.24	0.00	
Native American	0.00	0.00		****
MBE	100.00	17.15	583.18	****
WBE	0.00	28.09	0.00	
M/WBE	100.00	45.24	221.06	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Real Estate (NAICS 531)				
African American	0.00	13.67	0.00	**
Hispanic	0.00	3.68	0.00	****
Asian	0.00	4.50	0.00	
Native American	0.00	0.09	0.00	****
MBE	0.00	21.94	0.00	****
WBE	0.00	18.65	0.00	
M/WBE	0.00	40.59	0.00	****
Ambulatory Health Care Services (NAICS 621)				
African American	0.00	12.85	0.00	**
Hispanic	0.00	1.93	0.00	****
Asian	0.00	6.80	0.00	
Native American	0.00	0.09	0.00	****
MBE	0.00	21.68	0.00	****
WBE	0.00	22.19	0.00	
M/WBE	0.00	43.87	0.00	****
Specialty Trade Contractors (NAICS 238)				
African American	0.00	6.69	0.00	**
Hispanic	0.00	3.03	0.00	****
Asian	0.00	2.43	0.00	
Native American	0.00	0.17	0.00	****
MBE	0.00	12.31	0.00	****
WBE	0.00	11.38	0.00	
M/WBE	0.00	23.69	0.00	****
Accommodation (NAICS 721)				
African American	0.00	14.23	0.00	**
Hispanic	0.00	2.63	0.00	****
Asian	0.00	10.11	0.00	
Native American	0.00	0.07	0.00	****
MBE	0.00	27.03	0.00	****
WBE	0.00	16.24	0.00	
M/WBE	0.00	43.27	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Support Activities for Agriculture and Forestry (NAICS 115)				
African American	0.00	2.57	0.00	**
Hispanic	0.00	2.57	0.00	****
Asian	0.00	0.34	0.00	
Native American	0.00	0.00		****
MBE	0.00	5.48	0.00	****
WBE	0.00	21.99	0.00	
M/WBE	0.00	27.47	0.00	****
Other Information Services (NAICS 519)				
African American	0.00	15.08	0.00	**
Hispanic	0.00	2.03	0.00	****
Asian	0.00	7.41	0.00	
Native American	0.00	0.00		****
MBE	0.00	24.51	0.00	****
WBE	0.00	30.79	0.00	
M/WBE	0.00	55.30	0.00	****
Paper Manufacturing (NAICS 322)				
African American	0.00	11.26	0.00	**
Hispanic	0.00	0.00		****
Asian	0.00	8.01	0.00	
Native American	0.00	2.24	0.00	****
MBE	0.00	21.51	0.00	****
WBE	0.00	15.54	0.00	
M/WBE	0.00	37.05	0.00	****
Building Material and Garden Equipment and Supplies Dealers (NAICS 444)				
African American	0.00	8.09	0.00	**
Hispanic	0.00	2.58	0.00	****
Asian	0.00	4.72	0.00	
Native American	0.00	1.00	0.00	****
MBE	0.00	16.38	0.00	****
WBE	0.00	20.38	0.00	
M/WBE	0.00	36.76	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Food Manufacturing (NAICS 311)				
African American	0.00	7.69	0.00	**
Hispanic	0.00	0.18	0.00	****
Asian	0.00	8.83	0.00	
Native American	0.00	2.32	0.00	****
MBE	0.00	19.02	0.00	****
WBE	0.00	14.35	0.00	
M/WBE	0.00	33.37	0.00	****
Beverage & Tobacco Product Mfg. (NAICS 312)				
African American	0.00	11.03	0.00	**
Hispanic	0.00	0.00		****
Asian	0.00	8.83	0.00	
Native American	0.00	2.21	0.00	****
MBE	0.00	22.07	0.00	****
WBE	0.00	8.83	0.00	
M/WBE	0.00	30.89	0.00	****
Truck Transportation (NAICS 484)				
African American	0.00	23.36	0.00	**
Hispanic	0.00	8.44	0.00	****
Asian	0.00	5.92	0.00	
Native American	0.00	0.22	0.00	****
MBE	0.00	37.94	0.00	****
WBE	0.00	12.68	0.00	
M/WBE	0.00	50.62	0.00	****
Educational Services (NAICS 611)				
African American	0.00	19.59	0.00	**
Hispanic	0.00	2.99	0.00	****
Asian	0.00	7.32	0.00	
Native American	0.00	0.57	0.00	****
MBE	0.00	30.48	0.00	****
WBE	0.00	26.46	0.00	
M/WBE	0.00	56.94	0.00	****

Source and Notes: See Table 7.14A.

Table 7.21. Disparity Results for Bowie State University, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	0.00	9.69	0.00	****
Hispanic	0.00	3.48	0.00	****
Asian	0.00	5.44	0.00	****
Native American	0.00	0.39	0.00	
MBE	0.00	18.99	0.00	****
WBE	0.00	13.39	0.00	****
M/WBE	0.00	32.39	0.00	****
AE-CRS				
African American	50.85	10.17	499.82	
Hispanic	31.59	3.86	817.41	
Asian	0.00	11.35	0.00	****
Native American	0.00	0.39	0.00	****
MBE	82.44	25.78	319.72	
WBE	0.00	15.36	0.00	****
M/WBE	82.44	41.14	200.37	
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	49.66	4.62	1074.84	
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	49.66	24.46	203.03	
WBE	9.97	16.49	60.45	****
M/WBE	59.62	40.94	145.61	
IT				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Services				
African American	73.13	12.88	567.80	
Hispanic	0.00	1.95	0.00	****
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	73.13	21.83	335.02	
WBE	0.00	22.74	0.00	****
M/WBE	73.13	44.56	164.09	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	8.43	9.39	89.78	
Hispanic	0.00	2.02	0.00	****
Asian	5.62	9.05	62.10	***
Native American	0.00	0.93	0.00	****
MBE	14.05	21.39	65.69	****
WBE	0.00	17.52	0.00	****
M/WBE	14.05	38.91	36.11	****
All Procurement				
African American	54.74	11.35	482.26	
Hispanic	0.93	2.95	31.59	****
Asian	1.34	7.24	18.56	****
Native American	0.00	0.27	0.00	****
MBE	57.02	21.81	261.45	
WBE	0.14	17.76	0.77	****
M/WBE	57.15	39.57	144.43	

Source and Notes: See Table 7.14A. Agencies do not necessarily have procurements in all six major procurement categories. In those cases where an agency has no procurements in a given procurement category, that section of the corresponding table will be blank, such as is the case above for the IT category.

Table 7.22. Disparity Results for Coppin State College, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	0.00	9.69	0.00	****
Hispanic	0.00	3.48	0.00	****
Asian	0.00	5.44	0.00	****
Native American	0.00	0.39	0.00	
MBE	0.00	18.99	0.00	****
WBE	0.00	13.39	0.00	****
M/WBE	0.00	32.39	0.00	****
AE-CRS				
African American	0.00	10.17	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	11.35	0.00	****
Native American	0.00	0.39	0.00	****
MBE	0.00	25.78	0.00	****
WBE	17.39	15.36	113.27	
M/WBE	17.39	41.14	42.28	****
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	0.00	24.46	0.00	****
WBE	0.00	16.49	0.00	****
M/WBE	0.00	40.94	0.00	****
IT				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Services				
African American	71.77	12.88	557.28	
Hispanic	6.74	1.95	345.49	
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	78.51	21.83	359.68	
WBE	0.00	22.74	0.00	****
M/WBE	78.51	44.56	176.17	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	12.98	9.05	143.36	
Native American	0.00	0.93	0.00	****
MBE	12.98	21.39	60.67	****
WBE	0.00	17.52	0.00	****
M/WBE	12.98	38.91	33.35	****
All Procurement				
African American	50.87	11.35	448.17	
Hispanic	4.78	2.95	161.79	
Asian	1.18	7.24	16.37	****
Native American	0.00	0.27	0.00	****
MBE	56.83	21.81	260.60	
WBE	0.65	17.76	3.69	****
M/WBE	57.48	39.57	145.27	

Source and Notes: See Table 7.21.

Table 7.23. Disparity Results for Department of General Services, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	9.87	9.69	101.82	
Hispanic	3.19	3.48	91.62	
Asian	3.90	5.44	71.65	
Native American	0.63	0.39	163.72	
MBE	17.58	18.99	92.58	
WBE	5.07	13.39	37.83	****
M/WBE	22.65	32.39	69.94	****
AE-CRS				
African American	5.02	10.17	49.32	****
Hispanic	1.13	3.86	29.16	****
Asian	11.92	11.35	104.98	
Native American	0.00	0.39	0.00	****
MBE	18.06	25.78	70.05	****
WBE	14.32	15.36	93.22	
M/WBE	32.38	41.14	78.70	***
Maintenance				
African American	17.54	14.26	122.99	
Hispanic	0.63	4.62	13.60	****
Asian	7.03	5.30	132.67	
Native American	0.00	0.28	0.00	****
MBE	25.20	24.46	103.04	
WBE	18.69	16.49	113.37	
M/WBE	43.89	40.94	107.20	
IT				
African American	50.66	13.94	363.33	
Hispanic	0.00	3.86	0.00	****
Asian	46.30	13.94	332.06	
Native American	0.00	0.50	0.00	****
MBE	96.97	32.25	300.67	
WBE	1.89	15.84	11.92	****
M/WBE	98.85	48.09	205.54	
Services				
African American	31.07	12.88	241.22	
Hispanic	1.57	1.95	80.66	
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	32.64	21.83	149.53	
WBE	10.36	22.74	45.54	****
M/WBE	42.99	44.56	96.48	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	0.00	17.52	0.00	****
M/WBE	0.00	38.91	0.00	****
All Procurement				
African American	7.80	11.35	68.72	**
Hispanic	1.61	2.95	54.70	**
Asian	3.38	7.24	46.65	****
Native American	0.29	0.27	107.71	
MBE	13.08	21.81	59.98	****
WBE	5.63	17.76	31.68	****
M/WBE	18.71	39.57	47.28	****

Source and Notes: See Table 7.21.

Table 7.24. Disparity Results for Department of Public Safety, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	2.21	9.69	22.77	****
Hispanic	0.60	3.48	17.32	****
Asian	1.75	5.44	32.13	
Native American	0.00	0.39	0.00	****
MBE	4.56	18.99	23.99	
WBE	17.67	13.39	131.98	****
M/WBE	22.23	32.39	68.64	
AE-CRS				
African American	8.84	10.17	86.92	
Hispanic	0.00	3.86	0.00	
Asian	14.23	11.35	125.37	****
Native American	0.00	0.39	0.00	
MBE	23.07	25.78	89.49	****
WBE	8.30	15.36	54.07	****
M/WBE	31.38	41.14	76.27	
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	0.00	24.46	0.00	****
WBE	15.84	16.49	96.05	
M/WBE	15.84	40.94	38.67	****
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	13.94	0.00	****
Native American	0.00	0.50	0.00	****
MBE	0.00	32.25	0.00	****
WBE	0.30	15.84	1.86	****
M/WBE	0.30	48.09	0.61	****
Services				
African American	0.09	12.88	0.68	****
Hispanic	0.00	1.95	0.03	****
Asian	0.08	6.91	1.13	****
Native American	0.02	0.09	23.92	
MBE	0.19	21.83	0.86	****
WBE	0.22	22.74	0.95	****
M/WBE	0.40	44.56	0.91	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	68.81	17.52	392.71	
M/WBE	68.81	38.91	176.84	
All Procurement				
African American	0.95	11.35	8.38	****
Hispanic	0.15	2.95	4.97	****
Asian	1.06	7.24	14.68	****
Native American	0.01	0.27	3.82	****
MBE	2.17	21.81	9.95	****
WBE	19.79	17.76	111.40	
M/WBE	21.96	39.57	55.49	****

Source and Notes: See Table 7.21.

Table 7.25. Disparity Results for Department of Information Technology, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
AE-CRS				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Maintenance				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
IT				
African American	5.85	13.94	41.97	****
Hispanic	0.00	3.86	0.00	****
Asian	9.79	13.94	70.23	***
Native American	0.00	0.50	0.00	****
MBE	15.64	32.25	48.51	****
WBE	2.44	15.84	15.38	****
M/WBE	18.08	48.09	37.60	****
Services				
African American	61.54	12.88	477.83	
Hispanic	3.32	1.95	170.41	
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	64.86	21.83	297.16	
WBE	1.37	22.74	6.02	****
M/WBE	66.23	44.56	148.62	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
All Procurement				
African American	6.68	11.35	58.83	****
Hispanic	0.05	2.95	1.67	****
Asian	9.65	7.24	133.34	
Native American	0.00	0.27	0.00	****
MBE	16.37	21.81	75.09	***
WBE	2.42	17.76	13.63	****
M/WBE	18.80	39.57	47.50	****

Source and Notes: See Table 7.21.

Table 7.26. Disparity Results for Department of Budget and Management, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
AE-CRS				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Maintenance				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
IT				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Services				
African American	0.38	12.88	2.95	****
Hispanic	0.01	1.95	0.62	****
Asian	0.47	6.91	6.83	****
Native American	0.22	0.09	245.37	
MBE	1.08	21.83	4.96	****
WBE	0.68	22.74	3.00	****
M/WBE	1.76	44.56	3.96	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
All Procurement				
African American	0.38	11.35	3.35	****
Hispanic	0.01	2.95	0.41	****
Asian	0.47	7.24	6.52	****
Native American	0.22	0.27	81.32	
MBE	1.08	21.81	4.96	****
WBE	0.68	17.76	3.84	****
M/WBE	1.76	39.57	4.46	****

Source and Notes: See Table 7.21.

Table 7.27. Disparity Results for Department of Education, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	14.37	9.69	148.33	
Hispanic	3.66	3.48	105.03	
Asian	0.00	5.44	0.00	****
Native American	0.00	0.39	0.00	
MBE	18.03	18.99	94.91	
WBE	0.00	13.39	0.00	****
M/WBE	18.03	32.39	55.67	****
AE-CRS				
African American	0.00	10.17	0.00	****
Hispanic	0.00	3.86	0.00	
Asian	0.00	11.35	0.00	****
Native American	0.00	0.39	0.00	****
MBE	0.00	25.78	0.00	****
WBE	0.00	15.36	0.00	****
M/WBE	0.00	41.14	0.00	****
Maintenance				
African American	3.38	14.26	23.68	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	3.38	24.46	13.81	****
WBE	68.65	16.49	416.39	
M/WBE	72.03	40.94	175.91	
IT				
African American	7.90	13.94	56.63	****
Hispanic	0.00	3.86	0.00	****
Asian	13.71	13.94	98.33	
Native American	0.00	0.50	0.00	****
MBE	21.61	32.25	67.00	****
WBE	48.99	15.84	309.24	
M/WBE	70.60	48.09	146.80	
Services				
African American	0.36	12.88	2.83	****
Hispanic	0.30	1.95	15.54	****
Asian	1.16	6.91	16.77	****
Native American	0.00	0.09	1.93	****
MBE	1.83	21.83	8.37	****
WBE	0.83	22.74	3.66	****
M/WBE	2.66	44.56	5.97	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	12.08	9.05	133.42	
Native American	0.00	0.93	0.00	****
MBE	12.08	21.39	56.46	****
WBE	0.31	17.52	1.75	****
M/WBE	12.38	38.91	31.82	****
All Procurement				
African American	0.53	11.35	4.67	****
Hispanic	0.30	2.95	10.15	****
Asian	1.61	7.24	22.29	****
Native American	0.00	0.27	0.61	****
MBE	2.44	21.81	11.21	****
WBE	1.76	17.76	9.91	****
M/WBE	4.20	39.57	10.62	****

Source and Notes: See Table 7.21.

Table 7.28. Disparity Results for Department of Health and Mental Hygiene, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	0.00	9.69	0.00	****
Hispanic	0.00	3.48	0.00	****
Asian	0.00	5.44	0.00	****
Native American	0.00	0.39	0.00	
MBE	0.00	18.99	0.00	****
WBE	24.15	13.39	180.31	
M/WBE	24.15	32.39	74.56	****
AE-CRS				
African American	4.91	10.17	48.30	****
Hispanic	0.00	3.86	0.00	
Asian	0.00	11.35	0.00	****
Native American	0.00	0.39	0.00	****
MBE	4.91	25.78	19.06	****
WBE	0.00	15.36	0.00	****
M/WBE	4.91	41.14	11.94	****
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	0.00	24.46	0.00	****
WBE	8.40	16.49	50.95	****
M/WBE	8.40	40.94	20.52	****
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	15.87	13.94	113.81	
Native American	0.00	0.50	0.00	****
MBE	15.87	32.25	49.21	****
WBE	0.00	15.84	0.00	****
M/WBE	15.87	48.09	33.00	****
Services				
African American	3.84	12.88	29.85	****
Hispanic	0.01	1.95	0.77	****
Asian	0.77	6.91	11.08	****
Native American	0.91	0.09	1015.46	
MBE	5.53	21.83	25.34	****
WBE	38.92	22.74	171.19	
M/WBE	44.46	44.56	99.76	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.15	9.39	1.56	****
Hispanic	0.00	2.02	0.00	****
Asian	0.23	9.05	2.59	****
Native American	0.00	0.93	0.00	****
MBE	0.38	21.39	1.78	****
WBE	29.32	17.52	167.31	
M/WBE	29.70	38.91	76.32	***
All Procurement				
African American	3.65	11.35	32.12	****
Hispanic	0.01	2.95	0.48	****
Asian	0.94	7.24	12.94	****
Native American	0.86	0.27	318.02	
MBE	5.45	21.81	25.01	****
WBE	37.96	17.76	213.66	
M/WBE	43.41	39.57	109.70	

Source and Notes: See Table 7.21.

Table 7.29. Disparity Results for Department of Human Resources, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
AE-CRS				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Maintenance				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	13.94	0.00	****
Native American	0.00	0.50	0.00	****
MBE	0.00	32.25	0.00	****
WBE	0.00	15.84	0.00	****
M/WBE	0.00	48.09	0.00	****
Services				
African American	34.93	12.88	271.20	
Hispanic	0.59	1.95	30.09	****
Asian	0.07	6.91	1.03	****
Native American	0.00	0.09	0.00	****
MBE	35.59	21.83	163.03	
WBE	19.91	22.74	87.55	
M/WBE	55.49	44.56	124.52	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
All Procurement				
African American	32.32	11.35	284.74	
Hispanic	0.54	2.95	18.39	****
Asian	0.07	7.24	0.91	****
Native American	0.00	0.27	0.00	****
MBE	32.93	21.81	151.00	
WBE	18.42	17.76	103.69	
M/WBE	51.35	39.57	129.76	

Source and Notes: See Table 7.21.

Table 7.30. Disparity Results for Department of Juvenile Services, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	0.00	9.69	0.00	****
Hispanic	0.00	3.48	0.00	****
Asian	0.00	5.44	0.00	****
Native American	0.00	0.39	0.00	
MBE	0.00	18.99	0.00	****
WBE	0.00	13.39	0.00	****
M/WBE	0.00	32.39	0.00	****
AE-CRS				
African American	0.00	10.17	0.00	****
Hispanic	0.00	3.86	0.00	
Asian	0.00	11.35	0.00	****
Native American	0.00	0.39	0.00	****
MBE	0.00	25.78	0.00	****
WBE	0.00	15.36	0.00	****
M/WBE	0.00	41.14	0.00	****
Maintenance				
African American	2.32	14.26	16.25	****
Hispanic	5.80	4.62	125.59	
Asian	0.34	5.30	6.49	****
Native American	0.00	0.28	0.00	****
MBE	8.46	24.46	34.60	****
WBE	28.45	16.49	172.58	
M/WBE	36.92	40.94	90.16	
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	13.94	0.00	****
Native American	0.00	0.50	0.00	****
MBE	0.00	32.25	0.00	****
WBE	0.00	15.84	0.00	****
M/WBE	0.00	48.09	0.00	****
Services				
African American	1.56	12.88	12.14	****
Hispanic	0.00	1.95	0.00	****
Asian	0.74	6.91	10.75	****
Native American	0.00	0.09	0.00	****
MBE	2.31	21.83	10.57	****
WBE	25.44	22.74	111.89	
M/WBE	27.75	44.56	62.27	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	12.84	17.52	73.25	***
M/WBE	12.84	38.91	32.99	****
All Procurement				
African American	1.44	11.35	12.72	****
Hispanic	0.10	2.95	3.28	****
Asian	0.67	7.24	9.30	****
Native American	0.00	0.27	0.00	****
MBE	2.21	21.81	10.15	****
WBE	23.74	17.76	133.64	
M/WBE	25.95	39.57	65.59	****

Source and Notes: See Table 7.21.

Table 7.31. Disparity Results for Frostburg State University, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	1.73	9.69	17.81	****
Hispanic	0.00	3.48	0.00	****
Asian	0.00	5.44	0.00	****
Native American	0.00	0.39	0.00	
MBE	1.73	18.99	9.09	****
WBE	4.61	13.39	34.46	****
M/WBE	6.34	32.39	19.58	****
AE-CRS				
African American	0.00	10.17	0.00	****
Hispanic	0.00	3.86	0.00	
Asian	0.00	11.35	0.00	****
Native American	0.00	0.39	0.00	****
MBE	0.00	25.78	0.00	****
WBE	14.74	15.36	95.95	
M/WBE	14.74	41.14	35.82	****
Maintenance				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	9.28	13.94	66.52	***
Native American	0.00	0.50	0.00	****
MBE	9.28	32.25	28.76	****
WBE	0.00	15.84	0.00	****
M/WBE	9.28	48.09	19.29	****
Services				
African American	0.00	12.88	0.00	****
Hispanic	0.00	1.95	0.00	****
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	0.00	21.83	0.00	****
WBE	0.00	22.74	0.00	****
M/WBE	0.00	44.56	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	0.00	17.52	0.00	****
M/WBE	0.00	38.91	0.00	****
All Procurement				
African American	0.36	11.35	3.16	****
Hispanic	0.00	2.95	0.00	****
Asian	2.80	7.24	38.66	****
Native American	0.00	0.27	0.00	****
MBE	3.16	21.81	14.47	****
WBE	3.11	17.76	17.50	****
M/WBE	6.26	39.57	15.83	****

Source and Notes: See Table 7.21.

Table 7.32. Disparity Results for Public School Construction Program, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	3.87	9.69	39.90	****
Hispanic	1.12	3.48	32.14	****
Asian	1.67	5.44	30.78	****
Native American	0.20	0.39	50.86	
MBE	6.85	18.99	36.09	****
WBE	12.60	13.39	94.07	
M/WBE	19.45	32.39	60.07	****
AE-CRS				
African American	4.74	10.17	46.63	****
Hispanic	12.84	3.86	332.28	
Asian	0.00	11.35	0.00	****
Native American	0.00	0.39	0.00	****
MBE	17.59	25.78	68.20	****
WBE	9.46	15.36	61.62	****
M/WBE	27.05	41.14	65.75	****
Maintenance				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
IT				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Services				
African American	9.14	12.88	70.94	**
Hispanic	13.43	1.95	688.67	
Asian	6.11	6.91	88.44	
Native American	0.00	0.09	0.00	****
MBE	28.68	21.83	131.38	
WBE	15.25	22.74	67.06	****
M/WBE	43.92	44.56	98.56	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	13.82	17.52	78.87	
M/WBE	13.82	38.91	35.52	****
All Procurement				
African American	4.08	11.35	35.99	****
Hispanic	1.65	2.95	55.84	**
Asian	1.86	7.24	25.70	****
Native American	0.19	0.27	69.84	
MBE	7.78	21.81	35.68	****
WBE	12.71	17.76	71.56	***
M/WBE	20.49	39.57	51.79	****

Source and Notes: See Table 7.21.

Table 7.33. Disparity Results for Lottery Department, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
AE-CRS				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Maintenance				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
IT				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Services				
African American	9.59	12.88	74.46	*
Hispanic	0.03	1.95	1.48	****
Asian	0.04	6.91	0.56	****
Native American	0.08	0.09	94.02	
MBE	9.74	21.83	44.63	****
WBE	1.41	22.74	6.18	****
M/WBE	11.15	44.56	25.01	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
All Procurement				
African American	9.59	11.35	84.49	
Hispanic	0.03	2.95	0.98	****
Asian	0.04	7.24	0.53	****
Native American	0.08	0.27	31.16	*
MBE	9.74	21.81	44.67	****
WBE	1.41	17.76	7.91	****
M/WBE	11.15	39.57	28.17	****

Source and Notes: See Table 7.21.

Table 7.34. Disparity Results for Maryland Environmental Service, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	5.69	9.69	58.75	****
Hispanic	0.00	3.48	0.00	****
Asian	10.99	5.44	202.16	
Native American	0.00	0.39	0.00	
MBE	16.68	18.99	87.83	
WBE	5.27	13.39	39.37	****
M/WBE	21.96	32.39	67.79	****
AE-CRS				
African American	5.24	10.17	51.52	****
Hispanic	0.00	3.86	0.00	****
Asian	7.66	11.35	67.49	***
Native American	0.00	0.39	0.00	****
MBE	12.90	25.78	50.04	****
WBE	10.92	15.36	71.12	***
M/WBE	23.82	41.14	57.91	****
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	0.00	24.46	0.00	****
WBE	7.56	16.49	45.86	****
M/WBE	7.56	40.94	18.47	****
IT				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Services				
African American	6.39	12.88	49.64	****
Hispanic	0.00	1.95	0.00	****
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	6.39	21.83	29.29	****
WBE	9.00	22.74	39.58	****
M/WBE	15.39	44.56	34.54	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.86	9.05	9.46	****
Native American	0.00	0.93	0.00	****
MBE	0.86	21.39	4.00	****
WBE	1.97	17.52	11.27	****
M/WBE	2.83	38.91	7.27	****
All Procurement				
African American	4.24	11.35	37.35	****
Hispanic	0.00	2.95	0.00	****
Asian	7.06	7.24	97.62	
Native American	0.00	0.27	0.00	****
MBE	11.30	21.81	51.83	****
WBE	5.67	17.76	31.93	****
M/WBE	16.98	39.57	42.90	****

Source and Notes: See Table 7.21.

Table 7.35. Disparity Results for Maryland Stadium Authority, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	13.19	9.69	136.16	
Hispanic	12.17	3.48	349.77	
Asian	1.78	5.44	32.81	****
Native American	0.00	0.39	0.00	****
MBE	27.15	18.99	142.94	
WBE	6.14	13.39	45.88	****
M/WBE	33.29	32.39	102.80	
AE-CRS				
African American	4.57	10.17	44.87	****
Hispanic	0.06	3.86	1.66	****
Asian	0.00	11.35	0.00	****
Native American	0.20	0.39	50.00	
MBE	4.83	25.78	18.72	****
WBE	3.27	15.36	21.27	****
M/WBE	8.09	41.14	19.67	****
Maintenance				
African American	20.46	14.26	143.44	
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	20.46	24.46	83.64	
WBE	2.24	16.49	13.59	****
M/WBE	22.70	40.94	55.43	****
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	13.94	0.00	****
Native American	0.00	0.50	0.00	****
MBE	0.00	32.25	0.00	****
WBE	0.00	15.84	0.00	****
M/WBE	0.00	48.09	0.00	****
Services				
African American	0.06	12.88	0.49	****
Hispanic	12.78	1.95	655.56	
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	12.85	21.83	58.86	****
WBE	0.55	22.74	2.40	****
M/WBE	13.39	44.56	30.05	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
All Procurement				
African American	11.42	11.35	100.64	
Hispanic	10.91	2.95	369.70	
Asian	1.42	7.24	19.56	****
Native American	0.02	0.27	5.84	****
MBE	23.77	21.81	108.99	
WBE	5.25	17.76	29.57	****
M/WBE	29.02	39.57	73.34	****

Source and Notes: See Table 7.21.

Table 7.36. Disparity Results for Maryland State Police, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	100.00	9.69	1032.03	
Hispanic	0.00	3.48	0.00	****
Asian	0.00	5.44	0.00	****
Native American	0.00	0.39	0.00	****
MBE	100.00	18.99	526.48	
WBE	0.00	13.39	0.00	****
M/WBE	100.00	32.39	308.78	
AE-CRS				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	0.00	24.46	0.00	****
WBE	0.00	16.49	0.00	****
M/WBE	0.00	40.94	0.00	****
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	13.94	0.00	****
Native American	0.00	0.50	0.00	****
MBE	0.00	32.25	0.00	****
WBE	0.00	15.84	0.00	****
M/WBE	0.00	48.09	0.00	****
Services				
African American	0.00	12.88	0.00	****
Hispanic	0.00	1.95	0.00	****
Asian	0.15	6.91	2.20	****
Native American	0.00	0.09	0.00	****
MBE	0.15	21.83	0.69	****
WBE	79.58	22.74	349.99	
M/WBE	79.73	44.56	178.91	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	2.82	9.39	30.05	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	2.82	21.39	13.19	****
WBE	0.00	17.52	0.00	****
M/WBE	2.82	38.91	7.25	****
All Procurement				
African American	0.34	11.35	2.98	****
Hispanic	0.00	2.95	0.00	****
Asian	0.11	7.24	1.57	****
Native American	0.00	0.27	0.00	****
MBE	0.45	21.81	2.07	****
WBE	59.65	17.76	335.77	
M/WBE	60.10	39.57	151.88	

Source and Notes: See Table 7.21.

Table 7.37. Disparity Results for Maryland Aviation Administration, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	8.47	9.69	87.41	
Hispanic	2.89	3.48	82.95	
Asian	0.24	5.44	4.49	****
Native American	0.00	0.39	0.00	
MBE	11.60	18.99	61.08	****
WBE	4.73	13.39	35.35	****
M/WBE	16.33	32.39	50.44	****
AE-CRS				
African American	3.83	10.17	37.60	****
Hispanic	3.40	3.86	87.90	
Asian	2.36	11.35	20.77	****
Native American	0.00	0.39	0.00	****
MBE	9.58	25.78	37.15	****
WBE	5.35	15.36	34.82	****
M/WBE	14.93	41.14	36.28	****
Maintenance				
African American	3.97	14.26	27.87	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	3.97	24.46	16.25	****
WBE	2.39	16.49	14.48	****
M/WBE	6.36	40.94	15.53	****
IT				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Services				
African American	15.86	12.88	123.16	
Hispanic	3.63	1.95	186.28	
Asian	1.51	6.91	21.86	****
Native American	0.00	0.09	0.00	****
MBE	21.00	21.83	96.23	
WBE	0.17	22.74	0.74	****
M/WBE	21.17	44.56	47.51	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	0.00	17.52	0.00	****
M/WBE	0.00	38.91	0.00	****
All Procurement				
African American	7.94	11.35	69.91	**
Hispanic	2.31	2.95	78.20	
Asian	0.91	7.24	12.55	****
Native American	0.00	0.27	0.00	****
MBE	11.15	21.81	51.14	****
WBE	2.90	17.76	16.30	****
M/WBE	14.05	39.57	35.50	****

Source and Notes: See Table 7.21.

Table 7.38. Disparity Results for Maryland Port Administration, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	8.89	9.69	91.74	
Hispanic	1.36	3.48	39.02	****
Asian	0.15	5.44	2.71	****
Native American	0.00	0.39	0.00	
MBE	10.39	18.99	54.72	****
WBE	10.21	13.39	76.22	
M/WBE	20.60	32.39	63.61	****
AE-CRS				
African American	1.16	10.17	11.37	****
Hispanic	0.00	3.86	0.00	
Asian	7.28	11.35	64.14	***
Native American	0.00	0.39	0.00	****
MBE	8.44	25.78	32.72	****
WBE	12.03	15.36	78.36	
M/WBE	20.47	41.14	49.76	****
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	0.00	24.46	0.00	****
WBE	0.00	16.49	0.00	****
M/WBE	0.00	40.94	0.00	****
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	13.94	0.00	****
Native American	0.00	0.50	0.00	****
MBE	0.00	32.25	0.00	****
WBE	0.00	15.84	0.00	****
M/WBE	0.00	48.09	0.00	****
Services				
African American	8.36	12.88	64.94	****
Hispanic	0.00	1.95	0.00	****
Asian	15.69	6.91	227.08	
Native American	0.00	0.09	0.00	****
MBE	24.05	21.83	110.19	
WBE	9.24	22.74	40.63	****
M/WBE	33.29	44.56	74.70	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	0.00	17.52	0.00	****
M/WBE	0.00	38.91	0.00	****
All Procurement				
African American	7.32	11.35	64.46	***
Hispanic	0.87	2.95	29.50	****
Asian	3.99	7.24	55.15	****
Native American	0.00	0.27	0.00	****
MBE	12.18	21.81	55.84	****
WBE	10.14	17.76	57.09	****
M/WBE	22.32	39.57	56.40	****

Source and Notes: See Table 7.21.

Table 7.39. Disparity Results for Maryland State Highway Administration, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	3.06	9.69	31.57	****
Hispanic	2.67	3.48	76.76	
Asian	0.44	5.44	8.18	****
Native American	2.50	0.39	645.19	
MBE	8.68	18.99	45.68	****
WBE	19.45	13.39	145.25	
M/WBE	28.13	32.39	86.85	
AE-CRS				
African American	3.21	10.17	31.53	****
Hispanic	0.27	3.86	7.12	****
Asian	13.32	11.35	117.32	
Native American	0.00	0.39	0.00	****
MBE	16.80	25.78	65.16	****
WBE	10.15	15.36	66.11	****
M/WBE	26.95	41.14	65.51	****
Maintenance				
African American	2.63	14.26	18.47	****
Hispanic	3.47	4.62	75.08	
Asian	0.19	5.30	3.62	****
Native American	0.00	0.28	0.00	****
MBE	6.29	24.46	25.74	****
WBE	22.80	16.49	138.31	
M/WBE	29.10	40.94	71.07	****
IT				
African American	4.97	13.94	35.61	****
Hispanic	0.00	3.86	0.00	****
Asian	7.86	13.94	56.40	****
Native American	0.00	0.50	0.00	****
MBE	12.83	32.25	39.78	****
WBE	3.15	15.84	19.90	****
M/WBE	15.98	48.09	33.23	****
Services				
African American	58.81	12.88	456.66	
Hispanic	0.21	1.95	10.59	****
Asian	3.47	6.91	50.26	****
Native American	0.00	0.09	0.00	****
MBE	62.49	21.83	286.30	
WBE	18.52	22.74	81.44	
M/WBE	81.01	44.56	181.78	

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	0.00	17.52	0.00	****
M/WBE	0.00	38.91	0.00	****
All Procurement				
African American	3.98	11.35	35.10	****
Hispanic	2.26	2.95	76.50	
Asian	2.61	7.24	36.12	****
Native American	1.88	0.27	697.19	
MBE	10.73	21.81	49.23	****
WBE	17.90	17.76	100.76	
M/WBE	28.63	39.57	72.36	****

Source and Notes: See Table 7.21.

Table 7.40. Disparity Results for Maryland Transit Administration, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	5.55	9.69	57.26	****
Hispanic	2.42	3.48	69.50	
Asian	3.23	5.44	59.49	***
Native American	0.09	0.39	22.27	***
MBE	11.29	18.99	59.43	****
WBE	3.73	13.39	27.86	****
M/WBE	15.02	32.39	46.37	****
AE-CRS				
African American	3.27	10.17	32.11	****
Hispanic	3.91	3.86	101.21	
Asian	7.43	11.35	65.46	***
Native American	0.00	0.39	0.00	****
MBE	14.61	25.78	56.66	****
WBE	6.88	15.36	44.77	****
M/WBE	21.48	41.14	52.22	****
Maintenance				
African American	4.83	14.26	33.88	****
Hispanic	0.59	4.62	12.80	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	5.42	24.46	22.17	****
WBE	0.16	16.49	0.95	****
M/WBE	5.58	40.94	13.62	****
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	33.23	13.94	238.30	
Native American	0.00	0.50	0.00	****
MBE	33.23	32.25	103.03	
WBE	0.00	15.84	0.00	****
M/WBE	33.23	48.09	69.09	****
Services				
African American	2.24	12.88	17.38	****
Hispanic	0.74	1.95	38.01	****
Asian	0.56	6.91	8.11	****
Native American	0.01	0.09	5.61	**
MBE	3.55	21.83	16.24	****
WBE	2.41	22.74	10.59	****
M/WBE	5.95	44.56	13.36	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.77	9.05	8.49	****
Native American	0.00	0.93	0.00	****
MBE	0.77	21.39	3.59	****
WBE	0.00	17.52	0.00	****
M/WBE	0.77	38.91	1.98	****
All Procurement				
African American	2.37	11.35	20.87	****
Hispanic	1.22	2.95	41.20	****
Asian	2.49	7.24	34.47	****
Native American	0.01	0.27	4.35	****
MBE	6.09	21.81	27.93	****
WBE	2.51	17.76	14.13	****
M/WBE	8.60	39.57	21.73	****

Source and Notes: See Table 7.21.

Table 7.41. Disparity Results for Maryland Transportation Authority, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	4.89	9.69	50.41	****
Hispanic	1.70	3.48	48.92	****
Asian	1.47	5.44	26.96	****
Native American	0.00	0.39	0.00	
MBE	8.05	18.99	42.40	****
WBE	18.41	13.39	137.48	
M/WBE	26.46	32.39	81.71	
AE-CRS				
African American	6.95	10.17	68.31	**
Hispanic	0.00	3.86	0.00	****
Asian	7.98	11.35	70.30	**
Native American	0.00	0.39	0.00	****
MBE	14.93	25.78	57.90	****
WBE	10.61	15.36	69.08	***
M/WBE	25.54	41.14	62.07	****
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	0.00	24.46	0.00	****
WBE	19.14	16.49	116.08	
M/WBE	19.14	40.94	46.74	****
IT				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Services				
African American	4.20	12.88	32.64	****
Hispanic	0.00	1.95	0.00	****
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	4.20	21.83	19.26	****
WBE	8.27	22.74	36.38	****
M/WBE	12.47	44.56	27.99	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	0.00	17.52	0.00	****
M/WBE	0.00	38.91	0.00	****
All Procurement				
African American	5.33	11.35	46.94	****
Hispanic	1.23	2.95	41.58	****
Asian	2.94	7.24	40.63	****
Native American	0.00	0.27	0.00	****
MBE	9.49	21.81	43.54	****
WBE	16.14	17.76	90.88	
M/WBE	25.64	39.57	64.79	****

Source and Notes: See Table 7.21.

Table 7.42. Disparity Results for Maryland Motor Vehicle Administration, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	1.65	9.69	17.06	****
Hispanic	0.85	3.48	24.48	****
Asian	2.92	5.44	53.62	****
Native American	0.00	0.39	0.00	
MBE	5.42	18.99	28.54	****
WBE	9.87	13.39	73.71	*
M/WBE	15.29	32.39	47.22	****
AE-CRS				
African American	0.00	10.17	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	100.00	11.35	880.94	
Native American	0.00	0.39	0.00	****
MBE	100.00	25.78	387.84	
WBE	0.00	15.36	0.00	****
M/WBE	100.00	41.14	243.07	
Maintenance				
African American	6.53	14.26	45.76	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	6.53	24.46	26.68	****
WBE	0.00	16.49	0.00	****
M/WBE	6.53	40.94	15.94	****
IT				
African American	9.79	13.94	70.18	***
Hispanic	0.63	3.86	16.41	****
Asian	9.77	13.94	70.09	***
Native American	0.00	0.50	0.00	****
MBE	20.19	32.25	62.61	****
WBE	3.64	15.84	22.98	****
M/WBE	23.83	48.09	49.56	****
Services				
African American	1.70	12.88	13.19	****
Hispanic	2.26	1.95	115.99	
Asian	10.08	6.91	145.94	
Native American	0.00	0.09	0.00	****
MBE	14.04	21.83	64.34	****
WBE	21.26	22.74	93.52	
M/WBE	35.31	44.56	79.23	***

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	0.00	17.52	0.00	****
M/WBE	0.00	38.91	0.00	****
All Procurement				
African American	2.95	11.35	25.99	****
Hispanic	1.55	2.95	52.67	***
Asian	7.85	7.24	108.56	
Native American	0.00	0.27	0.00	****
MBE	12.36	21.81	56.67	****
WBE	14.57	17.76	82.00	
M/WBE	26.92	39.57	68.04	****

Source and Notes: See Table 7.21.

Table 7.43. Disparity Results for Maryland Department of Transportation—The Secretary's Office, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
AE-CRS				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Maintenance				
African American	17.60	14.26	123.40	
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	17.60	24.46	71.95	****
WBE	0.19	16.49	1.13	****
M/WBE	17.78	40.94	43.43	****
IT				
African American	8.97	13.94	64.31	****
Hispanic	1.25	3.86	32.39	****
Asian	4.66	13.94	33.41	****
Native American	0.00	0.50	0.00	****
MBE	14.88	32.25	46.13	****
WBE	6.61	15.84	41.73	****
M/WBE	21.49	48.09	44.68	****
Services				
African American	1.60	12.88	12.40	****
Hispanic	0.00	1.95	0.00	****
Asian	0.78	6.91	11.23	****
Native American	0.00	0.09	0.00	****
MBE	2.37	21.83	10.87	****
WBE	9.82	22.74	43.19	****
M/WBE	12.19	44.56	27.36	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
All Procurement				
African American	7.62	11.35	67.15	***
Hispanic	0.95	2.95	32.15	****
Asian	3.70	7.24	51.12	****
Native American	0.00	0.27	0.00	****
MBE	12.27	21.81	56.27	****
WBE	7.12	17.76	40.11	****
M/WBE	19.39	39.57	49.01	****

Source and Notes: See Table 7.21.

Table 7.44. Disparity Results for Morgan State University, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	14.12	9.69	145.77	
Hispanic	3.64	3.48	104.47	
Asian	0.05	5.44	0.87	****
Native American	0.00	0.39	0.00	
MBE	17.81	18.99	93.75	
WBE	1.45	13.39	10.81	****
M/WBE	19.25	32.39	59.45	****
AE-CRS				
African American	5.42	10.17	53.30	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	11.35	0.00	****
Native American	0.00	0.39	0.00	****
MBE	5.42	25.78	21.03	****
WBE	8.97	15.36	58.41	****
M/WBE	14.39	41.14	34.98	
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	0.00	24.46	0.00	****
WBE	0.00	16.49	0.00	****
M/WBE	0.00	40.94	0.00	****
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	13.94	0.00	****
Native American	0.00	0.50	0.00	****
MBE	0.00	32.25	0.00	****
WBE	0.00	15.84	0.00	****
M/WBE	0.00	48.09	0.00	****
Services				
African American	0.00	12.88	0.00	****
Hispanic	0.00	1.95	0.00	****
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	0.00	21.83	0.00	****
WBE	0.00	22.74	0.00	****
M/WBE	0.00	44.56	0.00	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	0.00	17.52	0.00	****
M/WBE	0.00	38.91	0.00	****
All Procurement				
African American	11.67	11.35	102.79	
Hispanic	2.97	2.95	100.55	
Asian	0.04	7.24	0.53	****
Native American	0.00	0.27	0.00	****
MBE	14.67	21.81	67.29	****
WBE	1.41	17.76	7.94	****
M/WBE	16.08	39.57	40.65	****

Source and Notes: See Table 7.21.

Table 7.45. Disparity Results for Salisbury State University, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	0.00	9.69	0.00	****
Hispanic	0.00	3.48	0.00	****
Asian	0.00	5.44	0.00	****
Native American	0.00	0.39	0.00	
MBE	0.00	18.99	0.00	****
WBE	0.00	13.39	0.02	****
M/WBE	0.00	32.39	0.01	****
AE-CRS				
African American	0.00	10.17	0.00	****
Hispanic	0.00	3.86	0.00	
Asian	0.00	11.35	0.00	****
Native American	0.00	0.39	0.00	****
MBE	0.00	25.78	0.00	****
WBE	0.00	15.36	0.00	****
M/WBE	0.00	41.14	0.00	****
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	0.00	24.46	0.00	****
WBE	11.89	16.49	72.12	***
M/WBE	11.89	40.94	29.04	****
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	13.94	0.00	****
Native American	0.00	0.50	0.00	****
MBE	0.00	32.25	0.00	****
WBE	0.00	15.84	0.00	****
M/WBE	0.00	48.09	0.00	****
Services				
African American	10.35	12.88	80.39	
Hispanic	0.00	1.95	0.00	****
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	10.35	21.83	47.43	****
WBE	5.07	22.74	22.32	****
M/WBE	15.43	44.56	34.62	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	7.51	9.05	82.93	
Native American	0.00	0.93	0.00	****
MBE	7.51	21.39	35.10	****
WBE	0.00	17.52	0.00	****
M/WBE	7.51	38.91	19.29	****
All Procurement				
African American	3.95	11.35	34.76	****
Hispanic	0.00	2.95	0.00	****
Asian	3.52	7.24	48.68	****
Native American	0.00	0.27	0.00	****
MBE	7.47	21.81	34.24	****
WBE	2.97	17.76	16.71	****
M/WBE	10.44	39.57	26.37	****

Source and Notes: See Table 7.21.

Table 7.46. Disparity Results for Towson State University, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	3.76	9.69	38.80	****
Hispanic	5.66	3.48	162.67	
Asian	1.45	5.44	26.76	****
Native American	0.00	0.39	0.00	
MBE	10.88	18.99	57.26	****
WBE	13.45	13.39	100.43	
M/WBE	24.32	32.39	75.11	****
AE-CRS				
African American	0.00	10.17	0.00	****
Hispanic	0.00	3.86	0.00	
Asian	6.88	11.35	60.63	****
Native American	0.00	0.39	0.00	****
MBE	6.88	25.78	26.69	****
WBE	7.96	15.36	51.82	****
M/WBE	14.84	41.14	36.07	****
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.72	4.62	15.50	****
Asian	0.34	5.30	6.40	****
Native American	0.00	0.28	0.00	****
MBE	1.06	24.46	4.31	****
WBE	0.65	16.49	3.97	****
M/WBE	1.71	40.94	4.18	****
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	14.43	13.94	103.47	
Native American	0.00	0.50	0.00	****
MBE	14.43	32.25	44.74	****
WBE	0.00	15.84	0.00	****
M/WBE	14.43	48.09	30.00	****
Services				
African American	0.30	12.88	2.31	****
Hispanic	0.00	1.95	0.00	****
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	0.30	21.83	1.36	****
WBE	0.79	22.74	3.47	****
M/WBE	1.09	44.56	2.44	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	2.87	9.39	30.56	****
Hispanic	0.00	2.02	0.00	****
Asian	0.83	9.05	9.17	****
Native American	0.00	0.93	0.00	****
MBE	3.70	21.39	17.29	****
WBE	0.00	17.52	0.00	****
M/WBE	3.70	38.91	9.51	****
All Procurement				
African American	1.72	11.35	15.19	****
Hispanic	0.80	2.95	27.02	****
Asian	0.91	7.24	12.55	****
Native American	0.00	0.27	0.00	****
MBE	3.43	21.81	15.73	****
WBE	1.90	17.76	10.69	****
M/WBE	5.33	39.57	13.47	****

Source and Notes: See Table 7.21.

Table 7.47. Disparity Results for University of Maryland Baltimore, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	5.93	9.69	61.19	****
Hispanic	0.36	3.48	10.30	****
Asian	0.14	5.44	2.50	****
Native American	0.80	0.39	205.18	
MBE	7.22	18.99	38.00	****
WBE	8.08	13.39	60.31	****
M/WBE	15.29	32.39	47.23	****
AE-CRS				
African American	3.93	10.17	38.60	****
Hispanic	0.00	3.86	0.00	****
Asian	1.84	11.35	16.20	****
Native American	0.00	0.39	0.00	****
MBE	5.77	25.78	22.36	****
WBE	23.18	15.36	150.93	
M/WBE	28.94	41.14	70.35	****
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	0.00	24.46	0.00	****
WBE	0.00	16.49	0.00	****
M/WBE	0.00	40.94	0.00	****
IT				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Services				
African American	11.20	12.88	86.94	
Hispanic	0.00	1.95	0.00	****
Asian	0.81	6.91	11.72	****
Native American	0.00	0.09	0.00	****
MBE	12.01	21.83	55.01	****
WBE	5.17	22.74	22.75	****
M/WBE	17.18	44.56	38.55	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	5.53	9.05	61.08	***
Native American	0.00	0.93	0.00	****
MBE	5.53	21.39	25.85	****
WBE	0.00	17.52	0.00	****
M/WBE	5.53	38.91	14.21	****
All Procurement				
African American	5.40	11.35	47.53	****
Hispanic	0.20	2.95	6.91	****
Asian	1.37	7.24	18.94	****
Native American	0.45	0.27	167.79	
MBE	7.42	21.81	34.03	****
WBE	7.56	17.76	42.57	****
M/WBE	14.98	39.57	37.87	****

Source and Notes: See Table 7.21.

Table 7.48. Disparity Results for University of Maryland Baltimore County, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	5.14	9.69	53.03	****
Hispanic	0.00	3.48	0.00	****
Asian	0.42	5.44	7.69	****
Native American	0.00	0.39	0.00	
MBE	5.56	18.99	29.25	****
WBE	15.48	13.39	115.56	
M/WBE	21.03	32.39	64.94	****
AE-CRS				
African American	0.00	10.17	0.00	****
Hispanic	0.00	3.86	0.00	
Asian	0.00	11.35	0.00	****
Native American	0.00	0.39	0.00	****
MBE	0.00	25.78	0.00	****
WBE	0.00	15.36	0.00	****
M/WBE	0.00	41.14	0.00	****
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	11.46	4.62	247.98	
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	11.46	24.46	46.84	****
WBE	16.14	16.49	97.90	
M/WBE	27.60	40.94	67.40	****
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	13.94	0.00	****
Native American	0.00	0.50	0.00	****
MBE	0.00	32.25	0.00	****
WBE	0.00	15.84	0.00	****
M/WBE	0.00	48.09	0.00	****
Services				
African American	9.44	12.88	73.33	*
Hispanic	0.00	1.95	0.00	****
Asian	0.10	6.91	1.49	****
Native American	0.00	0.09	0.00	****
MBE	9.55	21.83	43.74	****
WBE	4.22	22.74	18.58	****
M/WBE	13.77	44.56	30.90	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.69	9.05	7.62	****
Native American	0.00	0.93	0.00	****
MBE	0.69	21.39	3.22	****
WBE	0.00	17.52	0.00	****
M/WBE	0.69	38.91	1.77	****
All Procurement				
African American	3.13	11.35	27.54	****
Hispanic	0.08	2.95	2.73	****
Asian	0.41	7.24	5.66	****
Native American	0.00	0.27	0.00	****
MBE	3.62	21.81	16.58	****
WBE	2.28	17.76	12.84	****
M/WBE	5.90	39.57	14.90	****

Source and Notes: See Table 7.21.

Table 7.49. Disparity Results for University of Maryland College Park, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	6.49	9.69	66.97	**
Hispanic	1.61	3.48	46.19	****
Asian	5.14	5.44	94.57	
Native American	0.00	0.39	0.00	
MBE	13.24	18.99	69.70	****
WBE	10.23	13.39	76.40	
M/WBE	23.47	32.39	72.47	****
AE-CRS				
African American	0.92	10.17	9.02	****
Hispanic	0.21	3.86	5.31	****
Asian	0.69	11.35	6.09	****
Native American	0.00	0.39	0.00	****
MBE	1.81	25.78	7.04	****
WBE	9.43	15.36	61.38	****
M/WBE	11.24	41.14	27.32	****
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	0.00	24.46	0.00	****
WBE	0.00	16.49	0.00	****
M/WBE	0.00	40.94	0.00	****
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	13.94	0.00	****
Native American	0.00	0.50	0.00	****
MBE	0.00	32.25	0.00	****
WBE	0.00	15.84	0.00	****
M/WBE	0.00	48.09	0.00	****
Services				
African American	16.21	12.88	125.85	
Hispanic	2.80	1.95	143.66	
Asian	5.05	6.91	73.13	
Native American	0.00	0.09	0.00	****
MBE	24.06	21.83	110.24	
WBE	1.91	22.74	8.41	****
M/WBE	25.97	44.56	58.29	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.51	9.39	5.46	****
Hispanic	0.00	2.02	0.00	****
Asian	2.04	9.05	22.53	****
Native American	0.00	0.93	0.00	****
MBE	2.55	21.39	11.93	****
WBE	1.52	17.52	8.68	****
M/WBE	4.07	38.91	10.46	****
All Procurement				
African American	4.10	11.35	36.08	****
Hispanic	0.89	2.95	30.20	****
Asian	3.39	7.24	46.79	****
Native American	0.00	0.27	0.00	****
MBE	8.37	21.81	38.39	****
WBE	6.15	17.76	34.61	****
M/WBE	14.52	39.57	36.69	****

Source and Notes: See Table 7.21.

Table 7.50. Disparity Results for University of Maryland Eastern Shore, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	12.82	9.69	132.29	
Hispanic	0.00	3.48	0.00	****
Asian	0.00	5.44	0.00	****
Native American	0.00	0.39	0.00	
MBE	12.82	18.99	67.48	****
WBE	10.25	13.39	76.56	
M/WBE	23.07	32.39	71.24	****
AE-CRS				
African American	15.96	10.17	156.90	
Hispanic	0.00	3.86	0.00	
Asian	0.00	11.35	0.00	****
Native American	0.00	0.39	0.00	****
MBE	15.96	25.78	61.91	****
WBE	0.00	15.36	0.00	****
M/WBE	15.96	41.14	38.80	****
Maintenance				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
IT				
African American	0.00	13.94	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	45.67	13.94	327.53	
Native American	0.00	0.50	0.00	****
MBE	45.67	32.25	141.61	
WBE	0.00	15.84	0.00	****
M/WBE	45.67	48.09	94.96	
Services				
African American	0.00	12.88	0.00	****
Hispanic	0.00	1.95	0.00	****
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	0.00	21.83	0.00	****
WBE	12.10	22.74	53.21	****
M/WBE	12.10	44.56	27.15	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	2.04	9.39	21.74	****
Hispanic	0.00	2.02	0.00	****
Asian	7.59	9.05	83.86	
Native American	0.00	0.93	0.00	****
MBE	9.63	21.39	45.03	****
WBE	0.00	17.52	0.00	****
M/WBE	9.63	38.91	24.75	****
All Procurement				
African American	2.65	11.35	23.35	****
Hispanic	0.00	2.95	0.00	****
Asian	10.98	7.24	151.70	
Native American	0.00	0.27	0.00	****
MBE	13.63	21.81	62.49	****
WBE	1.01	17.76	5.71	****
M/WBE	14.64	39.57	37.00	****

Source and Notes: See Table 7.21.

Table 7.51. Disparity Results for University of Maryland University College, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
AE-CRS				
African American	0.00	10.17	0.00	****
Hispanic	0.00	3.86	0.00	
Asian	0.00	11.35	0.00	****
Native American	0.00	0.39	0.00	****
MBE	0.00	25.78	0.00	****
WBE	22.03	15.36	143.46	
M/WBE	22.03	41.14	53.55	****
Maintenance				
African American	3.39	14.26	23.80	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	3.39	24.46	13.88	****
WBE	0.00	16.49	0.00	****
M/WBE	3.39	40.94	8.29	****
IT				
African American	0.30	13.94	2.16	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	13.94	0.00	****
Native American	0.00	0.50	0.00	****
MBE	0.30	32.25	0.93	****
WBE	0.00	15.84	0.00	****
M/WBE	0.30	48.09	0.63	****
Services				
African American	0.91	12.88	7.05	****
Hispanic	0.00	1.95	0.00	****
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	0.91	21.83	4.16	****
WBE	0.57	22.74	2.49	****
M/WBE	1.47	44.56	3.31	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	0.00	17.52	0.00	****
M/WBE	0.00	38.91	0.00	****
All Procurement				
African American	1.24	11.35	10.95	****
Hispanic	0.00	2.95	0.00	****
Asian	0.00	7.24	0.00	****
Native American	0.00	0.27	0.00	****
MBE	1.24	21.81	5.70	****
WBE	0.38	17.76	2.13	****
M/WBE	1.62	39.57	4.09	****

Source and Notes: See Table 7.21.

Table 7.52. Disparity Results for University of Baltimore, Overall and By Procurement Category, 2005-2009

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
Construction				
African American	0.00	9.69	0.00	****
Hispanic	0.00	3.48	0.00	****
Asian	0.00	5.44	0.00	****
Native American	0.00	0.39	0.00	
MBE	0.00	18.99	0.00	****
WBE	0.63	13.39	4.72	****
M/WBE	0.63	32.39	1.95	****
AE-CRS				
African American	0.00	10.17	0.00	****
Hispanic	0.00	3.86	0.00	****
Asian	0.00	11.35	0.00	
Native American	0.00	0.39	0.00	****
MBE	0.00	25.78	0.00	****
WBE	3.16	15.36	20.61	****
M/WBE	3.16	41.14	7.69	****
Maintenance				
African American	0.00	14.26	0.00	****
Hispanic	0.00	4.62	0.00	****
Asian	0.00	5.30	0.00	****
Native American	0.00	0.28	0.00	****
MBE	0.00	24.46	0.00	****
WBE	0.00	16.49	0.00	****
M/WBE	0.00	40.94	0.00	****
IT				
African American				
Hispanic				
Asian				
Native American				
MBE				
WBE				
M/WBE				
Services				
African American	0.00	12.88	0.00	****
Hispanic	0.00	1.95	0.00	****
Asian	0.00	6.91	0.00	****
Native American	0.00	0.09	0.00	****
MBE	0.00	21.83	0.00	****
WBE	13.11	22.74	57.68	****
M/WBE	13.11	44.56	29.43	****

Major Procurement Category / M/WBE Type	Utilization	Availability	Disparity Ratio	
CSE				
African American	0.00	9.39	0.00	****
Hispanic	0.00	2.02	0.00	****
Asian	0.00	9.05	0.00	****
Native American	0.00	0.93	0.00	****
MBE	0.00	21.39	0.00	****
WBE	1.22	17.52	6.97	****
M/WBE	1.22	38.91	3.14	****
All Procurement				
African American	0.00	11.35	0.00	****
Hispanic	0.00	2.95	0.00	****
Asian	0.00	7.24	0.00	****
Native American	0.00	0.27	0.00	****
MBE	0.00	21.81	0.00	****
WBE	6.10	17.76	34.32	****
M/WBE	6.10	39.57	15.41	****

Source and Notes: See Table 7.21.

Table 7.53. Current Availability and Expected Availability

Procurement Category	M/WBE Type	Current Availability	Expected Availability
All	African American:	11.35	20.94
	Hispanic	2.95	4.55
	Asian	7.27	8.54
	Native American	0.27	0.34
	MBE	21.81	33.85
	WBE	17.76	22.87
	M/WBE	39.57	54.50
Construction	African American:	9.69	13.70
	Hispanic	3.48	6.80
	Asian	5.44	7.95
	Native American	0.39	0.61
	MBE	18.99	34.41
	WBE	13.39	20.59
	M/WBE	32.39	51.85
AE-CRS	African American:	10.17	14.38
	Hispanic	3.86	7.54
	Asian	11.35	16.59
	Native American	0.39	0.61
	MBE	25.78	46.72
	WBE	15.36	23.62
	M/WBE	41.14	65.86

Table 7.53. Current Availability and Expected Availability, cont'd

Procurement Category	M/WBE Type	Current Availability	Expected Availability
Maintenance	African American:	14.26	32.12
	Hispanic	4.62	7.42
	Asian	5.30	6.71
	Native American	0.28	0.36
	MBE	24.46	37.34
	WBE	16.49	20.33
	M/WBE	40.94	54.90
IT	African American:	13.94	31.40
	Hispanic	3.86	6.20
	Asian	13.94	17.65
	Native American	0.50	0.64
	MBE	32.25	49.23
	WBE	15.84	19.52
	M/WBE	48.09	64.49
Services	African American:	12.88	29.02
	Hispanic	1.95	3.13
	Asian	6.91	8.75
	Native American	0.09	0.11
	MBE	21.83	33.32
	WBE	22.74	28.03
	M/WBE	44.56	59.76
CSE	African American:	9.39	21.15
	Hispanic	2.02	3.24
	Asian	9.05	11.46
	Native American	0.93	1.19
	MBE	21.39	32.65
	WBE	17.52	21.59
	M/WBE	38.91	52.18

Source: See Table 4.23A and Table 5.12.

VIII. Qualitative Evidence of Disparities in the State's Market Area

We have presented a variety of economic and statistical findings above that are consistent with or indicative of the presence of business discrimination against minorities and women in the geographic and product markets that are relevant to the State's contracting and procurement activities. Chapters V, VI, and VII in particular have documented large and statistically significant adverse disparities in the State's relevant markets impacting minority and female entrepreneurs. Commercial loan denial rates are higher, the cost of credit is higher, business formation rates are lower, and business owner earnings are lower—even when comparisons are restricted to similarly situated businesses and business owners.

As a further check on these findings, we investigated qualitative (*i.e.* anecdotal) evidence of disparities in the State's market area. First, we conducted a large scale survey of business establishments in these markets—both M/WBE and non-M/WBE—and asked owners directly about their experiences, if any, with contemporary business-related acts of discrimination and other related issues.

Briefly, among respondents to our survey we found that M/WBEs in the State's markets report suffering business-related discrimination in large numbers and with statistically significantly greater frequency than non-M/WBEs. These differences remain statistically significant when firm size and owner characteristics are held constant. We also find that M/WBEs in these markets are more likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it harder for them to conduct business, and less likely than similarly situated non-M/WBEs to report that specific aspects of the regular business environment make it easier for them to conduct business. Additionally, we find that M/WBE firms that have been hired in the past by non-M/WBE prime contractors to work on public sector contracts with M/WBE goals are rarely hired—or even solicited—by these prime contractors to work on projects without M/WBE goals. The relative lack of M/WBE hiring and, even more tellingly, the relative lack of solicitation of M/WBEs in the absence of affirmative efforts by Maryland and other public entities in the Maryland market area shows that business discrimination continues to fetter M/WBE business opportunities in the State's relevant markets. We conclude that the statistical evidence presented in this report is consistent with these anecdotal accounts of contemporary business discrimination.

Next, we conducted in-depth personal interviews with minority, women and majority business owners about their experiences in seeking and performing contracts in the State's market area. These focus groups confirmed the results of the statistical evidence and the mail surveys: minorities and women encounter significant barriers to the success of their firms in seeking public and private sector work, and these barriers are often the result of discrimination.

The remainder of this Chapter is organized as follows. We first discuss the mail survey results in Section A. In Section A.1, we discuss the survey questionnaire, sample frame, and response rate. Section A.2 presents evidence on willingness of firms to do business with the public sector. Section A.3 presents the key findings from the M/WBE and non-M/WBE respondents concerning disparate treatment. Section A.4 presents the key findings concerning the impact of the regular business environment on M/WBEs' ability to conduct their businesses. Section A.5

presents key findings to our questions concerning whether prime contractors solicit or hire M/WBEs for work on public or private contracts without M/WBE goals. Section A.6 then examines whether M/WBEs and non-M/WBEs that responded to the mail surveys are representative of all M/WBEs and non-M/WBEs in the relevant markets. To do so, we surveyed a random sample of M/WBEs and non-M/WBEs that did not respond to our mail survey, and then compared their responses to key questions with those of our survey respondents.

Finally, Section B describes the results of the business experience group interviews. Responses are grouped under the headings of the most common cited barriers and issues facing M/WBEs and non-M/WBEs.

A. Business Experience Surveys

1. Survey Questionnaire, Sample, and Responses

The survey questionnaires asked whether and with what frequency firms had experienced discrimination in a wide variety of likely business dealings in the previous five years. The survey also inquired about the influence of specific aspects of the everyday business environment, such as bonding and insurance requirements, on each firm's ability to do business in the State's relevant markets. We also asked about the relative frequency with which firms that have been used as subcontractors, subconsultants, or suppliers by prime contractors on contracts *with* M/WBE goals have been hired to work, or even solicited to bid, on similar contracts *without* M/WBE goals. Finally, we posed questions about the characteristics of the firm, including firm age, owner's education, employment size, and revenue size to facilitate comparisons of similarly situated firms.

The mail survey sample was stratified by industry and drawn directly from the Master M/WBE Directory and the Baseline Business Universe compiled for this Study. Firms were sampled randomly within strata. M/WBE firms were oversampled to facilitate statistical comparisons with non-M/WBEs.[252] Of 18,088 businesses that received the questionnaire,[253] 2,210 (12.2 percent) provided usable responses.[254] The distribution of total responses according to the race and gender of the business owner, by major procurement category, appears in Table 8.1.

2. Willingness of Firms to Contract with the Public Sector

The probative value of anecdotal evidence of discrimination increases when it comes from active businesses in the relevant geographic and procurement markets. The value of such evidence increases further when it comes from firms that have actually worked or attempted to work for the public sector within those markets. Such is the present case.

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[252] *See* Chapter III for a discussion of how the product and geographic markets were defined. See Chapter IV for discussion of how the Master M/WBE Directory and the Baseline Business Universe were assembled.

[253] These figures exclude surveys that were returned undelivered or were otherwise undeliverable.

[254] The total number of valid responses to any particular survey question, however, was sometimes lower than this due to item non-response.

As shown below in Table 8.2, there is a strong linkage between the firms responding to our mail survey and the public sector of the Maryland economy. All respondents operate establishments in the relevant geographic and product markets. Moreover, significant numbers of survey respondents have worked or attempted to do work for the State of Maryland or other public entities in the market area in the last five years. This is observed for virtually all types of M/WBEs and non-M/WBEs in all procurement categories. Overall, more than half of non-M/WBEs and over three-fifths of M/WBEs have worked or attempted to work for the State of Maryland or some other public entity in the market area in the previous five years. This phenomenon is especially apparent for M/WBEs and non-M/WBEs in Construction, where 69 percent of M/WBEs and 61 percent of non-M/WBEs have attempted to work for the State of Maryland or some other public entity in the market area in the previous five years; and in AE-CRS, where 77 percent of M/WBEs and 59 percent of non-M/WBEs have attempted to work for the State of Maryland or some other public entity in the market area in the previous five years.

3. Experiences of Disparate Treatment in Business Dealings

The survey included questions about instances of disparate treatment based on race and/or gender experienced in various business dealings during the past five years. As shown in the last row of Table 8.3, 44 percent of M/WBE firms said they had experienced at least one instance of disparate treatment in one or more areas of business dealings identified on the survey. Reports of disparate treatment were substantially and statistically significantly higher for M/WBEs than for nonminority males, casting doubt on claims of widespread "reverse discrimination." Reports were highest among African Americans and Native Americans, with overall rates near 60 percent. Similar patterns were observed when the results were disaggregated by procurement category.

The balance of Table 8.3 shows results for each of 14 distinct types of disparate treatment inquired about in the survey. In all but one category (hiring workers from union hiring halls), the difference in reported amounts of disparate treatment between M/WBEs and non-M/WBEs is large and statistically significant. In joining or dealing with construction trade associations, for example, M/WBEs reported being discriminated against almost eight times more frequently than nonminority males. In applying for commercial loans and for surety bonds M/WBEs reported being discriminated against roughly five times more frequently than nonminority males.[255] For African Americans and Native Americans, the figures are even more stark. For example, in the three areas identified above, African Americans reported experiencing disparate treatment 11, 8, and 9 times more frequently, respectively, than nonminority males. For Native Americans, the figures are 26, 7, and 16 times more frequently, respectively, than nonminority males. Even where differences are smallest, M/WBEs report being discriminated against roughly 1.5 to 2 times more frequently than nonminority males.

Evidence of the impact of public sector M/WBE programs is seen in that the smallest differences between M/WBEs and non-M/WBEs appear in the categories of working or attempting to work

[255] Discrimination in access to commercial credit and capital is the most widely and commonly cited problem facing minority-owned firms. *See* Chapter VI for an extensive discussion of the theory and analysis of the evidence behind this phenomenon.

on public sector prime and subcontracts—although even here the figures are still 1.35 and 1.4 times higher, respectively, for M/WBEs than for non-M/WBEs.

Table 8.4 represents the same disparate treatment information as in Table 8.3, but with the frequency percentages replaced by relative rankings. That is, the 14 kinds of disparate treatment are ranked within each race/gender group according to the frequency with which disparate treatment was reported, with "1" representing the most frequent and "14" representing the least frequent.

The worst reported problem overall for M/WBEs was receiving timely payment for work performed. This was followed closely by working or attempting to work on public sector prime contracts, working or attempting to work on public sector subcontracts, working or attempting to work on private sector prime contracts, working or attempting to work on private sector subcontracts, and applying for commercial loans.

For African Americans, the worst reported problem overall was receiving timely payment for work performed; followed by applying for commercial loans, working or attempting to work on private sector prime contracts, and working or attempting to work on private sector subcontracts, working or attempting to work on public sector prime contracts, and working or attempting to work on public sector subcontracts.

For Hispanics, the worst reported problem overall was receiving timely payment for work performed; followed by working or attempting to work on private sector prime contracts, working or attempting to work on public sector prime contracts, working or attempting to work on private sector subcontracts, applying for commercial loans, and working or attempting to work on public sector subcontracts.

For Asians, the worst reported problem overall was working or attempting to work on public sector subcontracts; followed by working or attempting to work on public sector prime contracts, applying for commercial loans, working or attempting to work on private sector prime contracts, working or attempting to work on private sector subcontracts, and receiving timely payment for work performed.

For Native Americans, the worst reported problem overall was receiving timely payment for work performed; followed by applying for surety bonds, applying for commercial loans, working or attempting to work on public sector prime contracts, joining or dealing with trade associations, and functioning without hindrance or harassment on the work site.

For nonminority women, the worst reported problem overall was receiving timely payment for work performed; followed by working or attempting to work on public sector subcontracts, working or attempting to work on public sector prime contracts, working or attempting to work on private sector subcontracts, working or attempting to work on private sector prime contracts, and functioning without hindrance or harassment on the work site.

Some courts and other observers have asserted that findings such as those in Tables 8.3 and 8.4 tell us nothing about discrimination against M/WBEs since, even though they are current, even though they come directly from the businesses alleging disparate treatment, and even though they are restricted to the relevant geographic and product markets, they still do not compare

firms of similar size, qualifications, or experience. Elsewhere in this Study, we have argued against such flawed logic (and economics) since size, qualifications, and experience are *precisely* the factors that are adversely impacted by discrimination.[256] Nevertheless, if disparities are still observed even when such "capacity" factors are held constant, the case becomes even more compelling.

The results reported below in Table 8.5 show that even when levels of size, qualifications, and experience are held constant across firms, measures of disparate treatment of African American-, Hispanic-, Asian-, Native American-, and nonminority women-owned businesses are still large, adverse, and statistically significant.

In Table 8.5, we report the results from a series of Probit regressions using the survey data on disparate treatment.[257] As indicated earlier, the survey questionnaire collected data related to each firm's size, qualifications, and experience. The reported estimates from these models can be interpreted as changes or differences in the probability of disparate treatment conditional on the control variables. The estimates in the table show large differences in disparate treatment probabilities between M/WBEs and non-M/WBEs. In column (1) of Table 8.5 (in which the regression model contains only M/WBE status and procurement category indicators), the estimated coefficient of 0.195 on the M/WBE indicator indicates that the likelihood of experiencing disparate treatment for M/WBE firms is 19.5 percentage points higher than that for non-M/WBE firms.[258] This difference is statistically significant within a 99 percent confidence interval or better. Column (2) of Table 8.5 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race or gender, including the owner's education, the age of the firm, and the size of the firm measured by employment and by sales. Even after controlling for these differences, however, M/WBE firms remain 18.0 percentage points more likely than non-M/WBE firms to experience disparate treatment. This difference is also statistically significant within a 99 percent confidence interval.

Firm size and other characteristics account for little of the disparate treatment reported by M/WBEs in the Maryland market area.

The exercise is repeated in columns (3) and (4). The only difference is that the M/WBE indicator is separated into two components—one for minority-owned firms and one for nonminority-female owned firms. The results in column (3) indicate that minority-owned firms in the State's market area are 29.3 percentage points more likely to experience disparate treatment than non-M/WBE firms. When controls are added in column (4), this difference falls only slightly to 29.1 percentage points, indicating that disparate treatment is occurring even among similarly sized, qualified, and experienced firms. A similar, though less pronounced, result occurs for

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[256] *See* Wainwright and Holt (2010, 65-67); Wainwright (2000, 86-87).

[257] *See* Chapter V for a description of Probit regression.

[258] This estimate largely replicates the raw difference in disparate treatment rates between M/WBE and non-M/WBE firms reported in the last row of Table 8.3. The raw differential observed there (44.1% – 27.4% = 16.7%) differs slightly from the 19.5% differential reported here since the regression specification also controls for industry category.

nonminority females, although the p-value in column (4) falls just short of the 90 percent threshold.

The exercise is repeated again in columns (5) and (6) with separate indicators for each type of M/WBE. The results for nonminority females are nearly identical to those in columns (3) and (4). For African American-owned firms, the differential is 34.2 percentage points in column (5), falling only slightly to 34.0 percentage points once controls are added. For Hispanic-owned firms, the differentials are 24.7 percentage points in columns (5) and (6). For Asian-owned firms, the differentials are 25.2 and 24.6 percentage points, respectively. For Native American-owned firms, the differentials are 34.8 and 33.2 percentage points, respectively. All of these differences for African Americans, Hispanics, Asians, and Native Americans are statistically significant.

The regression models reported in Table 8.5 used as their dependent variable an indicator of whether or not a survey respondent reported having been treated less favorably in any of the 14 different types of business dealings described in the first column of Table 8.3.[259] We re-estimated the regression model reported in Column (2) of Table 8.5 separately using as the dependent variable, in turn, each of the 14 types of business dealings and report those results in Table 8.6. As Table 8.6 shows, African American-owned firms in particular experience a wide variety of disparate treatment compared to non-M/WBEs. In all 14 categories the differences for African American-owned firms are both large and statistically significant. For Hispanic-owned firms, this is true in 11 of 14 cases. For Asian-owned firms, this is true in all 14 cases. For Native American-owned firms, this is true in 9 of 14 cases. For nonminority female-owned firms, this is true in 7 of 14 cases. For M/WBEs as a group it is true in 13 of the 14 cases.

4. Impact of Current Business Environment on Ability to Win Contracts

The survey asked questions about some common features of the business environment to determine which factors were perceived by M/WBEs as serious impediments to obtaining contracts.

As Table 8.7 shows, substantial percentages of both M/WBEs and non-M/WBEs report that certain factors, such as "Obtaining working capital," "Late notice of bid/proposal deadlines," and "Large project sizes," make it harder or impossible for firms to obtain contracts. Among non-M/WBEs, for example, 37.4 percent reported that obtaining working capital made it harder or impossible for them to win contracts, 49.1 percent reported that late notice of bid/proposal deadlines made it harder or impossible for them to win contracts, and 38.6 percent reported that large project sizes made it harder or impossible for them to win contracts. The figures for M/WBEs, however, at 50.9 percent, 56.3 percent, and 53.4 percent, respectively, are significantly higher than for non-M/WBEs. Indeed, as Table 8.7 shows, M/WBEs reported relatively more difficulty on all nine factors about which they were polled.

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[259] Our disparate treatment question also allowed respondents to indicate the quantity of disparate treatment experienced (never, 1-5 times, 6-20 times, more than 20-times). Although not reported here, we also ran regressions using a dependent variable measuring high frequency of disparate treatment (6 or more times) during the prior five years. Results were more limited due to smaller sample sizes but were qualitatively similar to those obtained in Tables 8.5 and 8.6.

To control for firm and owner characteristics, we used a regression technique known as ordered Probit.[260] Ordered Probit regression is used when the dependent variable is discrete and ordinal (and hence can be ranked). We use ordered Probit to model the ordinal ranking—helps me (1), no effect (2), makes it harder (3), and makes it impossible (4)—of the aspect of procurement under consideration. The firm characteristics used as control variables consist of the age of the firm, the number of employees, the size of revenues, the education level of the primary owner of the firm, and the major industry group. To report results from ordered Probit analysis, we use a "+" to indicate that M/WBEs had more difficulty than non-M/WBEs with similar firm characteristics, and a "–" to indicate that M/WBEs had less difficulty than non-M/WBEs with similar firm characteristics.

Table 8.8 reports the sign and statistical significance from the ordered Probit analysis. We find that when observable firm characteristics are controlled for, eight of the nine factors we inquired about prove to be greater difficulties for M/WBEs than for non-M/WBEs (as indicated by the "+" sign). In particular, the disparities for "large project size," "obtaining working capital," and "Late notice of bid/proposal deadlines," are all statistically significant with respect to M/WBEs.

5. Solicitation and Use of M/WBEs on Public and Private Projects Without Affirmative Action Goals

Our second to last survey question asked, "How often do prime contractors who use your firm as a subcontractor on public-sector projects with requirements for minority, women and/or disadvantaged businesses also hire your firm on projects (public or private) *without* such goals or requirements?" As Table 8.9 shows, 70 percent of African American-owned firms, 58 percent of Hispanic-owned firms, 69 percent of Asian-owned firms, 79 percent of Native American-owned firms, and 63 percent of nonminority female-owned firms, responded that this seldom or never occurs. Similar results were observed in each major procurement category as well.

At least one court has held that the failure of prime contractors to even *solicit* qualified minority- and women-owned firms is a "market failure" that serves to establish a government's compelling interest in remedying that failure.[261] Among the evidence relied upon for this holding was a NERA survey similar to the current one in which approximately 50 percent of the respondents reported that they were seldom or never even *solicited* for non-goals work.[262]

Our final survey question therefore asked "How often do prime contractors who use your firm as a subcontractor on public-sector projects with requirements for minority, women and/or disadvantaged businesses *solicit* your firm on projects (public or private) without such goals or requirements?" Responses to this question are tabulated in Table 8.10, which shows the same pattern as in Table 8.9. In Table 8.10, 67 percent of African American-owned firms, 58 percent of Hispanic-owned firms, 69 percent of Asian-owned firms, 63 percent of Native American-

[260] For a textbook discussion of ordered Probit, see, for example, Greene (1997).

[261] *Builders Association of Greater Chicago v. Authority of Chicago*, 298 F.Supp.2d 725, 737 (N.D. Ill. 2003).

[262] *Id.*

owned firms, and 61 percent of nonminority female-owned firms responded that this seldom or never occurs. Similar results were also observed in each major procurement category.

6. Impact of Survey Non-Response

Since the mail survey was voluntary it is important to account for the fact that a majority of those who received it did not respond. As a check on the usefulness of the information obtained from our mail survey respondents, we conducted telephone surveys of 1,500 randomly selected M/WBEs and non-M/WBEs that did not respond to our mail survey. The purpose of this "non-response" survey is to test whether their answers to key survey questions were different from the answers of respondents in ways that would call into question the relevance of the information obtained from our mail survey respondents.

We obtained responses from 358 firms, for a raw response rate of 26.2 percent. After removing duplicate records, records where the firm was no longer in business, and records where the telephone number was disconnected, the effective response rate was 41.1 percent.

Of the firms with which we completed interviews, 38.8 percent were minority-owned, compared with a rate of 41.0 percent in the mail survey. The percentage of women-owned firms was 39.0 percent, compared to 43.7 percent in the mail survey. Neither difference is statistically significant.

In addition to determining minority-owned and women-owned status, we selected three questions from the mail survey to pose to non-respondents. The first question asked whether large project sizes helped or harmed the firm's ability to obtain public or private sector contracts. The second question asked whether and how frequently the firm had experienced discrimination in attempting to apply for commercial loans. The final question asked whether and how frequently the firm had experienced discrimination in working or attempting to work on private sector prime contracts.

Not surprisingly, one difference that we observed between respondents and non-respondents was greater general interest in the questions being asked. Among survey respondents, only 26.5 percent indicated that the question about large project sizes was "not applicable". Among non-respondents, the figure was 56.6 percent. Only 45.4 percent of survey respondents indicated that the question about discrimination in applying for commercial loans was not applicable, compared to 91.7 percent among non-respondents. Only 38.2 percent of survey respondents indicated that the question about discrimination in working or attempting to work on private sector prime contracts was not applicable, compared to 92.9 percent among non-respondents. This phenomenon was observed regardless of whether the firm was minority-owned, women-owned, or nonminority male-owned.

Among those firms to which the question was applicable, 51.0 percent of M/WBE firms who did not respond to the mail survey indicated that large project sizes made it harder or impossible to obtain contract awards. Among those who did respond to the survey, the figure was 53.2 percent. This difference is not statistically significant. The comparable figures for non-M/WBE firms were 25.0 percent and 38.6 percent, respectively. This difference is statistically significant using a 90 percent confidence interval but is not significant using a 95 percent interval. This result

implies that the estimate of adverse disparity for M/WBE firms with regard to large project size that was reported from the mail survey (*see* Table 8.5) may in fact be understated (*i.e.* less severe) than in the universe as a whole, since the ratio of M/WBE firms to non-M/WBE firms reporting that large project sizes make it hard or impossible for them to obtain contracts is actually slightly greater among non-respondents than among respondents. In other words, the disparity between M/WBEs and non-M/WBEs was even more pronounced among the non-respondents than among the respondents, indicating that the disparities reported above in this Chapter may be somewhat conservatively estimated.

Among those firms to which the question was applicable, 26.3 percent of minority-owned firms who did not respond to the mail survey indicated that they had experienced one or more instances of discrimination during the previous five years in applying for commercial loans. Among those who did respond to the survey, the figure was 35.3 percent. This difference is not statistically significant. The comparable figures for women-owned firms were 10 percent and 20.6 percent, respectively. This difference is not statistically significant. The comparable figures for non-M/WBE firms were 0 percent and 5.3 percent, respectively. This difference is not statistically significant (because few non-M/WBE firms considered this question to be applicable to them at all).[263]

Among those firms to which the question was applicable, 25.0 percent of minority-owned firms who did not respond to the mail survey indicated that they had experienced one or more instances of discrimination during the previous five years in working or attempting to work on private sector prime contracts. Among those who did respond to the survey, the figure was 35.3 percent. This difference is not statistically significant. The comparable figures for women-owned firms were 42.9 percent and 22.9 percent, respectively. This difference is not statistically significant. The comparable figures for non-M/WBE firms were 66.7 percent and 9.8 percent, respectively. This difference is not statistically significant (because few non-M/WBE firms considered this question to be applicable to them at all).

These results of our non-respondent survey, in general, indicate that both M/WBEs and non-M/WBEs are more likely to have responded to the mail survey if they had experienced the difficulties identified in the mail survey. In some cases this means the actual disparities facing M/WBEs may be somewhat larger than what we have estimated in our mail survey. For all three questions examined, the basic qualitative finding of more problems and greater disparities being observed among MBEs than among non-MBEs is unchanged.

B. Business Owner Interviews

To explore additional anecdotal evidence of possible discrimination against minorities and women in Maryland's market area, we conducted 21 group interviews. We met with 229 business owners from a broad cross section of the industries from which the State purchases services and goods. Firms ranged in size from large national businesses to many decades-old

[263] The percentages reported in this section may differ slightly from comparable figures reported elsewhere in Chapter 8, since minorities of unknown race or ethnicity were excluded from the tallies in the mail survey.

family-owned firms to new start-ups. Owners' backgrounds included individuals with extensive experience in their fields and entrepreneurs beginning their careers. We sought to explore their experiences in seeking and performing public and private sector prime contracts and subcontracts, with emphasis on State contracts.

This effort gathered individual perspectives to augment the statistical information from the business experience and credit access surveys. In general, interviewees' individual experiences mirrored the responses to those surveys. We also elicited recommendations for improvements to Maryland's current MBE, DBE, and ACDBE policies and procedures, reported below in Chapter IX.

The following are summaries of the issues discussed. Quotations are indented, and are representative of the views expressed over the many sessions by many participants.

1. Stereotypes, Negative Perceptions of Competence, and Higher Performance Standards

Many minority and women owners reported that while progress has been made in integrating them into public sector contracting activities in Maryland through affirmative action contracting programs, many barriers remain. Perhaps the most subtle and difficult to address is that of stereotypes, perceptions and higher performance standards. These biases, while sometimes subtle,[264] about minorities' and women's lack of competence infect all aspects of their attempts to obtain contracts and to be treated equally in performing contract work. Minorities and women repeatedly discussed their struggles with negative perceptions and attitudes of their capabilities in the business world.

> We've worked with minority firms and it hasn't worked out. I have heard that.
>
> I agree [that if people know you are a minority owned that they will therefore assume you are less competent].
>
> No one knew who [name] was because that could have been an Italian guy, you know. And thus, I was extremely successful until they found out I was, in fact, black. Perception. …Once I became black then all of a sudden the perception of these programs are welfare.
>
> When I do get a contract, a lot of times I do feel like I have to over perform just to show that as a woman that I can do it because I feel like I'm tested against a higher standard all the time. Like oh sure, you can do this. So, we outperform and do really well but I feel like it has to be that. You know, it's always like, I've always got to prove myself. Over and over.

[264] *See* http://www.projectimplicit.net/articles.php.

> [The perception is that if you are an MBE] you don't have the background, you don't have the experience. You are small. You may not be able to adapt. And, in fact, my first thing, I stopped calling myself MBE. Basically, the way I look at it is at the end of the day, this is like going to a restaurant. You go there for the food, you go there for the service, you go for the ambiance. At the end of the meal he tells you, I will accept American Express, Visa or Discovery. That's the way my MBE comes in. So I basically say, you know, you look at my value for what I'm providing. Forget about my certification. At the end of it, you as an agency get to leverage that. That has had some success but it took seven years. Still it could be lot better. No question. But my lights are on.

> Yes, I am a minority business but as part of my business values, I did not want to compete as a minority business. I want to compete based on the quality of the service, my past performance, the experience that I brought to the table and I just truly could not justify it.

> There are some negatives [being known as an MBE] and we have built our reputation on quality as well, and oh by the way we just happen to be minority and when people discover that we are a minority business it is sort of a ah-hah moment because when they come to our office they say this is a real good firm here and so I mean, I have a little different position. I am willing to let the law help me if it helps me open the door.… There is kind of a begrudging, oh we have to do this, so once they find out who we are they are very happy to team with us over other firms because they find out we are really faithful.… They just have to meet their percentage so once they get to know us I don't really worry too much about that. We have built our business model on that.

Women of all races often experienced gender bias and exclusion.

> I've been in a lot of situations where, you know, I'm dealing with a prime. He's screaming and yelling at me and I'll say, Mr. Jones, and he'll say, don't get "hysterical".… I've been dressed down as a bitch for asking people to adhere to contract documents. You know, yea, I think there is a significant amount of harassment out there. Typically, when, you know, you are doing your job. Yea, there's, you know, there's a lot of effort to sort of get you in line. Knock you back in line.

> There's that perception that there must have been the man [involved in a woman-owned business].

> A large construction company, I won't name names, did say to me just recently, well you're trying to sell your husband. I have the educational qualifications. I was trying to sell the company and he made this blatant statement, you're trying to sell your husband. And, I just had to stare for a few minutes.

> I was at a conference and they wanted to know how I liked working for my [male] sales rep.… I had a call a month ago from an attorney who had asked to speak to the owner and I answered the phone and he said, I don't know who you are but I asked to speak to the owner.… You find a male voice to represent whatever you do.

I won't go up to a group of men at a conference because they're talking football and golf and they don't want me going up there.… I grew up before there was any perception of women's lib and so you learn to work around it.

Engineering is male dominated.… The older engineers, they want to talk to the men, you know. It's like the old school, boys club.

There are some jobs that I have to send a male project manager. Well I have men and women because construction is still that backward. And if they see a guy show up, they basically, well [assume] he knows what he's talking about. But if I show up, it's like, blonde hair blue eyes what could she possibly know about how to pick up structural steel. So, there definitely is still [discrimination]. I don't know about race but I know when gender is in play that women still, even though there are a lot more of us in the industry, that there definitely is still a perception that we don't really know as much as our male counterparts do.

I've been around for a long time, so my company is well known, so if I feel like when I go on a job and people ask me what department I work in [I'm outraged]. I got to definitely tell you that as an owner of a company, that that discrimination still exists. It's not near as bad as when my grandmother ran the company or whatever. But you don't see women in construction.… [We are] a third generation woman owned construction company.

Women in architecture, women in construction, have been and continue to be discriminated against. I've been in this business over twenty years. I have not seen it get any better. So we have more women, I mean more than 50 percent are in architecture schools than are out there but you will not see 50 percent of architectural firm, a large firm, being 50 percent women. I've seen women basically run out of large firms. In fact, that's why I'm independent.… It is a problem and we keep bucking our heads against it and we keep on trying to get equal pay for equal work.

I tend to let my, please no offense, but my older white guys go out and talk to the contractor.

When I show up I'm probably the only female minority that's in the room at our pre-bid meetings or even, even companies, insurance companies when I go out to their product fairs they always ask me, who do I work for, who do you work for? And I will bring maybe one of my employees, which is a male. And this one particular time this young man that I brought with me, I said I'm stepping into the ladies room and you know, I'll be right back out. I come back out and I didn't see him and there was this gentleman and he was like, your boss just left.… African Americans make up less than five percent of the financial industry and African American women make up even less than that, so when we show up it's like, who did she work for? Who are you representing?

I've been in the construction management industry for about seven, eight years. And I, I still feel like every time I go into, you know, a pre bid or what have you, I'm the only black female in the room. And I mean that's okay with me. I don't have a problem with

> that. But I just wish that and hope and hopefully this, it'll come to this at some point where, when you walk in the room it's not automatically assumed you're you know, the, the employee or the you know, don't have any credibility walking in.

Two woman in construction reported that they had not been subjected to discrimination.

> People always say, well you know, you being a woman in construction, you know, how does it feel? I don't know. I mean, as far as I'm concerned I, it's something that I'm very comfortable and I've never been approached. Maybe they do [have] eyebrows raised.
>
> I've been in the business for seven years [as a woman-owned firm] and it's been very well received.… I spearhead the company, I'm the decision maker and not only am I a decision maker, when I started the company I have scars on my knees and you know, I've learned the business. So, when I go in it's very easily they're convinced. And on top of that, you have this nurturing spirit which has been a benefit for me to go in and really care about them. So, it's like construction, caring, and then you know, that combination has actually worked out very well for me.

Despite the barriers experienced by almost all minorities and women, many participants advocated the need to persevere and succeed.

> Perceptions can be changed.
>
> I will say there [are] barriers [because he is an African American man] but you can get through those just by being the businessperson, the best businessperson that you can be. Service is number one. You got to be a people person. And know when you're not. When people just don't want your service. And don't take it personally. Just keep it moving.

2. Exclusion from Industry Networks

Many minorities and women reported that there still exists "good old boys" network that makes it difficult for them to fairly obtain contract opportunities.

> If you think the good old boy network is not alive in Maryland, you all got a real serious issue.
>
> [It's alive] everywhere.
>
> There are informal networks to which we don't have access. This, I haven't been in a room with this many women in five years.
>
> It's almost like it's a fraternity and in a way it is a good old boys' club…. If you're not part of that, the way things are done it's kind of like you're left on the outside. You're not part of that fraternity.
>
> All of us know that it's a good old boy network. And if we don't want you in, you're not going to get in. We'll do it through bonding. We'll do it through pricing. But we're going

> to do it [because it's both monopolistic behavior and part of the monopoly is that everybody in it is big and white].
>
> A good old boy network exists because it's allowed to exist.… What we have here is a situation where we're trying to correct something that's been wrong for a long, long time. There are a lot of people who don't want it corrected. Okay? They have most of the money and most of the guns.
>
> Eighty percent, if not more, of the school work being done in state are being done by a group of six or seven firms.… It is a good old boy system.

3. Discrimination in Applying for Commercial Loans

Many women owners reported that sexist assumptions and barriers still hamper their ability to obtain working capital.

> I went to get a loan about five years ago and went in with a non-liquid asset to collateralize the loan. And they told me that they would be happy to give me the money if my husband would cosign for it.… I have been told, bring your husband in here. You know, we'll put your muni bonds in an account, but bring your husband in here and we'll give you the money.
>
> I had exactly that same experience where when I went for my first line of credit it was, bring your husband in and he has to cosign.… But I refused. And I borrowed from another investor. And, in order to get through that period. But, it's still happening now. Now I've been in business for fifteen years. Just two weeks ago, I had to renegotiate my line of credit. And I'm in [a business group] now here and so I'm with CEOs of other types of businesses and, yes, there's one woman but the rest of them are men. And, interestingly enough, we swapped who's paying what in, on their line of credit and what the terms of their lines of credit are, and I am always paying more. My interest rate is higher and my terms are more stringent and I always have to give a personal guarantee. And more collateral. No question about it. It just infuriates me.

4. Barriers to Obtaining Work on Public Sector Projects

a. Prime contracts

Most MBEs expressed frustration with obtaining public sector contracts as prime contractors. This sentiment crossed industries, size of firms, and length of time in business. While all small firms find it more difficult to receive prime contract awards than do large firms, minorities and women felt that their race, ethnicity and gender created additional barriers. That Maryland does not permit MBEs to count their own participation as prime vendors to meet contract goals was a particular source of frustration.

> I want the State to be allowed to count me as the MBE. Instead, I'm being requested to give five percent to another MBE.

You work very hard to get to be a prime and then you eliminate yourself from the process.

It's beyond wrong, it's just stupid.

b. Subcontracts

Most MBEs reported that without the requirement that prime firms make good faith efforts to meet contract goals, they would receive little or no work. While minorities and women found it is easier to obtain subcontracts than prime contracts on public projects because of affirmative action goals, it is still difficult to get work, receive fair treatment, and be paid on time. Many believed that majority prime firms use them only if forced to do so.

The goals are critical.… If there wasn't a DBE goal, they wouldn't have called us. They would use their own people.

If there are no goals, you won't get selected. Period.

Right.

You won't get solicited, you won't get called.

[You won't get solicited] even from your good friends or good friend colleague company.

You are dead in the water if there are no goals. Nobody's going to call you. Nobody, I mean, I'll give you an example. They are doing, they are rebuilding the stop centers on the way to Delaware, two stop centers. Maryland House and Chesapeake House. And they invited me, I wonder why, but I was invited out to an outreach. I drove all the way to Aberdeen for this outreach. You know, and they have giant companies that they do the financing and rebuild. People like HMS Host. The first statement by the people from the Maryland Department of Transportation were that there were no goals on this contract because the companies were financing these things themselves..… Nobody was interested in talking to me anymore except for HMS Host, which on their own, realizing that the State of Maryland would like to see MBEs but can't enforce it, HMS Host has taken [the] initiative and said we will use MBEs and we will require everybody working on the project to come with MBEs. No other group [did that].… It was like I was invisible.

If there is no requirement, they won't use you. I mean there are contracts that come out, RFPs that come out and say, you know, MBE is encouraged. There is no goals but it's encouraged. And nine out of ten times, they're not going to use MBE because it's not a requirement. It's like, okay, we're only doing this to be compliant. We're not doing this because this is the right thing to do. This is the most professional thing to do. But it is a requirement that the state has in order for me to gain this contract I'm going to use MBE.

I think that that is a, a perception to some degree, that [using M/WBEs] makes [the cost of the job] much higher. It does take the cost up some. I'm not going to sit here and say it doesn't. But it doesn't take it up through the roof like some would like to make you

> believe.… If everybody runs the program then there's nobody way underbidding everybody. Because everybody's using the same guidelines. If everybody is using MBEs and minority participation then there is nobody who is way lower than anybody else. Everybody's participating. Everybody's going to be at about the same, same place.… But, if we allow people to go around that with waivers, then it does create a real big gap.

Some owners reported that although their firms have been listed on the contract, they were underutilized or not utilized at all.

> We oftentimes find that we will, on the front end of a contract, get a contract for $75,000 or $100,000 and by the end of the work we've done $1,200 worth of work. Now what they've done is they've doctored their numbers so that they are, you know, they're compliant on the front end but there really isn't any effort to make certain that, you know, that that work was, in fact, done.

Some firms had their names listed by bidders without even being contacted, let alone reaching an agreement.

> Compliance notified me and said, well we want to know how this job is going? How are you working with this company? Whatever, whatever. Then, I said, what are you talking about? They never notified me of anything.

5. Barriers to Obtaining Work on Private Sector or "Non- Goals" Projects

Many M/WBEs reported that they had not received work on non-goal State contracts, and rarely are even solicited for private jobs.

> Never.

> Not, no.

> In the private sector, we're still a little bit short.

> If they call now and there's no goals, I'm almost reluctant to participate in any pre discussions because I think they're going to use my information again without putting me on the team.

Only firms with unusual niches reported much success outside of affirmative action contracting programs.

> Yea [we get private work], because our discipline is a specialty discipline.

A few women reported that they found private sector work easier to obtain than public contracts.

> Those are the better conversations I've had.… I'm significant in the non-goal. For some reason it reverses. I have value in the non-goal. The goal is like, pulling these ridiculous technical specifications to match me and to match their compliance.

> We do 90 percent of our work private and most again, the work we do are because of price and because of the quality of our workmanship so while I'm MBE certified I get most of my contracts based on merit basically because they know.

Some certified firms, especially those owned by White women, stated that once they were used on public jobs, they were solicited on that prime contractor's projects.

> I do probably 50/50 with contracts with goals and contracts without goals and the contracts without goals are much more difficult to get because you're competing against a pool of everyone versus a contract with goals.… But I find that when I get a contract with a goal and I do a good job for that contractor that they will use me a lot of times on contracts without goals regardless if they need to use me or not.

6. Conclusion

Consistent with other evidence reported in this Study, anecdotal interview information strongly suggests that M/WBEs continue to suffer discriminatory barriers to full and fair access to State and private sector contracts. This evidence includes stereotypes, perceptions of M/WBE incompetence and being subject to higher performance standards; discrimination in access to commercial loans; difficulties in receiving fair treatment in obtaining public sector prime contracts and subcontracts; and exclusion from private sector opportunities to perform as either prime contractors or as subcontractors. While not definitive proof that Maryland has a compelling interest in implementing race- and gender-conscious remedies for these impediments, the results of the surveys and the personal interviews are the types of evidence that, especially when considered alongside the numerous pieces of statistical evidence assembled, the courts have found to be highly probative of whether the State would be a passive participant in a discriminatory marketplace without affirmative interventions.

C. Tables

Table 8.1. Race, Gender and Procurement Category of Mail Survey Respondents (Number of Respondents)

Group	Construction	AE-CRS	Services	Commodities	Total
African American	99	22	293	35	449
Hispanic	70	8	75	16	169
Asian	32	36	141	17	226
Native American	10	1	21	3	35
Minorities with unknown race/ethnicity	10	2	8	6	26
Nonminority Women	143	48	342	111	644
Total M/WBE	364	117	880	188	1,549
Nonminority Men	280	46	251	84	661
Total	644	163	1,131	272	2,210

Source: NERA Maryland mail surveys.

Table 8.2. Survey Respondents Indicating They Had Worked or Attempted to Work for Public Sector Agencies in the Last Five Years

Worked or Attempted to Work, Last Five Years	African American	Hispanic	Asian	Native American	MBE	WBE	M/WBE	Non-M/WBE
ALL INDUSTRIES								
With Maryland	53.5%	50.9%	50.2%	42.4%	51.7%	40.4%	46.9%	38.5%
	(445)	(167)	(223)	(33)	(868)	(639)	(1507)	(657)
With Other Public Entity in Market Area	59.7%	52.1%	57.1%	61.8%	57.7%	48.4%	53.7%	45.9%
	(444)	(167)	(224)	(34)	(869)	(638)	(1507)	(660)
With any Public Entity in Market Area	67.9%	58.7%	65.0%	61.8%	65.2%	55.3%	61.0%	52.0%
	(443)	(167)	(223)	(34)	(867)	(638)	(1505)	(659)
CONSTRUCTION								
With Maryland	63.3%	57.1%	56.3%	62.5%	60.1%	57.0%	58.9%	47.1%
	(98)	(70)	(32)	(8)	(208)	(142)	(350)	(280)
With Other Public Entity in Market Area	71.1%	58.6%	50.0%	80.0%	64.1%	59.3%	62.2%	53.4%
	(97)	(70)	(32)	(10)	(209)	(140)	(349)	(279)
With any Public Entity in Market Area	75.3%	64.3%	62.5%	80.0%	69.9%	68.6%	69.3%	61.1%
	(97)	(70)	(32)	(10)	(209)	(140)	(349)	(280)
AE-CRS								
With Maryland	63.6%	75.0%	68.6%	100.0%	68.2%	54.2%	62.3%	47.8%
	(22)	(8)	(35)	(1)	(66)	(48)	(114)	(46)
With Other Public Entity in Market Area	63.6%	75.0%	72.2%	100.0%	70.1%	68.8%	69.6%	56.5%
	(22)	(8)	(36)	(1)	(67)	(48)	(115)	(46)
With any Public Entity in Market Area	72.7%	87.5%	80.0%	100.0%	78.8%	75.0%	77.2%	58.7%
	(22)	(8)	(35)	(1)	(66)	(48)	(114)	(46)

Table 8.2. Survey Respondents Indicating They Had Worked or Attempted to Work for Public Sector Agencies in the Last Five Years, cont'd

Worked or Attempted to Work, Last Five Years	African American	Hispanic	Asian	Native American	MBE	WBE	M/WBE	Non-M/WBE
OTHER SERVICES								
With Maryland	49.7%	45.2%	46.0%	38.1%	47.6%	30.9%	41.0%	25.9%
	(290)	(73)	(139)	(21)	(523)	(340)	(863)	(247)
With Other Public Entity in Market Area	56.0%	47.9%	56.8%	60.0%	55.3%	40.2%	49.3%	35.5%
	(291)	(73)	(139)	(20)	(523)	(341)	(864)	(251)
With any Public Entity in Market Area	65.9%	53.4%	63.3%	60.0%	63.2%	46.9%	56.8%	40.6%
	(290)	(73)	(139)	(20)	(522)	(341)	(863)	(249)
COMMODITIES								
With Maryland	51.4%	37.5%	35.3%	0.0%	42.3%	42.2%	42.2%	41.7%
	(35)	(16)	(17)	(3)	(71)	(109)	(180)	(84)
With Other Public Entity in Market Area	55.9%	31.3%	41.2%	0.0%	44.3%	51.4%	48.6%	46.4%
	(34)	(16)	(17)	(3)	(70)	(109)	(179)	(84)
With any Public Entity in Market Area	61.8%	43.8%	52.9%	0.0%	52.9%	56.0%	54.7%	52.4%
	(34)	(16)	(17)	(3)	(70)	(109)	(179)	(84)

Source: NERA calculations from Maryland mail surveys.

Note: Total number of valid responses in parentheses.

Table 8.3. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Gender While Participating in Business Dealings

Business Dealings	African American	Hispanic	Asian	Native American	MBE	WBE	M/WBE	Non-M/WBE
Applying for commercial loans	**43.1%**	**21.7%**	**32.2%**	**38.9%**	**35.2%**	**9.5%**	**25.1%**	**5.3%**
	(239)	**(120)**	**(115)**	**(18)**	**(492)**	**(317)**	**(809)**	**(361)**
Applying for surety bonds	**23.7%**	**17.8%**	**12.4%**	***43.8%***	**20.4%**	4.8%	**14.7%**	**2.7%**
	(186)	**(101)**	**(89)**	***(16)***	**(392)**	(228)	**(620)**	**(297)**
Applying for commercial or professional insurance	**14.9%**	**7.1%**	**12.4%**	**20.0%**	**12.7%**	2.1%	**8.2%**	**2.0%**
	(281)	**(127)**	**(153)**	**(20)**	**(581)**	(430)	**(1011)**	**(443)**
Hiring workers from union hiring halls	**9.9%**	0.0%	7.8%	0.0%	6.6%	2.6%	5.2%	3.3%
	(142)	(76)	(64)	(8)	(290)	(151)	(441)	(184)
Obtaining price quotes from suppliers or subcontracts	**25.6%**	**15.1%**	**18.9%**	**27.8%**	**21.6%**	7.0%	**15.6%**	**4.4%**
	(270)	**(126)**	**(127)**	**(18)**	**(541)**	(374)	**(915)**	**(406)**
Working or attempting to obtain work on public-sector prime contracts	**38.9%**	*23.0%*	**34.3%**	***37.5%***	**34.2%**	16.4%	**27.6%**	**19.7%**
	(283)	*(122)*	**(140)**	***(16)***	**(561)**	(330)	**(891)**	**(350)**
Working or attempting to obtain work on public-sector subcontracts	**38.6%**	19.5%	**35.0%**	29.4%	**33.5%**	17.4%	**27.4%**	**20.3%**
	(290)	(118)	**(143)**	(17)	**(568)**	(340)	**(908)**	**(360)**
Working or attempting to obtain work on private-sector prime contracts	**42.3%**	**24.8%**	**28.8%**	**29.4%**	**34.8%**	**14.8%**	**27.1%**	**9.8%**
	(291)	**(121)**	**(146)**	**(17)**	**(575)**	**(358)**	**(933)**	**(379)**
Working or attempting to obtain work on private-sector subcontracts	**40.3%**	**22.7%**	**27.4%**	**27.8%**	**32.7%**	**15.5%**	**26.1%**	**9.9%**
	(283)	**(128)**	**(146)**	**(18)**	**(575)**	**(355)**	**(930)**	**(394)**
Receiving timely payment for work performed	**43.5%**	**26.7%**	**24.4%**	**47.1%**	**35.0%**	**19.4%**	**28.5%**	**13.7%**
	(313)	**(135)**	**(164)**	**(17)**	**(629)**	**(448)**	**(1077)**	**(446)**
Functioning without hindrance or harassment on the work site	**25.1%**	**12.3%**	**16.8%**	**31.3%**	**20.1%**	**11.5%**	**16.5%**	**5.6%**
	(259)	**(130)**	**(143)**	**(16)**	**(548)**	**(392)**	**(940)**	**(412)**
Joining or dealing with construction trade associations	**14.9%**	**7.9%**	**12.8%**	**33.3%**	**13.2%**	**5.3%**	**10.0%**	**1.3%**
	(188)	**(101)**	**(86)**	**(12)**	**(387)**	**(263)**	**(650)**	**(319)**
Having to do inappropriate or extra work not required of comparable non-M/WBEs	**30.7%**	**14.3%**	**23.7%**	**26.7%**	**25.0%**	**11.1%**	**19.3%**	**6.0%**
	(254)	**(119)**	**(131)**	**(15)**	**(519)**	**(368)**	**(887)**	**(386)**
Double standards not required of comparable non-M/WBEs	**26.9%**	***15.0%***	**20.4%**	13.3%	**22.1%**	7.2%	**16.0%**	**8.8%**
	(260)	***(127)***	**(137)**	(15)	**(539)**	(375)	**(914)**	**(397)**
In any one of the business dealings listed above	**57.3%**	**50.0%**	**47.1%**	**60.0%**	**53.3%**	30.9%	**44.1%**	**27.4%**
	(377)	**(152)**	**(191)**	**(25)**	**(745)**	(518)	**(1263)**	**(500)**

Source: See Table 8.2 Note: Total number of valid responses in parentheses. Figures in **boldface** type are statistically significantly different from non-M/WBEs using a conventional two-tailed Fisher's Exact Test and within a 95% or better confidence interval. Figures in ***boldface italicized*** type are significant within a 90% confidence interval.

Table 8.4. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Gender While Participating in Business Dealings (Rankings)

Business Dealings	African American	Hispanic	Asian	Native American	MBE	WBE	M/WBE
Applying for commercial loans	2	5	3	3	1	8	6
Applying for surety bonds	11	7	13	2	10	12	11
Applying for commercial or professional insurance	12	13	12	10	13	14	13
Hiring workers from union hiring halls	14	14	14	12	14	13	14
Obtaining price quotes from suppliers or subs	9	8	9	8	9	10	10
Working or attempting to obtain work on public sector prime contracts	5	3	2	4	4	3	2
Working or attempting to obtain work on public sector subcontracts	6	6	1	7	5	2	3
Working or attempting to obtain work on private sector prime contracts	3	2	4	7	3	5	4
Working or attempting to obtain work on private sector subcontracts	4	4	5	8	6	4	5
Receiving timely payment for work performed	1	1	6	1	2	1	1
Functioning without hindrance or harassment on the work site	10	11	10	6	11	6	8
Joining or dealing with trade associations	13	12	11	5	12	11	12
Having to do extra work not required of others	7	10	7	9	7	7	7
Having to meet quality or performance standards not required of others	8	9	8	11	8	9	9

Source: See Table 8.2.

Table 8.5. Prevalence of Disparate Treatment Facing M/WBEs

	(1)	(2)	(3)	(4)	(5)	(6)
M/WBE	0.195 (7.45)	0.180 (6.40)				
MBE			0.293 (9.93)	0.291 (9.12)		
WBE			0.068 (2.08)	0.054 (1.57)	0.069 (2.10)	0.054 (1.57)
African American					0.342 (9.68)	0.340 (8.97)
Hispanic					0.247 (5.30)	0.247 (5.07)
Asian/Pacific Islanders					0.252 (5.73)	0.246 (5.26)
Native American					0.348 (3.47)	0.332 (3.24)
Owner's Education (3 indicator variables)	No	Yes	No	Yes	No	Yes
Firm Age (4 indicators)	No	Yes	No	Yes	No	Yes
Employment size bracket (6 indicators)	No	Yes	No	Yes	No	Yes
Sales/revenue size bracket (4 indicators)	No	Yes	No	Yes	No	Yes
Industry category (3 indicators)	Yes	Yes	Yes	Yes	Yes	Yes
N	1781.00	1716.00	1781.00	1716.00	1781.00	1716.00
Pseudo R^2	0.03	0.04	0.06	0.07	0.06	0.07
Chi^2	71.12	86.33	136.48	152.94	143.86	160.21
Log likelihood	(1160.01)	(1112.37)	(1127.33)	(1079.07)	(1123.64)	(1075.43)

Source: See Table 8.2.

Note: Reported estimates are coefficients from probit models (re-expressed as percentage differences), t-statistics are in parentheses. T-statistics of 2.58 (1.96) (1.64) or larger indicate that the result is significant within a 99 (95) (90) percent confidence interval.

Table 8.6. Prevalence of Disparate Treatment Facing M/WBEs, by Type of Business Dealing

Business Dealings	African American	Hispanic	Asian	Native American	MBE	WBE	M/WBE
Applying for commercial loans	**43.5%** **(9.33)**	**23.1%** **(4.28)**	**36.6%** **(6.27)**	**40.6%** **(3.65)**	**29.5%** **(8.70)**	5.2% (1.36)	**17.6%** **(6.64)**
Applying for surety bonds	**24.8%** **(5.77)**	**18.5%** **(3.88)**	**16.8%** **(3.27)**	**52.1%** **(4.69)**	**16.0%** **(5.64)**	2.7% (0.82)	**9.6%** **(4.45)**
Applying for commercial or professional insurance	**14.2%** **(5.37)**	**7.6%** **(2.49)**	**14.1%** **(4.25)**	**24.4%** **(3.32)**	**9.6%** **(5.33)**	-0.4% (-0.25)	**5.3%** **(3.74)**
Hiring workers from union hiring halls	**8.8%** **(2.45)**	0.0% (0.00)	**13.5%** **(2.25)**	0.0% (0.00)	**4.9%** **(1.99)**	-0.3% (-0.12)	2.9% (1.38)
Obtaining price quotes from suppliers or subcontracts	**26.3%** **(6.92)**	**18.6%** **(4.02)**	**25.4%** **(5.13)**	**34.5%** **(3.34)**	**19.3%** **(7.01)**	***5.5%*** ***(1.85)***	**11.1%** **(5.45)**
Working or attempting to obtain work on public sector prime contracts	**19.2%** **(4.74)**	3.2% (0.64)	**15.8%** **(3.11)**	14.2% (1.19)	**13.9%** **(4.23)**	-5.0% (-1.37)	**6.8%** **(2.28)**
Working or attempting to obtain work on public sector subcontracts	**18.3%** **(4.60)**	-2.5% (-0.51)	**15.0%** **(2.99)**	3.7% (0.34)	**12.1%** **(3.72)**	-4.5% (-1.25)	***5.7%*** ***(1.92)***
Working or attempting to obtain work on private sector prime contract	**36.6%** **(8.66)**	**19.4%** **(3.64)**	**24.8%** **(4.77)**	***22.0%*** ***(1.88)***	**26.0%** **(7.94)**	***6.4%*** ***(1.73)***	**16.4%** **(6.06)**
Working or attempting to obtain work on private sector subcontracts	**34.1%** **(8.24)**	**15.4%** **(3.05)**	**23.1%** **(4.54)**	17.4% (1.58)	**23.3%** **(7.38)**	***6.8%*** ***(1.90)***	**15.0%** **(5.75)**
Receiving timely payment for work performed	**37.6%** **(9.29)**	**18.8%** **(3.70)**	**21.5%** **(4.31)**	**37.4%** **(3.09)**	**26.8%** **(8.43)**	**11.3%** **(3.29)**	**17.4%** **(6.84)**
Functioning without hindrance or harassment on the work site	**25.9%** **(6.77)**	**10.3%** **(2.40)**	**18.6%** **(4.12)**	**31.7%** **(2.85)**	**16.8%** **(6.21)**	**9.1%** **(3.09)**	**10.7%** **(5.33)**
Joining or dealing with construction trade associations	**23.2%** **(5.22)**	**13.7%** **(2.96)**	**21.1%** **(3.83)**	**48.1%** **(3.97)**	**14.4%** **(5.09)**	**8.2%** **(2.70)**	**7.7%** **(4.39)**
Having to do inappropriate or extra work not required of comparable non-M/WBEs	**32.6%** **(7.82)**	**12.4%** **(2.58)**	**27.6%** **(5.35)**	**27.8%** **(2.42)**	**21.8%** **(7.25)**	**8.5%** **(2.60)**	**13.2%** **(5.83)**
Having to meet quality, inspection, or performance standards not required of comparable non-M/WBEs	**25.6%** **(6.98)**	**10.3%** **(2.48)**	**20.2%** **(4.46)**	5.9% (0.60)	**16.3%** **(6.27)**	-0.6% (-0.22)	**8.6%** **(4.07)**
In any one of the business dealings listed above	**34.0%** **(8.97)**	**24.7%** **(5.07)**	**24.6%** **(5.26)**	**33.2%** **(3.24)**	**29.1%** **(9.12)**	5.4% (1.57)	**18.0%** **(6.40)**

Source: See Table 8.2.

Note: Reported estimates are coefficients from probit models (re-expressed as percentage differences) with specification such as in Table 8.5, columns (2). T-statistics are in parentheses. T-statistics of 1.96 (1.64) or larger indicate that the result is significant within a 95 (90) percent confidence interval. Results with T-statistics of 1.96 or higher are **boldfaced**. Results with T-statistics of 1.64 or higher are ***boldfaced italicized***.

Table 8.7. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Sample Differences

Business Environment	African American	Hispanic	Asian	Native American	MBE	WBE	M/WBE	Non-M/WBE
Bonding Requirements	**51.6% (223)**	40.7% (91)	38.1% (84)	44.4% (18)	**46.2% (416)**	36.4% (217)	**42.8% (633)**	**31.9% (276)**
Insurance Requirements	**21.0% (281)**	12.5% (96)	**24.5% (143)**	***28.6% (21)***	**20.7% (541)**	14.5% (332)	**18.3% (873)**	**12.8% (384)**
Previous Experience Requirements	**32.1% (308)**	18.5% (108)	**30.5% (154)**	**31.8% (22)**	**29.2% (592)**	**18.4% (380)**	**25.0% (972)**	**12.7% (394)**
Cost of Bidding or Proposing	**45.2% (292)**	**42.3% (104)**	**43.9% (139)**	22.7% (22)	**43.4% (557)**	35.5% (355)	**40.4% (912)**	**30.6% (372)**
Large Project Sizes	**60.4% (285)**	**50.5% (101)**	**63.4% (134)**	50.0% (18)	**58.9% (538)**	44.4% (333)	**53.4% (871)**	**38.6% (352)**
Price of Supplies or Materials	31.8% (277)	35.7% (98)	25.0% (120)	35.0% (20)	31.1% (515)	27.1% (332)	29.5% (847)	28.6% (374)
Obtaining Working Capital	**65.2% (296)**	**58.0% (100)**	42.0% (138)	**61.9% (21)**	**58.0% (555)**	38.4% (320)	**50.9% (875)**	**37.4% (358)**
Late Notice of Bid/Proposal Deadlines	***56.8% (292)***	50.5% (97)	**60.3% (126)**	50.0% (18)	**56.3% (533)**	***56.3% (318)***	**56.3% (851)**	**49.1% (338)**
Prior Dealings with Owner	**23.6% (284)**	13.7% (102)	**21.4% (140)**	16.7% (18)	**21.0% (544)**	9.8% (358)	**16.5% (902)**	**10.0% (379)**

Source: See Table 8.2.

Note: Total number of valid responses in parentheses. Figures in **boldface** type are statistically significantly different from non-M/WBEs using a conventional two-tailed Fisher's Exact Test and within a 95% or better confidence interval. Figures in ***boldface italicized*** type are significant within a 90% confidence interval.

Table 8.8. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Regression Results

Business Environment	M/WBE
Bonding Requirements	+
Insurance Requirements	–
Previous Experience Requirements	+
Cost of Bidding or Proposing	+
Large Project Sizes	+*
Price of Supplies or Materials	+
Obtaining Working Capital	+†
Late Notice of Bid/Proposal Deadlines	+†
Prior Dealings with Owner	+

Source: See Table 8.2.

Note: A plus (+) indicates that a group is more likely than non-M/WBEs to report difficulty with business environment factors. A minus (–) indicates that a group is less likely than non-M/WBEs to experience difficulty. An asterisk (*) indicates that the disparity is statistically significant within a 95% or better confidence interval. A dagger (†) indicates that the disparity is statistically significant within a 90% or better confidence interval.

Table 8.9. Percent of M/WBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with M/WBE Goals Seldom or Never *Hire* Them on Projects without Such Goals

M/WBE Group	All Industries	Construction	AE-CRS	Services	Commodities
African American	70.1% (234)	58.7% (63)	64.3% (14)	74.1% (139)	83.3% (18)
Hispanic	57.8% (90)	52.4% (42)	66.7% (3)	63.2% (38)	57.1% (7)
Asian	69.0% (116)	73.7% (19)	63.2% (19)	68.6% (70)	75.0% (8)
Native American	78.9% (19)	85.7% (7)	- (0)	81.8% (11)	0.0% (1)
MBE	67.3% (474)	59.1% (137)	65.8% (38)	71.0% (262)	73.0% (37)
WBE	63.3% (218)	55.4% (74)	60.0% (20)	67.1% (82)	71.4% (42)
Total M/WBE	66.0% (692)	57.8% (211)	63.8% (58)	70.1% (344)	72.2% (79)

Source: See Table 8.2.

Note: Total number of valid responses in parentheses.

Table 8.10. Percent of M/WBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with M/WBE Goals Seldom or Never *Solicit* Them on Projects without Such Goals

M/WBE Group	All Industries	Construction	AE-CRS	Services	Commodities
African American	66.7% (222)	59.0% (61)	72.7% (11)	68.7% (134)	75.0% (16)
Hispanic	58.0% (88)	52.4% (42)	66.7% (3)	64.9% (37)	50.0% (6)
Asian	69.0% (113)	73.7% (19)	63.2% (19)	66.2% (68)	100.0% (7)
Native American	63.2% (19)	50.0% (8)	100.0% (1)	77.8% (9)	0.0% (1)
MBE	65.1% (458)	56.9% (137)	69.4% (36)	67.5% (252)	75.8% (33)
WBE	61.4% (220)	47.9% (73)	44.4% (18)	72.1% (86)	69.8% (43)
Total M/WBE	63.9% (678)	53.8% (210)	61.1% (54)	68.6% (338)	72.4% (76)

Source: See Table 8.2.

Note: Total number of valid responses in parentheses.

IX. MBE Program Analysis and Feedback Interviews

The State's Minority Business Enterprise Program ("MBE Program") seeks to provide opportunities for M/WBEs to participate fully and fairly in State contracting. State agencies are to attempt to achieve an overall goal of spending at least 25 percent of all State contract and procurement dollars directly or indirectly with certified MBEs.[265] Of that 25 percent, the objective is to spend a minimum of 7 percent of the total dollar value of each agency's procurements with certified African American-owned MBEs and a minimum of 10 percent of the total dollar value of each agency's procurements with certified women-owned MBEs. The Maryland Department of Transportation ("MDOT") must also attempt to achieve the participation of Disadvantaged Business Enterprises (DBEs) in its United States Department of Transportation-assisted contracts, as contained in its overall annual DBE goal setting prepared for the U.S. Department of Transportation, pursuant to 49 C.F.R. Part 26.

A. History of the MBE Program

The General Assembly enacted the State's first MBE law in 1978, based upon hearings and testimony regarding the underutilization of minorities in State procurement.[266] The General Assembly found that M/WBEs had experienced the effects of past discrimination in the award of contracts and/or subcontracts for the purchase of materials, supplies, equipment and services for the benefit of the State. The effect of such discrimination may have been to impede the economic development and expansion of minority businesses. The first MBE law required that 10 percent of the dollar value procurements for the University System of Maryland ("UMS"), the Department of General Services ("DGS"), MDOT, the Food Center Authority, and the Interagency Committee on Public School Construction (IAC) be awarded to MBE prime contractors and subcontractors.[267] This first enactment served as a policy directive to the Executive Branch.

In 1981, the MBE statute was repealed and reenacted, with amendments providing for sanctions for firms that misrepresented themselves as MBEs.[268]

In 1983, the MBE law was broadened to include all State departments or agencies. The Department of Budget and Management was added to the list of designated agencies, and the Board of Public Works was given the authority to draft regulations consistent with the Program's objectives.[269]

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[265] COMAR 21.11.03.01(A)(3). "Certified" MBEs refers to both minority-owned and women-owned firms that have been certified under the MBE Program. Md. Code Ann., State Fin. & Proc. §§ 14-301(d) & (i).

[266] Codified in former Article 41, Section 14F, Annotated Code of Maryland.

[267] The IAC operates differently than any other State agency as it provides matching funds for school construction projects to 24 separate school districts. Where State funds are used for public school construction projects overseen by the IAC, the State's MBE laws are applied.

[268] Codified in former Article 41, Section 14F, Annotated Code of Maryland.

[269] House Bill 259 (1983), codified at Article 21, Procurement, Section 8-601, Annotated Code of Maryland.

In 1988, the State set a goal for certain departments of 10 percent MBE participation and adopted regulations to implement the Program.

In 1990, in response to *City of Richmond v. Croson*,[270] Coopers & Lybrand completed a Minority Business Utilization Study that determined that Maryland possessed a sufficient compelling interest in continuing the MBE Program. Based on this study, the MBE Program was re-enacted in 1990.

National Economic Research Associates ("NERA") was commissioned by the State to conduct an MBE availability and utilization study in 1994. Based in part on this study, the legislature in 1995 repealed and reenacted the MBE statute, and increased the MBE goal from 10 percent to 14 percent.

NERA was again retained in 1999 to conduct a new study of the State's MBE Program. Completed in 2001, this Study found that marketplace discrimination made it harder for MBEs to compete for business from the State and its prime contractors, and that while prime contractors used MBEs on public sector projects with MBE goals, they seldom or never used them on projects without such goals. The Study found that while 17 percent of contracts were awarded to MBEs in State fiscal year 2000, the availability of firms in the State's geographic and procurement markets was 26.9 percent.

Following the 2001 Study, the legislature enacted a revised MBE statute.[271] The MBE goal was increased from 14 percent to 25 percent. An MBE was defined as a legal entity that is at least 51 percent "owned and controlled by one or more individuals who are socially and economically disadvantaged" and also includes "a not-for-profit entity organized to promote the interests of physically or mentally disabled individuals."[272] The revised law imposed a personal net worth limit on MBE Program eligibility of $750,000, similar to the cap imposed on eligibility for the USDOT DBE Program administered by MDOT for its federal-aid contracts.[273] The Program's sunset date was July 1, 2006.

In 2002, a Performance Audit of the MBE Program was completed by the Office of Legislative Audits. The report identified three main challenges for the Program:

- Reported MBE participation data were often unsupported, inaccurate or inconsistent with reporting guidelines;

- The Governor's Office of Minority Affairs ("GOMA") did not use actual payments to MBEs as an evaluation tool or measure of Program success; and

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[270] House Bill 1450 (1990), codified at State Finance and Procurement Article, Section 14-301 *et seq*., Annotated Code of Maryland.

[271] House Bill 306 (2001), codified at State Finance and Procurement Article, Section 14-301 *et seq*., Annotated Code of Maryland.

[272] Md. Code Ann., State Fin. & Proc. § 14-301(f)(2).

[273] House Bill 483 (2004); *see* 49 CFR §26.67(a)(2)(i).

- State agencies did not adequately monitor MBE participation on contracts.

In 2004, the Director position for GOMA was elevated to Special Secretary, and the Governor's Commission on MBE Reform was created by an Executive Order. The Commission was chaired by the Lieutenant Governor and staffed by GOMA. In addition, three important Program changes were adopted that year:

- All prime contractors must identify their proposed MBE utilization at the time of bid, rather than within 10 days after the contract has been awarded (this is known as the "10 day rule");

- 22 State agencies must reserve 10 percent of their contracting dollars for small businesses (the Small Business Reserve Program); and

- The MBE owner must be economically disadvantaged, as evidenced by his or her personal net worth not exceeding a specified cap. The limit was set at $1.5M.

NERA was retained again in 2004 to conduct a third disparity study[274]. Completed in 2006, this Study found:

- The State's relevant geographic market was determined to consist of the State of Maryland, the State of Delaware, and the Washington, DC Metropolitan Statistical Area (including the District of Columbia, the State of Maryland, and parts of Virginia and West Virginia);

- Total MBE availability in all the State's procurement categories was 29.61 percent;

- Current MBE availability levels in Maryland were substantially lower than those that would be expected to be observed if commercial markets operated in a race- and gender-neutral manner;

- Evidence of discrimination in Maryland in the small business credit market, particularly against African American-owned firms;

- Large disparities between the availability of MBEs and their utilization on State contracts; and

- Large scale mail surveys and business owner interviews confirmed the persistence of discriminatory barriers.

After receiving this report, the State reauthorized the MBE Program, and set overall, annual goals of spending 25 percent of procurement contract dollars with MBEs, including subgoals of 7 percent for African-American-owned firms and 10 percent for WBEs.

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[274] *Sex, Race, and Business Enterprise: Evidence from the State of Maryland*, prepared for the Maryland Department of Transportation, NERA Economic Consulting, March 8, 2006.

2009 saw several significant changes to the Program:

- State agencies are prohibited from bundling procurements, defined as consolidating two or more procurement requirements that were previously performed under separate contracts into one contract that is unlikely to be awarded to MBEs or small businesses. Procurements may be bundled under the Small Business Reserve Program.

- Prime contractors are now prohibited from including a certified firm in a bid or proposal without the MBE's authorization. The prime firm must use the MBE's services to perform the contract, and may not use the MBE solely for the use of its name in the bid or proposal. GOMA was also required to establish a fraud hotline.

- The cap on personal net worth was to be adjusted annually in accordance with the Consumer Price Index, and up to $500,000 of the cash value of any qualified retirement savings plan or individual retirement account is excluded from the personal net worth calculation.

- A woman-owned business that is owned by a member of a racial or ethnic minority may be certified as both a WBE and an MBE. Such a firm may participate in an individual procurement as either a WBE or an MBE, but not both.

- Borrowers under the Linked Deposit Program may now apply for loans directly from participating lenders rather than through the Department of Housing and Community Development. The Program also exempts decertified MBEs from having their loans reduced if their decertification is due to revenue or employment growth.

- The requirement for inclusion of minority fund managers and brokers who participate in State-funded and managed investment programs was strengthened.

- A Prompt Payment Directive was implemented to ensure timely payment to all subcontractors.

- MBE University was launched, discussed below.

B. MBE Program Elements

1. Program eligibility

There are five key elements to Program eligibility:

- Ownership: A minimum of 51 percent of the business must be owned by one or more socially and economically-disadvantaged individual(s).

- Social and economic disadvantage: Certain groups are presumed to be socially and economically disadvantaged:

    - African Americans;

- Native Americans;
- Hispanics;
- Asians;
- Women;
- Disabled persons and
- Non-profit organizations serving the physically and/or mentally disabled population (MBE only).

- Control: The minority applicant(s) must have technical expertise and experience relating to specific products and/or services provided by the firm as well as the authority to make day-to-day and long-term business decisions for the firm.

- Personal Net Worth: An economically disadvantaged individual is a "socially disadvantaged individual whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same or similar line of business who are not socially disadvantaged."[275,] The firm's minority or woman owner(s) must be economically disadvantaged, as evidenced by his or her personal net worth not exceeding a specified cap, as indexed for inflation. The current limit, effective January 2011, is $1,530,652.

- Business Size: A firm must be a small business based upon its gross receipts.[276] COMAR 21.11.03.15 sets forth the graduation standard. If a certified MBE meets or exceeds the small business size standards specified in 13 CFR Part 121, as amended, the MBE is no longer eligible to participate in a new procurement as a certified MBE. The MBE is still eligible for credit towards an MBE goal under a contract entered into when the MBE was eligible and certified. Ineligibility of an MBE to participate in the MBE Program may not be the sole cause of the termination of the MBE contractual relationship for the remainder of the term of the contract. If during the next three years, the MBE again becomes

[275] COMAR 21.11.03.03B(5)(a).

[276] Receipts means "total income" (or in the case of a sole proprietorship, "gross income") plus "cost of goods sold" as these terms are defined and reported on Internal Revenue Service tax return forms. The term does not include: net capital gains or losses; taxes collected for and remitted to a taxing authority if included in gross or total income, such as sales or other taxes collected from customers and excluding taxes levied on the firm or its employees; proceeds from transactions between a concern and its domestic or foreign affiliates; and amounts collected for another by a travel agent, real estate agent, advertising agent, conference management service provider, freight forwarder or customs broker. For size determination purposes, the only exclusions from receipts are those specifically provided for in this paragraph. All other items, such as subcontractor costs, reimbursements for purchases a contractor makes at a customer's request, and employee-based costs such as payroll taxes, may not be excluded from receipts. Receipts are averaged over a firm's latest three (3) completed fiscal years to determine its average annual receipts. If a business has not existed for three years, the gross sales average is computed for the period of the business' existence.

qualified under the small business size standards, the MBE may resume participation as a certified MBE through the recertification process. If, after 3 years of nonparticipation, the MBE continues to meet or exceed the small business size standards, the MBE is considered to have graduated and will no longer be certified.

Certification is conducted by the Office of Minority Business Enterprises ("OMBE"), which is within MDOT's Office of the Secretary. OMBE is charged with certifying MBE firms and maintaining an MBE Directory for use by all State agencies and the general public. Within MDOT, the Minority Business Enterprise Advisory Committee makes recommendations concerning the certification and recertification of MBEs. Certification consists of a review and evaluation of the application for certification, the "Disclosure Affidavit" and supporting documentation submitted by the firm and includes site visits to the firm's offices to review its operations, management, and financing as well as selected job sites on which the firm is working at the time of the eligibility investigation. MBE certifications are subject to annual review for continuing eligibility.

2. Program operations

In general, designated agencies must attempt to achieve the overall State goal of spending 25 percent with certified MBEs. This includes subgoals of 7 percent sending with certified African American-owned MBEs and 10 percent with certified women-owned MBEs. In addition, MDOT is required to structure its construction procurement to try to achieve participation of at least 25 percent of the dollar value of contracts in excess of $50,000 by certified MBEs, either on the prime contract or subcontract level.

a. Governor's Office of Minority Affairs

GOMA is a cabinet-level state office that serves as an advocate for minority business enterprises in Maryland. GOMA's mission is to strengthen and preserve Maryland's M/WBEs by facilitating M/WBE activities through coordinating and promoting government programs aimed at strengthening and preserving the State's 200,000 minority and women owned businesses. GOMA is also responsible for overseeing the work of the State agencies as they plan and carry out projects that are intended to overcome special problems related to minority business enterprise participation initiatives. As the State's cabinet level advocate for minority businesses, GOMA helps minority business owners who are seeking State certification and State procurement opportunities. GOMA also assists minority business owners who believe they have been treated unfairly by a State agency or other entity. It provides referrals to agencies and other entities that have programs to assist minority business owners.

b. Agency responsibilities

Agency MBE Liaisons provide the direct interface between bidders, MBEs and the agencies.[277] They are required to report directly to an agency's Secretary, Deputy Secretary, Assistant Secretary, or other executive level agency head. They are generally responsible for coordinating

[277] COMAR 21.11.03.05.

the agency's MBE and small business outreach; ensuring prime and subcontractor compliance on contracts containing MBE commitments; assisting in the resolution of contract issues involving MBE firms; collecting and submitting MBE program reports or information as required.

In coordination with GOMA, procurement agencies are also responsible for Program outreach. Procurement officers may notify MBEs of new opportunities by meetings, seminars, etc.[278] If known certified MBEs can perform the entire contract, State procurement agencies may solicit the qualified MBEs directly as part of the solicitation process being employed for the business community in general. All solicitations issued by procurement agencies for construction contracts in excess of $50,000 shall be assessed to determine the potential for certified MBE participation, and an agency may establish, for a particular construction contract, a certified MBE subcontract participation goal expressed as a percentage of the dollar value of the contract. In addition, procurement agencies may establish a certified MBE subcontract participation goal for a particular construction contract of $50,000 or less, or any supply, maintenance, service, construction-related service, architectural service, or engineering service contract. The names of prime contractors requesting or purchasing solicitation documents for construction contracts are provided on request to any certified MBE whose specialty suggests an interest in subcontracting.[279]

Each agency reviews and evaluates upcoming procurement opportunities and MBE availability and sets contract-specific goals for particular goods and services. Contract goals vary depending on the availability of MBEs, the anticipated scope of work of the contract and the geographic region within which the goods and/or services will be procured.

When a solicitation includes a stated MBE goal, all bidders/proposers must complete and submit an MBE utilization affidavit acknowledging the MBE participation goal and committing their firm to making good faith efforts to achieve the goal. Prime contractors must also identify proposed MBE participation at the time of the submittal. By submitting a bid or proposal, the bidder/proposer agrees that MBEs will perform the percentage of the total dollar amounts of the contract as specified in the submission. If the bidder/proposer has made good faith efforts to achieve the MBE goal but has been unable to do so, the bidder/proposer must request a waiver.

To receive a waiver, the bidder/proposer must, upon request, submit documentation of its good faith efforts to meet the goal, including a statement of the work allocated to MBE participation and the efforts made to identify, contact and negotiate with MBEs available to perform the work. An agency may grant a waiver request if (1) the contractor reasonably demonstrates that it could not obtain certified MBE participation and such participation could not be obtained at a reasonable price, or in the appropriate MBE classification; and (2) the agency head or designee determines that the public interest is served by granting the waiver. In determining whether to grant or deny a waiver, the procurement agency's head may consider engineering estimates, catalogue prices, general market availability and availability of certified MBEs in the area in

[278] COMAR 21.11.03.07.

[279] COMAR 21.11.03.09(B); COMAR 21.11.03.09(C)(1); 21.11.03.09(C)(7); COMAR 21.11.03.09(D).

which the work is to be performed, other bids or offers and subcontract bids or offers substantiating significant variances between certified MBE and non-MBE cost of participation, their impact on the overall cost of the contract to the State, and any other relevant factors.[280] If a waiver is granted, a copy of the waiver determination must be sent to GOMA.

If the solicitation documents expressly permit, in the event of two or more offers in which the offerors' technical and price proposals are determined by the procurement officer to be equally most advantageous to the State, a procurement agency may award a contract to a certified MBE or to a person whose offer otherwise reflects the greater amount of certified MBE or minority participation.

Each agency is required to maintain records of MBE utilization on the contracts the agency has awarded. At the end of each fiscal year, the agencies submit MBE Utilization Reports to GOMA. These reports contain dollars awarded and dollars paid to MBE prime contractors and subcontractors. GOMA compiles the data reported by each agency and submits an annual report to the Governor, summarizing the MBE participation achieved by each agency and for the State as a whole.

C. Race-Neutral and Gender-Neutral Initiatives

As discussed in Chapter II, a crucial element of narrowly tailoring a race- and gender-conscious program is the use of race- and gender-neutral measures[281] to the maximum feasible extent to reduce barriers to MBE contracting.

1. Small Business Preference Program

The State's Small Business Preference Program provides a bid preference for small businesses.[282] The program is designed to provide small businesses with effective access to State procurements. A business is a "small business" if:

- It is independently owned and operated;
- It is not a subsidiary of another firm;
- It is not dominant in its field of operation;
- Its wholesale operations did not employ more than 50 persons and its gross sales did not exceed $4,000,000 in its most recently completed three fiscal years;

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[280] COMAR 21.11.03.11B.

[281] By race and gender-neutral, we mean any policy, requirement or measure other than race- and gender-conscious subcontracting goals, e.g., small business assistance or set-asides. *See* Section 14-301(h), State Finance and Procurement ("Race-neutral measure" means a method that is or can be used to assist all small businesses.")

[282] COMAR 21.11.01.01 *et seq*.

- Its retail operations did not employ more than 25 persons and its gross sales did not exceed $3,000,000 in its most recently completed fiscal year;
- Its manufacturing operations did not employ more than 100 persons and its gross sales did not exceed $2,000,000 in its most recently completed three fiscal years;
- Its service operations did not employ more than 100 persons and its gross sales did not exceed $10,000,000 in its most recently completed three fiscal years; and
- Its construction operations did not employ more than 50 persons and its gross sales did not exceed $7,000,000 in its most recently completed three fiscal years.[283]

Based on its "Small Business Affidavit" form, the Department of General Services ("DGS"), designates vendors as small businesses and includes them on its "Small Business" vendor list.[284]

Under the Program, DGS, the University System of Maryland ("USM"), MDOT and the Department of Public Safety and Correctional Services ("DPSCS") may send solicitations both to firms identified on the Small Business vendor list and to regular vendors in order to establish a reasonable price range commensurate with current market conditions. User agencies also send solicitations to qualified small business vendors for contracts within their authority. Each of the agencies is to accept the most favorable responsive bid, or most advantageous offer, from a responsible small business vendor for a small business preference procurement, if the small business bid or offer does not exceed the most favorable responsible bid, or most advantageous offer, received from a responsible regular vendor by more than five percent or the predetermined percentage preference.[285] The preference is calculated by multiplying the regular business's apparent low bid by the percentage preference set forth in the solicitation and adding that amount to the regular business's price quote to derive the "calculated" quote for the regular business. If the small business's actual price quote is lower than the "calculated" quote for the regular business, the small business must be given the award.

2. Small Business Reserve Program

The Small Business Reserve (SBR) Program was first adopted in 2004. The Program requires that designated State agencies structure their procurement processes so that at least 10 percent of their total procurement dollars are spent with qualified small businesses. In 2008, the gross sales ceilings for participating firms were raised along with the addition of Architectural and Engineering services as a participating industry. Further legislative changes in 2010 extended the Program's Sunset Date to 2016 and added the Maryland Transportation Authority and the Department of Information Technology as participating agencies. The overall goal is to support the economic viability of small businesses by guaranteeing that the contract will be awarded to a qualified small business. Only qualified small business may participate in the Program. Once a

[283] COMAR 21.01.02.01B(80).

[284] COMAR 21.11.01.01.4.

[285] The maximum preference for a small business is 5%, however, it can increase to 7 and 8% if the small business is also a veteran or a disabled veteran-owned firm respectively.

solicitation has been designated as a small business reserve, a firm must be certified as a small business prior to award.

A small business need not be registered for the Program at the time of bid/proposal submission; registration may occur any time before final contract award.[286] Further, agencies are permitted to count incidental SBR expenditures towards the 10 percent SBR target amount. "Incidental SBR expenditures" are contract payments made to SBR vendors where, although the initial procurement/purchase was not designated for SBR participation, a small business won the contract.[287]

GOMA was given responsibility for overseeing the implementation of the SBR Program in 2006. GOMA focuses on providing agencies with the training, information and technical assistance necessary to successfully implement the program, and monitoring agencies' procurement activity to ensure that the Program is utilized to the fullest extent possible and all reporting requirements are met.

SBR agencies are required each year to develop a SBR strategic plan that is the equivalent of a procurement forecast that identifies:

- All procurements the agency plans to execute in the upcoming fiscal year;
- The subset of all procurements that will be designated for SBR participation;
- The projected total procurement expenditures for the upcoming fiscal year;
- The projected SBR target amount (10 percent of projected total expenditures); and
- The methodology the agency will use during the FY to monitor SBR achievement.

The agency SBR strategic plans must be submitted to GOMA within 60 days of final approval of the State budget by the legislature. Agencies are also required to submit to GOMA an annual SBR report that summarizes its actual SBR activity over the previous fiscal year.

The Program is managed by DGS, which maintains a SBR database and manages all functions related to SBR Program vendor registration. DGS is also responsible for ensuring that all self-registering vendors are legitimately qualified to participate in the program. As part of the quality control process, DGS must verify a specific vendor's eligibility to participate in the SBR Program upon request from an agency procurement official, or when sources from the private/business community provide sufficient credible information to DGS to trigger an investigation.

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[286] *See* Board of Public Works Advisory No. 2005-1 Revised.

[287] *Ibid.*

A small business is defined as a business, other than a broker, that is independently owned and operated, not a subsidiary of another business and not dominant in its field of operation. Other criteria also apply by procurement category as follows:

- The wholesale operations of the business do not employ more than 50 persons and the gross sales of the business do not exceed an average of $4,000,000 in its most recently completed three fiscal years;
- The retail operations of the business do not employ more than 25 persons and the gross sales of the business do not exceed an average of $3,000,000 in its most recently completed three fiscal years;
- The manufacturing operations of the business do not employ more than 100 persons and the gross sales of the business do not exceed an average of $2,000,000 in its most recently completed three fiscal years;
- The service operations of the business do not employ more than 100 persons and the gross sales of the business do not exceed an average of $10,000,000 in its more recently completed three fiscal years;
- The construction operations of the business do not employ more than 50 persons and the gross sales of the business do not exceed an average of $7,000,000 in its most recently completed three fiscal years; and
- The architectural and engineering services of the business do not employ more than 100 persons, and the gross sales of the business do not exceed an average of $4,500,000 in its most recently completed three fiscal years.

If a business is less than three years old, the gross sales average is computed for the entire period it has been in existence. For newly formed businesses, the determination will be based upon employment levels and projected gross sales.

For a business that has filed a Federal income tax return, the annual average gross sales of the business are calculated from the sales amounts contained on the tax return.

Employment is calculated on an employee "Full-Time Equivalent" (FTE) basis. All full time, part time, temporary or contractual employees, including employees of temporary help firms or subcontractors working for the business, are counted against the applicable employment limitation. The specific FTE employment levels for a business at the end of each calendar quarter are averaged to determine a business' most recent FTE employment level.

If a business operates in more than one business classification, its combined operation must meet the limitation of the more liberal classifications. Only for-profit businesses can apply to be qualified as a small business. A business can qualify as a small business, an MBE and a DBE.

DGS implements an online self-certification process. A business is required to reapply for qualification every year by the anniversary date of the initial certification. A firm's gross sales and employment data are also verified annually.

3. Outreach to Small Firms and MBEs

All solicitations over $15,000 are advertised on *eMaryland Marketplace*, minority media, and sent to minority and female contractor associations. Some agencies waive fees for sending copies of bid specifications to such organizations. Because of prohibitive costs, MDOT generally only sends bid packages upon request, but some solicitation packages are uploaded to *eMaryland Marketplace* or the State Highway Administration's website. DGS, USM, and DPSCS each maintain a bidders list that includes MBEs to whom solicitations are routinely mailed. Generally, agencies rely on the MDOT Directory to identify MBEs and on GOMA to ensure that MBE organizations are notified.

The State sponsors workshops, seminars and conferences for small and minority businesses. The Entrepreneurial Development Institute provides training courses to enhance success in obtaining State contracts.

In 2009, MDOT's OMBE began providing workshops to educate small and minority owned firms about the MBE and DBE programs and to assist them with the application process. These free workshops are offered on a monthly basis.

In addition to the fraud hotline established by GOMA in 2009, the OMBE has a fraud hotline so that individuals can report suspected cases of fraud related to the MBE Program.

In 2008, Maryland, Virginia and the District of Columbia entered into a Modified DBE Reciprocity Certification Program that streamlined the certification process for DBE and ACDBE firms in the metro area. The agencies included in this agreement are: the District Department of Transportation, the Washington Metropolitan Area Transit Authority, the Maryland Department of Transportation, the Virginia Department of Minority Business Enterprise, and the Metropolitan Washington Airports Authority.

4. Maryland Small Business Development Financing Authority

The Maryland Small Business Development Financing Authority (MSBDFA) was created in 1978 to assist in the promotion of business growth in the State for businesses owned by socially or economically disadvantaged persons in Maryland. The MSBDFA statute was later expanded to include any small business that does not meet the established credit criteria of financial institutions and commercial sureties, and consequently, is unable to obtain adequate business assistance on reasonable terms through normal financing and bonding institutions. A major criterion for approval is the economic impact of the loan, investment or guaranty, via employment opportunities and tax base increases.

MSBDFA offers four assistance programs:

Contract Financing Program. This Program assists firms through loans and guaranties. Loan funds can be used for working capital or the acquisition of equipment to begin, continue and complete work on contracts that receive the majority of their funding (51 percent or greater) from government agencies or public utilities. Financing in either form is limited to $2,000,000 and must be repaid during the term of the contract, with applied interest rates ranging from the

prevailing prime rate to prime plus two percent. Applicants may also qualify for financing before contract award.

Long-Term Guaranty Program. This Program assists eligible firms through guarantees for loans to be used for, among other things, working capital, the acquisition and related installation of machinery or equipment, and the acquisition of real property to be owned by the applicant and to be used in the business for which financing assistance is being provided. Established in 1982, this Program makes available loan guaranties and interest rate subsidies to financial institutions making loans to socially or economically disadvantaged persons who own businesses in Maryland. Guaranties may not exceed the lesser of 80 percent of the loan or $2,000,000. The minimum loan is $5,000; the term cannot exceed 10 years; and the maximum interest rate is the prime rate plus 2 percent. MSBDFA can also provide interest rate subsidies up to 4 percent to a financial institution making a loan to a qualified applicant. The subsidy may be reviewed annually, and may be for the life of the loan. The institution is required to pay up to 1.5 percent of the loan amount at closing and annually. This cost may be passed on to the applicant. Collateral may consist of accounts receivable, machinery and equipment, inventory, real estate, the cash surrender value of life insurance, assignment of securities and personal guaranties. In addition to the general eligibility requirements, applicants must have applied for and been denied a loan by a financial institution, and have sufficient experience and capacity to manage the business for which financing is sought.

Surety Bond Program. This Program assists through guaranties of bid, performance and payment bonds, or by providing such bonds directly for contracts that receive the majority of their funding (greater than 51 percent) from governmental agencies or public utilities. This effort is designed specifically to facilitate the bonding process for contractors who do not meet the surety industry's standard underwriting criteria. Applicants may qualify before contract award to assist their success in bidding. MSBDFA can directly issue bid, performance or payment bonds up to $5,000,000. It can guarantee up to the lower of 90 percent of a surety's losses incurred as a result of a contractor's breach of a bid, performance or payment bond. It may establish a surety bond line in order to directly issue or guarantee multiple bonds to a principal within pre-approved terms, conditions and limitations.

MSBDFA generally requires fees of 3 percent per $1,000 of the contract price for construction projects and 3 percent per $1,000 of the bond amount for supply and service contracts. There is a $50 charge for bid bonds or a $200 annual fee if a bid bond service undertaking is issued. The contractor's fee for bond guaranties is 0.5 percent of the bond amount. Generally, the standard guaranty fee payable by the surety is 20 percent of the premium charged to the contractor. The bonding agent's fee for a bond issued directly by the agency is up to 20 percent of the premium collected by MSBDFA. The agent's fees for bonds guaranteed by MSBDFA will be paid by the issuing surety. However, fees and premiums need not be uniform among transactions. Collateral consists of assignment of contracts, machinery and equipment, inventory, real estate, life insurance cash value, and securities.

Eligibility criteria further include the applicant having been denied bonding by at least one surety within 90 days of submitting an application; subcontracting no more than 75 percent of the dollar value of the contract; the contract having substantial economic impact in Maryland through job generation and expansion of the State's tax base; the applicant never having defaulted on any

loan or financial assistance made or guaranteed by MSBDFA; and the firm's employment of fewer than 500 full time employees or has gross revenues of less than $50 million.

Equity Participation Investment Program. This Program assists eligible firms through the use of loan guaranties, and equity investments in franchises, technology based businesses and for the acquisition of existing profitable businesses. The funds may be used for among other things, working capital, inventory, and the acquisition of machinery, equipment and real property. Forms of investment may include evidence of indebtedness, equity participation, participation in a profit sharing agreement, investment contract, or security.

Particular attention is paid to the structure and eventual liquidation of EPIP's investments. Each investment is designed to enhance the long-term growth prospects for the company. In all cases, MSBDFA's recovery shall be the greater of its percentage of the current value of the business or the amount of its initial investment. Before a financing relationship is consummated, there must be an agreement regarding the probable method of liquidation.

The Franchising Component seeks to increase the number of jobs created or retained, generate incremental tax revenues, and serve the needs of the local community. It permits direct investment up to the lesser of 49 percent of the total financing or $2,000,000. MSDBFA's investment must be recoverable within 7 years and the return shall be commensurate with the risk undertaken. The applicant must make an equity investment of not less than 10 percent of the total project costs.

The Technology Component was established to enhance the business potential of socially or economically disadvantaged entrepreneurs. It provides debt or equity financing for the expansion of technology-based businesses. It focuses on proven technological products and services in the critical marketing and early production stages. MSBDFA's equity participation financing shall not exceed $2,000,000 to any enterprise. It shall be recoverable within 10 years and the return shall be commensurate with the risk. As a venture capital program, EPIP expects to provide financing that supplements normal bank loans. Typical investments range from $100,000 to $3,000,000. Administrative expenses prohibit the agency from considering new financing requests less than $50,000, although lesser supplements to existing MSBDFA investments are possible. While EPIP will invest in either equity or debt, most debt investments will include warrants or convertible equity instruments relating to the acquisition of common stock. Preferred stock usually carries cumulative dividend and conversion rights. EPIP must dispose of its equity in 10 years or less. It is expected that the business owners will invest personal capital into the business.

The Business Acquisition Component seeks to provide equity or debt financing for the acquisition of existing profitable businesses. MSBDFA's equity participation financing shall not exceed the lesser of $2,000,000 or 49 percent of the total project cost. Its investment shall be recoverable within 7 years and the return shall be commensurate with the risk. The applicant is required to make a minimum equity investment of 5 percent of the total project costs. The acquired business shall have been in existence for at least 5 years; been profitable for at least two of the previous three years; have sufficient cash flow to service the debt and ensure adequate return on the agency's investment; demonstrate the capacity for growth and job creation in Maryland; and enjoy a strong customer base.

During FY 2010, MSBDFA approved 39 transactions, and closed and funded 26. MSBDFA's portfolio exposure has increased from $18.0 million at the end of FY 2006 to $32.2 million at the end of FY 2010, an increase of 78.9 percent. The loan loss rate for the combined programs over the past 5 years was 2.96 percent, based on 132 transactions totaling $48.3 million. During the most recent four-year period, 72 percent of the number of loans and 57 percent of the loan dollars were awarded to minority-owned firms; 34 percent of the number of loans and 25 percent of loan dollars were awarded to woman-owned firms.

5. Maryland's Linked Deposit Program

Maryland implemented the Linked Deposit Program ("LDP") in early 2009. This statewide initiative is designed to stimulate opportunities for certified MBEs by reducing the interest rate on loans they obtain from participating banks. MBEs that notify the Maryland Department of Housing and Community Development ("DHCD") prior to obtaining qualifying loans from enrolled financial institutions may be able to receive a 2 percent discount on loans to be applied to a project or activity located in Maryland, so long as that borrower remains certified as an MBE. Lenders underwrite the requested loan according to their standard underwriting. A participating bank and an MBE may agree to any loan amount they deem appropriate, but for purposes of LDP, the amount eligible to be "enrolled" may not exceed $1 million dollars, or if a business has more than one loan under the Program, the total of all such loans cannot exceed $1 million. Loans may be combined with other loan programs like Neighborhood BusinessWorks and the Maryland Capital Access Program. Loan terms cannot exceed 10 years; points charged by the lender cannot exceed 1% of the loan amount; and the Linked Deposit interest rate is available for term loans only or loans with fixed rates with one disbursement.

The Program is operated by the Office of the Treasurer and the DHCD. The Treasurer has flexibility to make deposits in participating financial institutions that may yield a higher interest rate than certificates of deposit. When a qualifying loan is enrolled, the Treasurer may make one or more interest bearing deposits. With respect to each deposit, the Treasurer accepts an interest rate that is 2 percent less than current market rates. Loans enrolled in LDP are not a debt of the State nor is the State liable to any financial institution for payment of the principal or interest on a loan assisted by a linked deposit.

6. Microenterprise Loan Program

The Microenterprise Loan Program ("MLP"), also administered by the DHCD, expands opportunities for microenterprise development, creating new opportunities for small business development and sustainability in Maryland communities statewide. MLP provides flexible for microenterprise start-ups and expansions within designated Sustainable Communities throughout the State. Eligible applicants must be: Maryland-based small businesses with not more than 5 employees or nonprofit organizations whose activities contribute to a broader revitalization effort; located in a commercial space; and located in a designated Sustainable Community in the State of Maryland. Applicants must also demonstrate that financing from two other lending sources is not possible. Funds obtained through MLP may be used for: working capital; marketing/planning/feasibility studies; real estate acquisition down payment; minor renovations; minor leasehold improvements; machinery and equipment; and certain other costs associated with opening or expanding a small business.

7. Maryland Capital Access Program

The Maryland Capital Access Program ("MCAP"), administered by DHCD, is part of the revitalization initiative to support the growth and success of small businesses in Priority Funding Areas throughout the State of Maryland. MCAP is a credit enhancement program that enables private lenders to establish a loan loss reserve fund from fees paid by lenders, borrowers and the State of Maryland. Communities that have small businesses receiving financing through loans enrolled in MCAP will benefit from new or expanded services provided by the small businesses. Most Maryland businesses, including nonprofit organizations, are eligible. Businesses must be located in Maryland's "Priority Funding Areas" ("PFAs") approved by the Maryland Department of Planning for State funding in accordance with the Smart Growth Act of 1997. Nearly all populated areas of the State are recognized PFAs.

8. Neighborhood BusinessWorks Loan Program

The Neighborhood BusinessWorks program ("NBW"), administered by DHCD, provides a revitalization resource to help stimulate investment in Maryland communities. The NBW loans provide flexible gap financing to small businesses locating or expanding in locally designated Sustainable Communities throughout the State. Eligible applicants include: Maryland-based small businesses (as defined by the U.S. Small Business Administration) and nonprofit organizations whose activities contribute to a broader revitalization effort and whose projects are intended to promote investment in commercial districts or town centers. Funds obtained through NBW may be used for: market/planning/feasibility studies; real estate acquisition; new construction or rehabilitation; leasehold improvements; machinery and equipment; working capital (when part of total project cost); and certain other costs associated with opening or expanding a small business.

9. MBE University

MBE University is a new initiative designed to promote training and information on the tools necessary for successfully doing business with the State as an MBE. The University hosts a traveling M/WBE conference that visits each of the State's regions. The MBE University was created in collaboration with the State's minority business coordinating agencies and the Governor's Office. The coordinating agencies include GOMA, Maryland Department of Business and Economic Development ("DBED"), MDOT, DGS, and the Governor's Grants Office. The first conference was held on December 1, 2009, with over 300 people in attendance.

10. Maryland Small Business Development Centers Network

The State also operates the Small Business Development Center Network, consisting of six regional offices and more than 20 locations where entrepreneurs can receive comprehensive, resources and relevant assistance. Each region offers a variety of training and outreach programs and one-on-one counseling with special emphasis on developing programs that meet the unique needs of businesses within their jurisdiction. Services include counseling; training, financing; and certification. Programs cover technology, retail and restaurant and procurement.

11. Maryland Procurement Technical Assistance Center

Funded by the State in conjunction with other federal and local agencies, the Maryland Procurement Technical Assistance Center ("MDPTAC") provides mostly no cost assistance to small businesses that meet the SBA size standards. MDPTAC's mission is to provide businesses with an understanding of the requirements of government contracting and the market expertise they need to obtain and successfully perform federal, State, and local government contracts. It also supports government agencies in reaching and working with the suppliers they need.

Services include:

- Automated bid matching from hundreds of buying offices, tailored to individual client specifications.
- Information on federal/State/local procurement actions.
- Assistance in obtaining solicitations, references, specifications, and drawings from buying offices.
- Assistance with preparation of bidders mailing list applications.
- Assistance with solicitation interpretation and bid package preparation.
- Pre/post award contract assistance.
- Help in locating subcontracting opportunities.
- Market research to locate government agencies that buy a firm's product or services.
- Access to library of federal, State, and local procurement resources.
- Workshops/seminars on a variety of contracting topics.
- Assistance with registrations and certifications.
- Referrals to other assistance activities where appropriate.

12. Governor's Commission on Small Business

On June 3, 2010, Governor Martin O'Malley created, by Executive Order 01.01.2010.13, The Governor's Commission on Small Business. The Commission will provide a forum for small business to articulate and address barriers to business growth, recommend policy development measures to the Governor and General Assembly and oversee implementation of recommendations of the Governor's Task Force on Small Business. Also included in the Commission's duties and responsibilities are: advocating for full employment and skills upgrades to support business development and job creation in emerging and growth industries; identifying public/private partnership opportunities to supplement small business economic

programs and financial incentives; and identifying methods to improve resource accessibility for small M/WBEs.

13. Maryland's Prompt Payment Effort

In 2008, Maryland implemented a Prompt Payment Directive, providing prompt payment protections to all firms performing as subcontractors on Executive Branch agencies procurement contracts, in excess of $25,000. Prior to 2008, formal prompt payment protections were only provided to subcontractors participating on State procurement contracts for construction.[288] The Directive identifies specific remedies for non-payment of undisputed amounts and provides language to be included in solicitations and any resulting contract documents. This Directive also describes specific duties of agencies. Agencies may only modify or omit prompt payment provisions if doing so would be in the State's best interest and notice and explanation is given to GOMA. Additionally, if the subcontractor is an MBE or Small Business Reserve firm, notice of any prompt payment complaints must be forwarded to GOMA.

D. Maryland's MBE Program Feedback Interviews

In order to assess the effectiveness of the State's MBE Program as well as its race- and gender-neutral initiatives, we conducted extensive interviews with MBEs, non-MBEs and State officials. We conducted 21 business owner group interviews around the State. We met with 229 business owners from the building and highway construction, design, other professional services, information technology and supply industries. Firms ranged in size from large international businesses to new start-ups. From all participants, we sought feedback about the Program, as well as suggestions for improvements and new initiatives. Below are summaries of those interviews, arranged by important topics. Summaries are representative of the views expressed by many interviewees over multiple sessions. Quotations are indented.

1. Program Success

Overall, MBEs reported that the State's Program was essential to their survival.

> [Without the MBE program, I] wouldn't be where I'm at. I wouldn't even have a business.… Getting minority certified in the State, and getting Women Business Enterprise National Council certified through women business, is the only thing that saved me.
>
> Maryland's MBE Program is a very good program. And, I really think Maryland, the State of Maryland is really serious with this program. And, it's very helpful and I personally, my company, got two subcontracts through the MBE project.
>
> I have benefited from being both a prime and a sub on MBE programs and that's worked well.

[288] Md. Code Ann., State Fin. & Proc. § 15-2261(b).

> We've had really great experience from the Program. We had a private company go to the MDOT database because they know that there's a lot of qualifications you have to go through to get certified. And they picked us because we had government experience, and brought us in as a sub. Actually, a woman-owned business. Seven percent, it was a city contract. Had us present and they said that they were going to mentor us and grow us and that's what they've done. And they've actually doubled our percentage of work from it and it's really because of the database listing. And then we've grown through State work from the recognition.
>
> If it weren't for this Program, you know, we wouldn't be getting this work.
>
> I've seen a huge advantage from my perspective. Because the job range of what we do has changed and our capability to do an 80 million-dollar job is not there. There are support programs that exist. But it has been beneficial because I do work for people who could self-perform. And there's no way in the world I would get that work otherwise. So with all of the bundling and the design-build projects that are coming out it has been a huge benefit for me.
>
> We're doing good business on a number of construction projects precisely because there have been goals that were going to be enforced. They're going to be enforced where companies felt, look, we have to meet these goals and I was able to make the case that we could help with meeting the goals. Maryland recently has gone forward to even say that if you try and commit fraud, that is if you use a company's name without informing them on a bid, you are liable to be prosecuted. Or if you conspire with some fly-by-night MBE that you will use their name and subsequently they do not perform any work, you can still be prosecuted.

2. Program Eligibility

A necessary element of meeting strict constitutional scrutiny is narrowly tailoring Program eligibility. As discussed fully in Chapter II, the remedy must accrue only to those persons who have suffered the effects of discrimination.

No one questioned the need to include racial minorities in the Program, including non-MBEs. However, several majority- and minority-owned firms questioned nonminority women's disadvantage. They stressed that competitors had transferred long-standing and successful majority-owned businesses to female relatives, who now are considered "disadvantaged," despite their family relationships in the construction industry.

> I bid on MBE jobs and she gets those jobs. Okay? And she gets most of the jobs. And she is able to bid a lot lower than me…I don't have any proof, but I'm pretty sure it's because her cost structure is a lot lower than mine. She can buy all her materials at a fraction of what I buy mine of because she's buying them from her [immediate family member].

Many non-MBEs urged the adoption of a time limit on Program eligibility, similar to that in the U.S. Small Business Administration's (SBA) 8(a) Program. MBEs were believed to have ample

time to overcome any discriminatory barriers, and remaining in the Program indefinitely was argued to be unfair to nonminority males.

> If somebody goes into a business and you compete in that business, you know, pick a number, ten, fifteen years. Then at that point you should know how to run your business, you should know how to maintain the business and be able to compete on an even basis with everybody else.
>
> You've got companies that are small companies that they reach a certain volume, go out of their jurisdiction, now they're not minority anymore. So, how do I meet a hundred million dollars in three years?… We have to use two firms instead of one.… It's a juggle and you have to manage them. A considerable amount of energy to get it done.
>
> We have the firms that don't want to grow because then they're afraid they're not going to get that work that we've been having to give to them. So, I mean, where exactly is the, I guess where is the program taking us in that situation other than it really, to be honest with you, being just the entitlement? It doesn't sound good to have it, you know, to call it a setaside but if that's what the program is basically breeding, then, then why would we call it anything different if. If the process is really to have firms grow and to, you know, to basically be able to sustain themselves and to be able to, to actually bid on jobs just like we all do, then, then that's what it should be there for.
>
> I think the process is there to help and I think we're all certainly not talking about every single firm that's in the program is that way. I mean, you know, I think there are certain firms that don't want to exceed their, they don't want to exceed their dollar value because they don't want to come out of the program. But I think there are certainly firms there that, I mean I know I've seen firms actually get out of the, become non-DBE and they've progressed and they're moving on. I think the program is there to help the situation you were just describing for firms that can't get liability, that can't get bonded. The problem is that, that it's sort of the, it's sort of the few areas where people are taking advantage of it that are basically hurting the rest of everyone else who really is using it for what it was intended for in the beginning.
>
> I look at some people and I think you've been in business this many years and you don't have a net worth of that?
>
> A lot of them are incompetent. That's why they don't [graduate]. And by giving advantages in a lot of these cases, we're subsidizing that incompetence.… Even with all the help they get, some of them are going to fail, some of them are never going to achieve substantial net worth. I think that's a part of the answer to that question [why they do not graduate]. The answer is some of them are on life support. They're supported by their prime contractors who need their participation. They're holding their hand.… It's subsidized incompetence.
>
> There also needs to be some kind of a time limit where they can stay in this program for five years, ten years.… It's like it's an entitlement.… They're in this program and they're getting free money.… They didn't have to go out and market.… I think there should be a

> set aside program where firms can actually go out and market the prime clients. Compete against each other for fairly with other firms of their capabilities and size for projects, where they can work directly with the clients, the owners. Not have to go through us.
>
> A lot of firms will play games so that they do not graduate. I had one firm tell me they are not doing any work the rest of this year so they don't get their revenues any higher because they are afraid if they get their revenues any higher so please do not give us any work through the end of 2010 so that they can stay in the program.
>
> Is the program to train firms who are disadvantaged in some way so they can learn to be competitive in our free-market system or it is just to give them a handout for the next 30 years because they stay small enough and they are disadvantaged but they will get their fair share just because they are a woman or a minority?… This Program is to take the disadvantaged person who might not be able to make it on their own and give them some mentoring and some training and some contracts so that firms need to give them work but then I would make them, if you are a minority firm after 10 years you lose it just because time wise you had a chance to grow your business and understand the business world and you should no longer need to be given a handout. I have seen some firms that stay minorities for 25 years and they continue doing mediocre work.

There were strong objections to the failure to graduate long established WBEs from nonminority male-owners.

> It's the women that are being helped and with no graduation that encourages, you know, men to pass down their businesses to either their daughters or their wife and set up, I don't want to say fronts, but that's an easy way to do it.
>
> Our long-term competitors in this business never graduate.… [Gross receipts are] averaged three years so you just manage to stay under that size limit. You can also manage your net worth. It excludes the value of your house and your retirement plan, etc. And you can move money around in a trust fund.… Up and down the east coast, all the major [particular specialty trade] contractors are reconstituted to the wife or daughter or some subset of that. We don't see any African Americans.… It's grossly unfair for a program that was really intended to benefit African Americans. If you look at the statistics on where the major dollars are spent in the highway program in Maryland, I think the top fifteen and twenty are all WBEs… [The nonminority women-owned firms are] legitimate. They can meet the rules and the standards. But I don't think that was the original intent of the Program.… They're not disadvantaged.… I think it should be time-based like the SBA does, where you have ten years and then you're out.…
>
> [Our competitors are] all women-owned. They are all reconfigured from husband to wife or daughter, and if you look at the data, the vast majority of the dollars go to women-owned, not African-American firms. I think graduation would help cure that. A time-based graduation. Ten years seems to be enough time that you would be allowed to be protected. Our primary competitor competes on a very regular and heated basis with us on prime contracts.

3. MBE Certification Process

In general, there were few criticisms about the certification process. There was general agreement that MDOT's certification process is rigorous; in fact, some female owners stated that they had been unable to qualify as MBEs because of their husband's involvement in the business. There was the common understanding that high standards and thorough investigations are necessary to ensure Program integrity. The frustration was usually with the length of time from application to certification.

> I thought the process went very smoothly. I didn't have a problem. I started the company myself. But, they do ask a lot of questions. But, the reason why is so that we don't have someone who had the business in someone else's name pass it to them. Because it is for us.
>
> When we went through the process for becoming MDOT certified, they were extremely helpful, they were very courteous, we filled out the paperwork, we were approved…. So, I would rate it very high. I thought they were first class.
>
> Under Governor O'Malley's administration, they now have a seminar every month within the first, usually within the first one week of the month and they have it on the website MD majority business dot com where they will have this seminar teaching you how to do the certification.

However, several minority- and majority-owned firms mentioned that they believed that many women-owned firms were "fronts."

> There are a lot of games that get played where I have seen the formation of MBE, they can be a thriving regular firm of 30 people but then somehow a women buys into it and gets 51% and all of a sudden they are an MBE and/or this could be a minority too, and unfortunately with any program like this I have seen it where a minority firm that has been very successful outgrows it but then all of a sudden a child of the owner of the minority firm surprisingly buys 51% of established 30 person firm and they become an MBE and so it does attract a little bit of people who are pushing the edge of integrity because it is a lucrative business.
>
> We have a lot of very wealthy husbands to the women that are poor.

4. MBE Contract Goal implementation

While Maryland law establishes an annual, overall goal for aggregated State procurements, the means to achieve those overall targets is by setting subcontracting goals on a contract by contract basis. MBE contract goals are set based upon the anticipated and usual scopes of subcontracting, and the availability of certified firms to perform those scopes. We sought feedback from MBEs and non-MBEs about the State's goal setting process, the first step in implementing the overall MBE policy.

Goal setting experiences varied from agency to agency, often tied to the industry of the project, *e.g.*, building construction; highway and bridge work; IT procurements; design services, etc. In many respects, construction is the industry in which subcontract goal setting has been most successful. This is because public contracting affirmative action programs are largely based upon the bidding and service delivery methods of construction contracts, where large general contractors hire subcontractors for various specialty trades.

Not surprisingly, MBEs and non-MBEs often had different perspectives.

a. Contract goal setting

Amongst non-MBE prime vendors, a major, overriding concern is the belief that the Program's goals were too high.

> The goals are currently too high; something in the 10-20 percent range would be more acceptable. These goals originally started years ago in the 8-15 percent range, but have grown to the 30-35% range for political reasons which is excessive when you consider how a firms project cost is broken down.

> The biggest problem that we have is that there are not enough quality firms that meet the percentages.

> If you really broke out of our contract what could be performed by a minority, it's not a large percentage when you take out our own work, if you actually took out the material. If you took out a lot of different things. It's not 35 percent. So, when it started in the state I think it was either 10 or 14 percent. Now that was a much more reasonable, practical, fair goal. But now they keep jacking it up and jacking it up because every governor wants to say, hey look, I'm helping the minority community because you guys are voting me in.

> I've had jobs with a 35 percent goal. On top of that 50 percent of the work we have to do with our [own forces]. So now, I'm at 85 percent. They've dictated them to me. I'd love to be 50 percent. But you've got 35 percent that has to go to a minority. And you're going to pave a major road and there's how many major asphalt firms in this area. So, you know, there's their niche. There's 35. There's no way I can meet the 35 and the 50.

There was widespread concern that many agencies outside of MDOT do not set goals based on the scope of the project but instead apply the State's overall goals or annual goals for federally-funded projects, regardless of the circumstances.

> Once in awhile, they'll know that this project [cannot sustain the annual goal], and they'll drop [the goal]. Typically, it's standard.

> [One agency] is doing the same thing [in placing the same goal on every contract].

> The agencies [should] just look at the work and come up with realistic goals.

> Apply a correct percentage to the contract you're putting out rather than just a blanket percentage on every single contract and assume that, that's there's 25 percent that could be reached on every single contract that you advertise.
>
> I think the frustration that we all have is that the, there are aggressive goals. I won't say they're too high because I don't know what too high really is, but they're aggressive goals. And they're not, they're applying those goals *carte blanche* across every single contract and they're not basically looking at it and saying, is there really an avenue in this particular service that we're advertising where this 25 percent goal makes sense.

Other participants had bid on contracts where there were no goals.

> We've had several contracts that [the MDOT] goal setting group [has] taken a look at and evaluated and they've determined that there wasn't any participation, you know, for the goal, the contract was too small and you know, there weren't enough companies certified to perform that work.

Prime firms on large construction projects found it easier to meet goals.

> We're very conscious and conscientious of [meeting DBE goals] on our project and, of course, we are trying to meet all of our goals and in any case, we can exceed them that is what we would like to do.… We haven't done any waivers yet. We've actually found other ways to make our goals as well.… We do notice the highway contract is very niche and is very specialized and there's only certain companies certified in the codes to perform our work. So, you know, sometimes you kind of have to kind of look. If we want to be successful, you know, you have to kind of look outside of the box and look at other ways that we can meet our participation.
>
> A large project with many disciplines is a lot easier to carve up to get that percentage because you can give a whole logical piece of work to an MBE or WBE or whatever to perform. These small contracts that we're talking about that still have that same percentage don't, you can't slice it up that way. What they should do is instead of trying to take 20 or 30 percent out of each one of those is give three to open and one to minority only bidders.… Do it as a set aside. The goal, the objective is the same but then you're not trying to carve 20 percent which is 10 percent overhead to manage out of a job and not get the, you know, not get the result..

Businesses in industries other than construction found it especially difficult to meet goals.

> One of our complaints or one of our biggest issues that we have is that it's hard to find MBEs that supply us. We're a school predominantly and we don't know where we get our supplies from. We use them mostly for maintenance but we want to know how else can we use MBEs for other than maintenance..… We have not not made the goal.
>
> There should be separate requirements for service industries and construction industries. It's very common in the construction industry to have subs. That's, you know, most of the general contractors have subs. For me I do everything in house. From drivers to

> maintenance to cleaning to dispatch. I mean that's what gives me the most competitive price. So, when now I have to go outside and contract out my cleaning, it has a significant cost to it. You know, it's probably 50 percent more than what I was spending. It's significant loss of control. Not only from a quality standpoint, I've had some service issues. But also from the standpoint that I've had some serious theft issues. Where I don't have the control over these employees.
>
> [MTA says] you got to make the requirement. There is no negotiations on it.… I think one of the solutions because I recognize that there's no going back. You know, we're always hearing you have to deal with this going forward is for service contracts, supplies shouldn't be limited to 60 percent of the requirement.
>
> One of the big problems is that, is that this is not clear to the state contract administrators as to how this works.… [The requirement is] 25 percent of total contract. Typically, 75 or 80 percent of our total contract is pass[ed] through [to other firms]. Which means that our obligation to an MBE sub or a group of MBE subs is greater than our operating money from the contract. So, if we take the contract we lost money, automatically.… And the result of that is that when we see an RFP coming through with that kind of requirement in there we just don't bid.… [This problem is] usually raised at pre bid conferences. And the response has always been this is the goal, it comes from the governor's office and we don't have anything to do with that.… we don't know that [there is a waiver] process.… [Other firms are meeting the goal by] hir[ing] a minority firm simply to pass money through with no other function. Or they just don't meet the goal and nobody says anything.

However, many owners, especially in the design field, were able to meet the goals.

> In our case, we meet every goal. We don't like how we have to meet them sometimes; however, because we are a player in the state of Maryland we meet those goals.

Firms outside the Baltimore area further disliked that urban MBEs were used in favor of local non-certified firms.

> What really upsets us is especially work where State dollars is coming into this area and we do not have the 30 percent minority participation or census, you know, we're forced to go and take contract money and hire consultants out of the urban area and, where we need the money up here and I have qualified consultants that I could utilize, I can't because I got to meet the goal. And so I end up sending the money right back down to the city where, we need it more than what they do right now.
>
> We are asked to leave our employees at home and in some cases it may even mean laying them off in an attempt to try to get companies up that don't want to work in [rural] County. And I don't blame them because there's a lot of the contractors are from the D.C. area maybe. I don't know, around here it doesn't sound like there's that many of them. I know the contractors that were low bid and they needed that work and it got taken away from them. And the minority contractors that we ended up using were from out of town, they weren't from the area, but we had chose knowing how the system worked.

> A lot of MBE firms will say they are available statewide, [but] they're not.

Setting unrealistic goals hurts MBEs, too.

> A national [supply] firm will come to [an MBE] and say, hey, look, we got a big GC out here, he really needs to use us, we've given him a good price, but we need minority participation. So, can you come in and do some of this work and you'll be above us and you can sub to us? So now they go, oh look, we've done this work. We've got a minority contractor here who's a sub. Now, let's say this contract is a million dollars. Okay? That's a big job for my guy. He can do it but it's a big job. He's going to sub it all to basically a competitor of his but who's bigger and now he's going to have a million dollar bond out there. Basically, he's doing a hundred thousand dollars pushing papers, paying for bond premium. Not keeping any of his guys busy. But his bond program is completely used up because he's got a million dollar bond out there. So another job comes around where he can do the work…[but he's] can't do that job…[because] he's tied up in paperwork.
>
> State agencies measure success by meeting numbers, meeting dollar and percentage goals. Artificially high goals encourage "fronts" which ultimately harms legitimate DBE's.
>
> A lot of it's [MBEs] just don't have the resources [so they fail on goals jobs].

Prime firms in all procurement areas were concerned that there are not enough qualified MBEs to fulfill the goals. They reported the quality of MBEs' work was often below that of nonminority male-owned firms.

> The quality of work our MBEs provide isn't the same level if you went up to other contractors.
>
> [When there are no goals, we do not use the MBEs we use on goals projects.] We use our very best consultants. First of all, in our field the work is very competitive. We compete against somewhere between 60 to 100 firms on every project and therefore you know the very best firms are getting selected and so we use our very best consultants that we work with over and over again when there are not specific requirements. And when there are specific requirements, we use our very best minority consultant that we can to fit that number.
>
> Certain MBE contractors…you have to handle them with kid gloves. You can't handle them like a normal subcontractor. For instance, we have one now that I've had issues where they've basically signed affidavits of payment to suppliers and didn't pay them. We've had issues of illegal aliens as employees, but yet when that issue is brought up with the state the response is, "Do what you can to keep them on the job." Where if it had been any other subcontractor I'd have tossed them.… one of the problems that we have with getting any information out of the state is that they will not give you a particular answer to any question. It is all generalization [like lawyers].… I understand where they are coming from. They are trying to avoid a precedent.… It just makes it that much more

> unclear and that much more reprehensible to those of us that have to deal with it, and I don't think they quite understand that aspect of it.
>
> There are abuses out there and I am not saying it is all of them. There are some great MBE firms, there are some that are in the right, you know doing what makes sense but there are also 10% or 5%, some number out there who are just gaming the system and it is an easy way to make money

Some cited problems with timely performance by MBEs, which they speculated might be caused by MBEs taking on more work than small firms could deliver.

> In good times, the minority firms are so busy that when you need them they don't have people available and they are in a squeeze so you end up getting sometimes poor performance because they are just too busy in great times.… We had real issues with being able to get enough really qualified minority people that could staff their projects and make the schedules and so on that we just became accustomed to supplementing them.

Some prime contractors had found MBEs unwilling to market their firms or provide quotes when requested. MBEs were seen as exempt from the usual market imperative to aggressively seek work.

> There is basically no requirement that an MBE actively look for projects and solicit work, they have to be solicited.… If I come to you and tell you I've got work for you to do it, and I'll pay you X amount of dollars to do it, you're gonna find a way to do it whether you can or you can't– if you've got to sub it out to somebody else or whatever– but if you know what your volume limits are and your monetary limits are and you see a project that's $3 million dollars and you can't do a project for $3 million dollars, you're not going to actively solicit that work.
>
> I guess one of my problems with the program is, it is a handout and it is often treated that way and firms don't necessarily try and become the best they can. They often just live off of the fact that people call them up and give them work and they do not have to even perform well and so that is my biggest hang up with the program is that some firms are there just because it is a convenient way to get easy work and unlike, I heard earlier in the conversation we win our next job even though it is through an RFP we win it by doing a great job on the previous one so the client wants us on future jobs. MBE's don't necessarily have to do that because, if they are mediocre that is better than the poor ones and many of them are mediocre.

Many non-MBEs believed that they should not have to subcontract work that they would prefer to perform in house. While numerous general contractors and professional services owners expressed this view, this was especially true of highway specialty trade contractors, who felt that goals should not be set for guardrails and landscaping scopes, which have few subcontracting opportunities and where there were many competitive MBEs.

> My company is big enough that we can do just about all components of the jobs we do so what we do is we try and find places to breakout for firms even though we can do it ourselves probably better we go and look for the best firms out there but we would not normally give it to them if we can do the services in house. The only ones that we would give out work, we don't do geo technical, exploration and drilling and there are firms that are pretty good out there and they happen to be MBE so they take care of killing two birds with one stone, surveys sometimes are very easy to breakout even though we have a survey department, we find that a convenient thing to break out for an MBE firm.

Non-MBE specialty trade contractors were adamant they are actively disadvantaged by the MBE and DBE Programs. They noted that on highway contracts, the prime contractor must self-perform at least 50 percent of the contract, and typically self-performs an even greater share. This leaves a relatively small percentage for meeting the MBE subcontracting goal. They urged the State to examine whether a subcontracting trade has an "overconcentration" of MBEs, which they defined as whether one or two MBEs have received the majority of the work of a specialty trade, to the exclusion of non-MBEs. Several stated that because there are many successful MBEs in their areas of work no subcontracting goals should be set. Some recounted having to subcontract to direct competitors, who had also bid against them as prime contractors on the same job.

> The non-minority specialty contractor, at least in the highway industry, have slowly been going out of business because they've been enforcing the program as a quota rather than a goal. And that fundamentally it's about the absence of good faith waivers being granted anymore.… The goal setting right away is sort of rigged against [nonminority male-owned specialty subcontractors].… [General contractors] want to move dirt, build bridges, etc. Specialty items are naturally where [MBEs] gravitate. So, that's sort of a sad story.

> We should address over-concentration of specialty trades.… The inequity of the burden falling on one specialty contracting item just doesn't seem what the intended consequence of the program was.… It is falling entirely on the subcontracting industry as a whole.… [The prime contractors are meeting the goals] by discriminating against [nonminority male-owned specialty subcontractors] and producing things like having your steel erector buy structural steel, which is not the industry way of doing it, but it is now just because it generates numbers. We're not generating businesses here in Maryland we are generating numbers.… [To address this, the State] can concentrate on things like training for the job. You know, like we talked about SCORE-type of program, where you hire executives to help find funding, bonding. And I know there are some programs out there for that, but none of the minorities seem to know it. You know, it is there but it is certainly not well used. Things like one stop shopping could help minorities. Every minority, every firm says, yeah that's a great idea. What number do you call if somebody requests it? The State doesn't have it. It's been brought up five years ago. They just don't implement things.… The consequence of good faith waivers being difficult to obtain is general contractors give up actively participating in the waiver process and learn to take the path of least resistance. They dismiss non-DBE specialty contractor quotes unless there is a significant disparity in price, causing disproportionate negative impact on non-DBE subcontractors.… State agencies have been known to encourage general contractors to

> "bid shop" non-DBE's quotations when goals are not met. Having the lowest price is not enough to win a bid; non-DBE specialty contractors must have an "extra-low" price to have a chance to win a bid. Specialty contracting is a low margin business and this bid shopping process harms both the DBE and non-DBE specialty contractor. There is no "bright line" to differentiate how much lower a non-DBE bid must be to be considered responsive – 3% low? – 5 percent low? – 10 percent low?
>
> What we're forced to do in [specialty] construction is I have to call up one of my competitors and say, how much of my work do you want to do? I give my work away to my competitor that does the exact kind of work I do, just to meet the goal. And then I pay more than I needed to pay for my material and I use a supplier for some things and I'm probably paying three to five percent more than I needed to pay for that material because I had to go and purchase it through someone just because they're an MBE.… We have three minority contractors in Maryland and we're, basically friendly competitors and I call and just say, I'm going to give you, I'm going to give you, you know, 25 percent of my work. They can just sit back and just take it.… No one [from the State] can come to these meetings and tell us how they decide to [set the goal].… Everything in our bid we would do ourselves. And it's not that, you know, we're trying to hog it up it's just that our kind of work is a lot of things. A little bit of a lot of things. We would never bring a sub in to do our work. But we're forced to give our work away.… We are almost becoming the minority because we have lost all these rights to these minority contractors.

Several prime contractors agreed. They expressed frustration that they cannot meet goals unless they only use MBEs in those scopes where there is good availability of certified firms, thereby shutting out non-MBEs.

> We never award to a non-minority electrical sub anymore. I mean it's maybe one out of thirty electrical subs can go to a non-minority. It's just an automatic. Same with guardrail. If there's guardrail on the job, if there's electrical on the job you have a shot at meeting the goal because there are enough minority firms in that.
>
> The goal itself has slowly been ratcheted up to the point now that the prime on the project has very little options as to where to divvy up the work [to the detriment of non-MBE subcontractors].

Design firms reported problems unique to professional services projects as compared to construction contracts.

> One area that we really have problems with is the women-owned percentages have been increasing pretty dramatically recently and that has become a real issue because in our field there are only two or three kinds of consultants that we are hiring in A&E, in the design of buildings and vertical buildings and there are very few engineers that are women owned. We know of a couple of civils that we use that are women-owned and like I said there is a couple of landscape architects, sometimes we can always get interior design out of, that is easy.… The engineering and architecture professions were primarily male professions until recently and that has really changed quite dramatically. I know in architectural school and I think even in engineering schools has been a great increase in

> the number of women. Architecture schools, more than half of the students are women and so the younger generation that is coming out there are more and more women in these professions but it still has not quite translated yet. I think we are one decade away from it.… It could be a greater challenge than a male starting their own company for obvious reasons that you know women have trying to balance their home and work life, it is much harder to start a business and also run a family. I suspect that, from what I have seen there are some women who tend to jump into it when they are 45 and start their own firm at that time.… We have more than 50% of our professional staff are women in our office. We are a little unique I think in our profession but, and one of my three partners is a woman but she never wants to break off, she is part of this company. She has, and we try to give her no incentive whatsoever.

One design firm owner had been penalized for meeting the goal through smaller MBEs.

> [One agency] was taking points away for [our] meeting the [MBE] goal because the firms that [we] used to meet the goal were small!… If you look at who were the winning firms, well they simply perpetuated the system of the good ole boys they have always had.

Design firms were particularly concerned about the added costs of managing MBEs subconsultants, as well as the possibility of developing future competitors.

> You have, you'd have to work with [another engineering] firm for many, many, many years in order to get their processes and so forth the same as yours. Not to say that they're not as good but they're just different. And so, you have to manage and train. And all that overhead each time if you, if you find someone you can work with.… We're developing [long term relationships with MBEs] but there's been a, you know, it's cost, there's been costs all along. You know, it's less now as we do more and more projects they become, you know, we get to know each other better and that works.

> In our environment, there is a knowledge about systems technology that is part of our investment. So, when we work with some of our subs at some point we're developing a future competitor.

> We have a 25 percent goal on every A[rchitecture] and E[ngineering] contract.…We're on such a specialized contract that I don't have any place in that 25 percent to really, to apply, I mean my only real resolution would be to actually find somebody, teach them my business which is never going to be something I'm going to be willing to do, and then give them that 25 percent.….. Now, you know, there are avenues that I can bring, that I can bring in MBE participation without any problem at all, but there's no way that that arbitrary 25 percent goal is ever going to be met. I mean, we have the same type of contracts nationwide and you know, I can tell you, VDOT's goals are 12 percent, DELDOT's goals are 10 percent. You know, they're much more in line with what, with what you can actually subcontract in our specific discipline.… From our experience, you know, whatever, whatever the state DOT, we're mainly a DOT contractor, whatever that state decides their goal is, I personally see very little movement in that goal up or down. It's set, it's set in stone. They've got a 12 percent goal on every contract [or] they've got a ten percent goal on every contract.

Many non-MBEs argue that the Program should be eliminated in its current form and scope.

> It's a failed program. They should completely eliminate it and start over.

> It's time to start phasing out all of this MBE stuff. I think that it's absolutely ridiculous. I think that competition will take care of itself and just as all of us who are the prime contractors have to be the lowest price, the most responsive, we have to jump through every single hoop, we have to fill out all the paperwork. That's not the same case when you're forcing people to just use one group of subcontractors. And I don't subcontract anything. My company's a very specialized company. We don't subcontract anything. It's all handled in-house. That's why our customers want to use us because everything's handled turnkey.… like he said, [the goal is] mandatory. If I was going to get the contract, I had to take that portion and give it away. And all that did was take work away from my guys who I, you know, I know their families, they pay their mortgage, you know. That job is very important to them. It took that work right away from them.

> The whole MBE program has distorted the capitalist marketplace.… Whereas if this program had never been in place I think you'd see much different results right now.

> I think [the existence of a good old boys network is] total hogwash. I think that frankly, there is a lot more integration within the industry than anyone will ever admit. I don't think there is the prejudice of the level that's being discussed by certain people in the state, certain political agencies, certain political sides. I don't believe it.… The issue of good old boy network is, frankly has to do with making sure that we have companies that can actually do the work.… I don't think [the construction industry is] as prejudiced as you think.… I'm tired of hearing it.… [MBEs do not get private sector or non-goals work because t]hey don't need it.… [MBEs] never were forced to create an efficient company. They were never forced to hire the right people. They were never forced to have a payroll that they had to meet every week on their own without being stymied.

> I personally think that the [MBE program] system needs to be totally broken down and redone. I'm not sure what that would look like. But at this particular, you know, to me the best thing at this particular point would be just to not have a system.… It's something that you can't manage by trying to create a system artificially. You just have to let everything run its course in my opinion.

> [Rather than implementing contract goals, the State] could help [MBEs] out with business in different avenues. Maybe with you know, helping out on the SBA loan side. This guy wants to compete, give him a loan to get a better tractor. Give him a loan to get a better leaf blower so that he can bid. But why shouldn't he have to bid like everybody else does?… That should be where the focus is, not on the contracting, making people go to a certain group of people to contract. I mean the people who are paying, you know, you say taxpayers and I don't see color or anything like that. Competition is what depends on the job. I mean competition breeds itself. If you want to help them out, help them compete. Don't force somebody to use them. You're not helping them compete. You're not helping anybody compete. I mean, if you go to me and go, I'm going to give you this job but you're going to use her company, she can charge me whatever she wants,

> she can show up whenever she wants, she can do whatever she wants, and I'm going to be forced to do it and you're going to hold me responsible. But you told me I have to use her company.
>
> Where the State needs to get involved in assisting these MBE and WBE firms to come to the arena.

5. Bid Evaluation and Good Faith Efforts to Meet Goals

As with goal setting, the views of non-MBEs and MBEs were often radically different about how goals are applied.

Numerous non-MBE prime firm owners complained about the lack of quality and capacity of MBEs.

> I've had bad experiences with DBEs that we haven't used before. I actually just went through a nightmare with one.… We had a guy for asphalt we'd never used before. You cannot be on an emergency job and shut down at night and going through and having somebody that falls off. I mean we had to re mill and redo and had to have him off the job. And getting somebody off the job is a nightmare. I mean that takes an act of God.
>
> [MBEs often] don't have the staff. And they have gone as far as asking some subs to put in writing that we will meet the needs at the time that they're presented to us.
>
> To my understanding, when this program took off what we were trying to do is get the MBEs and WBEs to come into the workplace and to be a competitive facet of our economy, in my world, in the design world. It's not happening. I don't see it.… The supply is not there.

Many non-MBE general contractors felt that waivers are actively discouraged at many agencies. Few were willing to take the chance that the waiver request would be denied. A few firms had successfully obtained waivers but felt that the process was too slow, burdensome and arbitrary.

> On the consulting side, I will tell you that they label them as goals but they aren't goals. They're mandatory. If you don't make the 30 percent on a, with the consultants on my side, you don't even get short listed for the project.
>
> We've done jobs down in southern Maryland; we can't even find an MBE. We called [the State]. They will not give waivers anymore. Three years ago, we could get a waiver. I can't get a waiver anymore.… We had to keep going back to the state, to the government agency and going we need more time, we need more time. We can't find anybody. We ended up finding a guy who doesn't even do the work that we needed done but he is registered with MDOT as an MBE to take a portion of our contract. And then all that does is raise the cost. It puts unqualified people on the job. I mean he's talking about jobs that, you know, the guy doesn't have all the equipment. What's the guy doing the job for? I mean we should be getting the very best work with our taxpayers' dollars.

I called every name straight down the list. Either they would not return my phone calls for one. I even had one, the president of the company, tell me when I finally did get in touch with him, I get your kind of calls every single day. I do not wish to give you any numbers.… They don't give waivers.… if they're listed as an MBE with their contact information through MDOT and I call them and they tell me that they get those kind of calls every day, they're not wishing to give us any numbers. What do you do then? Why are they allowed to be listed as an MBE?

We asked for a waiver and the response we got is that we did not call enough of the NAICS codes, we didn't find enough on the search engine, we didn't contact enough, we didn't put newspaper ads out, we didn't put anything on the web. We did not do enough to attract MBEs.

Good faith waivers, or the good faith process needs to be flexible.

Our company went through a waiver four years ago for a job out at the prison. We bid that job three times until somebody met the goal. We met the goal because it was a big job, we wanted the job.… It's a huge, huge cost. And we ended up, the reason we had to get a waiver is because we missed the goal on the third time around by a fraction of a percent. And it was so close and then we were able to, I think we negotiated with the state a little bit to get where we needed to be. Because the other thing for them, they got their job delayed by, oh, probably six months by the time the third bid was done.… The State's wasting its resources every time it has to go and put the same contract out to bid over and over and over again [although the bids are lower each time the contract is rebid].

We've had…pre-bid meeting[s] where…the person running the meeting has started the meeting with, "If you cannot meet the goal, do not bid this project." Now, you won't get anybody to put that in writing, but they say it.… In practice, they're treating it as a quota.

We've had several jobs that are, that have been rejected, our bids have been rejected…because of the inflexibility of the waiver process.

Very similar experience. We're in an industry that's highly specialized, highly technical. Not a lot of people do it. Kind of a niche market. We're told the same thing at pre-bids. If you're not going to meet the minority goal, don't bid. No waivers, never been able to get a waiver.**…** [Our waiver requests were] denied. And a lot of our, some of our contracts are all equipment. From companies like Motorola who obviously not an MBE. So, how do you get the 25 percent participation there?

There's a job you all bid last week that the low bidder, he's going to submit $150,000 in trucking. There isn't that much trucking on the job. There is no way he's going to meet that. But it gets awarded that way.… And you got to dance the dance and you know, hope to heck.… Theoretically, they will hold you to it but at the same time, there's a lot of extenuating circumstances. Sometimes, I just get non-performed and then you know, you should be allowed out of it but sometimes you have to pay them to get out of it.… I'll be real curious to see the end of the job, how they met the goal.

> We call, we fax, we e-mail, we advertise. We do everything short of going to their office and begging them to even give us a number. Well, we have been able to get waivers. We've been in situations where you would have to go to the fifth bidder on the list to find anyone that even came close to meeting the goal. We've been in situations where, you know, we were second or third bid and we had more participation than the people in front of us and we ended up with the work. And was I happy to have the work? Yes, but not for that reason. We had chose to put the higher price in to have them do the work instead of us. And it gets back to what this gentleman was talking about with the reasonable cost. I had called the state office and asked some questions about, what is reasonable? And he said, well, it all depends. And as a contractor that is bidding the work and dealing with minority and no-minority subs it's a very awkward situation to find yourself in where, do we pay ten percent more for someone and risk losing the whole job, or do we take a lower number and try and take a gamble and fight it? … We beat our heads off the wall trying to get responses and we've never lost a job because of, because we haven't tried hard enough. But we invest a lot of money into it and on every job we take that chance of, of, I mean very rarely are we able to meet the goal. But, but we always have some.

Waivers of all or portions of a subgoal for African American MBEs or WBEs had been obtained when the contractor had met the overall contract goal.

> You've got an overall goal and then sub goals. And I can, sometimes I can meet the overall goal but I can't meet the sub goals. I have gotten waivers on that.… the only waiver I've seen in the last four years is on the sub goals. There's a lot of work to get it but we can get it.

> Sometimes I can overachieve on the WBE and not on the African-American and then, if there's a lot of structural steel and if there's an African-American steel erector that you can meet the goal that way. So, it just depends on the kind of work.

Using MBEs was seen as increasing project costs and therefore the prime contractors' bid prices.

> If you're looking at a six million dollar project you're talking about anywhere from a million and a half to two million dollars of MBE participation. The requirement to hit that, why the waivers become important and why you see a lot of washing of a contract where you just pay money to have somebody run some paper through an MBE, is because achieving 30 percent, achieving a two million dollar goal on a six million dollar project is, unless you take, unless you pick a electrical and mechanical contractor, that's a third of the project right there. So, if you don't use one of those guys as an MBE you have a hard time meeting the goal.

> If you really achieve the goal, you are generally spending more money than those people who go for waivers because MBEs are at a premium. The good ones cost more.… if [MBE's] higher in cost somehow or another you need to fix them into the bidding and get your bid higher just to meet this percentage. Or you go for the waiver.

> We have a small guy that we're working with and that we've helped out and he passed, basically he gives me an invoice for his guys' time and he invoices me for all his

materials. And you can see, yes, he does pay more for the materials that we're paying. And we end up calling and saying, here, you're going to charge him this and then they charge him finance charges and then we got to call [to get the prices in line].

If somebody else can provide minority [participation] they say he didn't provide a good faith effort even though he's a million dollars low.… It could be the last guy on the list and they're like, well you didn't provide a good faith effort because somebody was able to provide [participation].

The bid forms should include pricing for [the] base [bid] with MBE participation and without participation if you want to figure out the cost of MBE. Often times, projects are priced scale and non-scale in various municipalities currently.

[An MBE] never get[s] used unless we're bidding a job that's for [an agency] where we know we're not going to get a waiver, then we'll fit them in there if they're going to help us meet that goal. That's the only time because I mean we're talking 25, 30 percent higher than two or three other companies.

There were two projects that were similar and one had a minority percentage and one did not – and the minority firm that bid, the one that had the minority percentage on it was extremely high, but was taken anyway to meet the goal.

We can do most of the jobs in house. All the different aspects of it, the integration, insulation, repair. And we're forced a lot of times to go out and find an MBE who isn't as qualified who ends up costing more money to do the job, to bid it. And a lot of times we have to pay them a lot more than what we should just to meet the 25 percent set aside. So, it costs us money and certainly it costs the state a lot more money because of how that program, you know, works in our instance.… We end up having to supply additional technical support than what we would otherwise have to do.

They think, I'm an MBE. You have to take my price. You don't like my price, you're going to have to use me at some point. They don't care whether they're priced competitively.

Like most contractors in this state are nonunion and a lot of times they'll have a prevailing wage contract and the municipalities decide how much state money do I want to use. And they will ask, give me a prevailing wage price and give me a non-prevailing wage price. The state could do exactly what he said and they could set tiers of, they could set different tiers of MBE like give me five, give me ten, give me twenty and get different prices. The problem becomes is you have to name everybody that day, how does it work?

There was support for requiring prime contractors to submit all the quotes they receive, from MBEs and non-MBEs, to evaluate the issue of the impact of the goals on price.

Well, it is something clearly they should try. We try through the agencies, private contractors, to get them to look at really what's going on.

> I don't think you're asking anybody to do anything extra if you're [requiring bidders to provide all the quotes they received from subcontractors to determine whether the MBEs' bids were competitive].

Prime firm participants objected strongly to the current requirement that MBE compliance documents be submitted with the bid. They reported close to chaos on bid day.

> [If the State would permit us to] turn it in the next day at the same time, you would get more subs at more different dollar percentages. Because you don't start getting prices until like maybe an hour or 45 minutes before a bid. Because nobody wants to give up their price first. If I'm bidding to him as a mechanical, I typically want to be, not the last price he gets, but I don't necessarily want to be the first price he gets. Because when the next guy comes he can say, well you're high or well you're low.

> Practically speaking, to name MBE's at time of bid with the forms is too difficult. If these forms could be turned in two to four hours after the price bid, it would be better for all and would probably lead to lower project costs as often times price cuts come in just prior to the bid yet are not deducted from the price as it would be too time consuming/risky to modify all the MBE related paperwork for a price change.

> We're more than happy to try to use minority- and women-owned subs, but if there's another manner we could do it other than naming them on bid day. Because it forces us to make a lot of very quick decisions you know, if we're not low then it's all a pointless endeavor anyways and we're forced to really, you know, use people that we may not be sure if their scope's complete. If somebody gives us a quote an hour in or an hour to go and we can't get them on the phone now we've got a question mark there that we can't get resolved.

> In the 21st century, we're sitting in our cars with these pads in our lap writing this down.

> If you write down the name of a precertified MDOT company somebody ought to be able to look it up see what their address and their phone number and their fax number.

> You miss one little spot and your bid's thrown out.

> One of my complaints to the state is many years ago, or not, or recently, the past couple years, they've really made a move to try to have all the documentation at bid day. And that has been, that has caused so many protests and so many issues within the industry that it's just unbelievable. It's costing the taxpayers of the state millions and millions of dollars because of protested bids because people have clerical errors on their minority reports. It has nothing to do with the fact that the companies want to be, agree with the program to try to help minorities. It has nothing to do with it. It has to do with clerical errors which end up costing the state millions [by going to the next lowest bidder].… your forms are either perfect or you're out.

On the other side, MBEs in construction doubted that there was ever a lack of qualified firms to meet the goals.

> [Local prime contractors have] done State work but up until the recent time they could, they could get a variance or a waiver.… And that's what they used. That was regular business. They would go in, win the contract, do a due diligence according to their paperwork saying that we tried to get you know, some MBEs and minority participation but couldn't and they'd document it and whatever and they would be given a waiver. With the current political atmosphere waivers, have been told that waivers will not work anymore. You've going to have to get it done or else you don't get the job. And because of that hard stance some people who have basically been in the waiver business all these years, as you talked about, and a lot of big companies or small companies around here do state work. But waivers is how they've been getting around it. And now they can't and now they're having to deal with it. And now they're having to participate and now they're having to go out and talk to a minority business.… We'll have contractors come from as far away from as New York, down to Virginia, Pennsylvania, several states over. And when they come in, they'll come in and they'll find the minority participation. Either they bring it with them or they'll do it some kind of way and they'll get the jobs. And our hardheaded local people, and they're not coming around, will say, well you know, we can't get them or whatever. Well they don't get the job. Somebody else gets the job. But what they've been doing is been holding to it. To, and I think that's a good thing because it really makes everybody accountable to using the program. Because, yea, we have a great program and, yes, it's been there a long time. But because of waivers, there's been a way around it.… Especially if you have somebody who is able to come up with the participation [the State is not granting waivers]. They may not be lowest bid, but they can come up with the participation and that's who's getting the jobs in a majority of the situations.

Many participants, both M/WBEs and non-M/WBEs, mentioned the use of "front" firms or "pass throughs" that perform no commercially useful function, in creating the appearance of meeting goals without the actual substance.

> So, how does a mechanical make 35 percent? As part of our work, we typically buy the air conditioning units ourself. So we have, we can buy a big piece of equipment. We find a minority supplier to run it through or we find a minority sub that we're already working with.

> I've seen magnetic stickers be put on trucks listing another company's name and just people changed on the payrolls to make it work.

> [Two subcontractor bids] looked exactly the same. They were the numbers where, the end result was different but we looked at the one from one guy and it was somebody I knew. And I looked at the other one from the MBE and it was the same thing. He changed the letterhead and when you calculated it out, he added five percent. He washed it through. And we see, that's an extreme example. Normally I have to look a little bit to find the wash.… He washes paper. And we can buy that. I can go on any project I want I can go and buy that if I want. We don't do it because it pisses, personally, it pisses me off.… I would love you to kill the paper washing.… They're the ones that are making up probably 80 percent of the program.… And the state's not going to do that because all they want to do is tell everybody that they got this program covered.

> I can take a percentage of my contract and I can give it to somebody for five percent and I can meet my goal. Every time.
>
> The other thing with brokers. We have you know, companies that come in and say, we'll run anything through us. Which from my point of view, if you come to me and say, I'll run anything you want through for five percent or three percent or four percent, that's yippee for me. Because I can take the low bids everywhere else, I don't have to worry about shuffling a higher bid in, I can get my percentage and get all my papers filled out and get my bid in on time. And, you know, I don't have any feelings either way on those companies. It does seem a little, a little unfair that some of them have been set up in the past four or five years and now all of a sudden the state is cracking down with a hammer saying no brokers.
>
> There's a few people we've turned away from in the last few years because we know they were really just brokers. And that has limited in our line of work what we can, what we can use.
>
> We use a flow through.… [The non-MBE supplier] invoices the MBE or WBE. The MBE or WBE then invoices me with the 3 point or 5 point markup. I pay them, they pay him. So, it's just a flow through.
>
> There's a tremendous amount of pass throughs.… [Pass through companies are] getting six [percent] here in Maryland [for allowing their names to be listed].
>
> Our competitors basically will use a pass through company, even though they're getting stricter with MDOT.… I do think [the MBE Program] has a lot of merit. I just think that people find ways as I said to use the letter of it but not the spirit of it.

Meeting goals on task order contracts or indefinite delivery/indefinite quantity (ID/IQ) and on-call contracts is particularly problematic for both prime contractors and subcontractors. Because there are no concrete specifications in place at bid time, the prime bidder cannot fully and accurately develop its MBE utilization plan. Moreover, the MBEs listed have no guarantee of any amount of work and so cannot plan their own schedules. Many reported that they received little or no work on these contracts. Further, prime contractors often had no significant subcontracting opportunities on a particular task, making it very difficult to meet overall contract goals. The very large State-wide Technical Services Procurement and Consulting Services Procurement contracts were notably frustrating for MBEs, who must market to all of the primes with no guarantees that they will ever receive work, even if they are successful in being added to those primes' subcontractor rosters.

> For SHA (and other MDOT modes), they typically advertise on-call contracts for a multi-year period. Each one has an MBE/DBE goal associated with it. Each prime consultant will pull together a team to submit a proposal for the contract, showing percentage allocations to the MBEs/DBEs to achieve the goal. If they win the contract, they will get task order assignments through its life and should be using MBEs/DBEs along the way. The question is whether they actually meet the overall contract goal by the end of the contract. There appears to be no penalties for not actually achieving the goal by the end

> of the contract. What the state agency needs to do is add a selection criterion on contracts for "MBE/DBE Compliance". The prime should get points (or not) on their history of successfully using MBEs/DBEs on past contracts. Basically, primes should be negatively impacted in their ability to win new contracts if they don't properly use MBEs/DBEs on old contracts.

Several prime firms want to be awarded goal credit for using second tier MBE subcontractors.

> If you actually have a legitimate MBE contractor but for some reason you're one tier above where that's allowed [it's not counted].… [If] I can substantiate ten percent of my bid amount as MBE, legitimate MBE contractors, we should be able to utilize that.

> MBE participation at any level should be counted; sometimes only first or second tier subs are counted.

Some participants reported that the recipients of state funds do not apply the program consistently.

> There's inconsistency between and across all the various agencies.

> [You] go to a pre bid meeting for a project and someone has a question about the minority goals, they'll say, well do the best you can and they go on and have a conversation about the next topic. If we go twenty miles down the road to another county, they'll spend an hour discussing that problem. It's very important, it's mandated, it has to be done. But it's very inconsistent with the different county agencies.… A steel contractor might have a ten percent minority requirement in Anne Arundel County and a concrete contractor might have a 20 percent and the carpentry contractor might have 25 percent. It's not consistent.… How do different counties exempt themselves from this so called state regulation?

> A lot of places don't have any ramifications.… You can kind of like, you know, on the front end kind of put down what you want. You know and what they want to hear. On the back end, not meet the goals and what's really going to happen to the contractor? So historically Maryland really hasn't you know, really enforced or had any financial penalties for not meeting goals. We've had some sanctions, you know, slight sanctions on our project, you know, because we, you know, had to, you know, do that in some instances. But you know, historically that has not been the case.

Some prime firms reported that they use qualified MBEs regardless of affirmative action goals.

> We use minority businesses on jobs where we don't have to if there's a low bid. It doesn't matter to us.

> We know which MBE subs are good at what they do. They're the people that we use all the time regardless.

One large prime contractor offered this assessment of the Program

> In my opinion, the question really needs to be asked: what is [the] purpose or goals this Program is trying to achieve and is it a cost effective method of doing so and if not- why? This program has been in existence long enough to evaluate that. If the goal is to promote the birth and growth of minority firms, from my perspective, it doesn't seem to me that the state is getting it's bang for the buck, although I would concede that if it shut down the program altogether it could potentially stymie what birth/growth minority firms have had. Minority business growth is a multifaceted issue that goes beyond government-sponsored programs. For instance, I believe it takes a special type of personality to start a business: positive, energetic, knowledgeable risk taker (one that understands the risk reward relationship), etc. I don't see these attributes being explained or taught in schools at even the most basic level. Most elementary/middle school aged kids don't know why they are in school or understand the relationship between greater education generally equates to greater earning potential. I also believe, example (primarily parental/family), makes a world of difference; in general example trumps education. By that, I mean I grew up and I watched my old man go to work every day, consequently I am doing the same.… That is a generational process/mindframe of personal sacrifice for the good of future generations that was more commonplace years ago that appears to have died out. That said, I am of the belief that businesses in general (minority or non) are much harder to start and grow than they were 20 years ago due to constantly increasing/changing government regulation/proposed taxation, which increases the administrative expertise needed to run a business of any size which translates into cost, which is a barrier to entry. As a contractor, I have seen many MBE firms start and few survive- the reason being in my opinion is that most that start a contracting business come from the field and understand the field work aspect, but do not understand the bidding, project management, legal, accounting, cash flow, financing, overhead, insurance, bonding, requisition cycle, payroll or anything non-building related type issues. Those that succeed generally had the opportunity to work in the office in some capacity such as a project manager and have had some exposure to these issues. Candidly, there is a lot to know to run a successful business and while education may help, nothing beats real life practical experience in a well run organization to understand how to start and grow one, an apprenticeship if you will at a managerial level. Unfortunately, I don't think that is something that can be legislated.

6. Contract Performance and MBE Program Enforcement

Dozens of MBEs stated that more monitoring during contract performance and effective sanctions for non-compliance with MBE contractual commitments were needed.

> The State need[s] more rigorous monitoring of whether these prime contractors are actually meeting the requirement.… They keep cutting our hours.… And although I file a report, I don’t know whether the states actually look at the report. Because if they look at the report it’s obvious that the goals are not met.

> I have also had the experience where I was a sub and halfway into the first year we didn’t get any more work orders, they quit taking our phone calls, you know, don’t respond. Don’t know what’s happening. And then even worse is every month I have to turn in my

report to the customer saying, I'm getting zero work and they owe me zero money. So, the state customer has the information directly from me that they're not meeting their requirement

The monitoring thing is key for the MBE program. Monitoring. Documentation to show that we are being paid. Enforcement. And some kind of penalty if they don't, you know, come through on, you know, hire the percentage of minorities on their contracts. And I can't tell you how many times I get calls last minute from primes. I need your information. We got a contract to bid on. Can you send me all your MBE information? I sent it to them. They win it and you never hear from them again. I stopped sending that information. When I get a call like that, I say, I'm not interested. If you're not going to fully disclose everything to me, I can't work with you like that.… They're going to find some MBE who just wants a couple bucks, you know, and they will just throw him a bone and rather than paying the fair price that I'm offering they're going to find somebody cheaper just to make more money and not use an MBE because nobody's monitoring. Nobody's checking.

There is tremendous amount of training needs from the state perspective to track and monitor the MBE program. The state staff for the most part are not fully equipped.

[The prime firms say] don't go around me, don't call the governor's office but you don't have access to the contracting authorities. They need to hear from us directly. This is my participation in this project over this period of time.

In some cases, you have no idea what other subcontractors are on the team so you couldn't know whether or not somebody else on the team who is also MBE certified is getting the work and then you would feel at least better that the work is getting distributed.… In some cases, you cannot find out. I tried to find out who was on a contract I won and I was told it would be a Freedom of Information Act request. I mean, that's a lot of effort to go through.… I've had copies of contracts provided to me [by the prime firm] where all that is covered up and whited out. They purposely won't tell you.

What is the problem with when they e-mail out to the prime, this is the task order that's coming down because I know they did it in the form of e-mail. Okay, that everybody has a copy down the road. What does that take? That they should have a group, a group list for every contract that has all the subs' e-mails on it. You know, just like they would for any other internal team

Most of the project managers and modes don't see it as their responsibility to find out how the prime consultant is managing the subconsultants.… Management of the subconsultants is not [part of the engineering firms' rating by the State].

When I call and try to get in touch with these people [from the University system], they put me off, put me off, put me off.

Some MBEs complained that there is little follow up by the State about whether the MBE listed as the subcontractor in fact is used on the project. Listed firms were often substituted, at the best, by other MBEs, and at the worse, by non-MBEs or by the contractor's own forces.

> I routinely am bid shopped and my name is put down on bid day… but we are constantly replaced. And I've complained about this to the Governor's Office of Minority Affairs.… I will set aside a couple million dollars to do a project and then I will find out after we've been awarded that they've switched me with somebody else and there's no, basically any penalty to replacing me with another MBE subcontractor.… A couple times, it's really almost put me out of business so it's really, I think it's very unethical. Maybe it might be legal but it's extremely unethical.
>
> They should, you know, have some consequences to this rather than just having it as an open issue that, you know, you're not supposed to do this and we'll slap your hand. But that's really to me not a deterrent for a G[eneral] C[ontractor], especially on a large project to change their MBE subs.
>
> I remember, you know, being at the presentation with the CEO colleague who I've known for fifteen years…. And I remember him pitching, we're partners, you know, we're partners. And then when the contract was awarded, the project manager in particular tried to, how can I put it, tried to diminish our contribution on the project. So, as far as I'm concerned I don't need to be at the top at all. I'm willing to support the team but, you know, as far as I'm concerned don't give me, you know, it's not about widgets it's really about, this is a significant contract for a significant client and we are part of your team. And so we worked with the contract but the challenge during the, you know, it was a very painful contract to some extent because of the project manager.… It was just we're big, you're small and tried to, you know, kind of strong arm me to say that…if you don't want to go it our way without any negotiation then we'll go find someone else. Well he knew that wasn't an option because I knew the CEO so that's the, you know, but I didn't go run to him and say oh dad, you know, a bully pushing me around. I had to deal with that.
>
> I was on a contract, did the work. I had an issue with the general contractor that I said, you know, I'd like this resolved before we proceed with work and I documented this all. And what the contractor did instead of trying to resolve the issue with me and with the state, they just replaced me with somebody else. And I wasn't told. And on top of that, the state wasn't, didn't really care.
>
> The University of Maryland said once they legally put the contract in the hand of that electrical contractor, they could not intervene.

Others had good experiences with the State's monitoring of prime firms' contract commitments to use MBEs.

> Everybody on that team has to come in and report to the contracting officer, this is what I've done on the contract.

> [In contrast to some other Maryland agencies] there's a unit at MDOT that does that because I've participated in that and it's exactly what you're saying. The prime is confronted with the statistics of, here's your level of participation.
>
> We've had a situation where we were used [to meet a goal at bid time] without being informed.… They were former customers of ours. But we were no longer working for them. And I found out by accident… [We told the prime firm] why don't you sit down with us and let's talk about it?… This particular government department they have maybe been a little bit slow in letting the winners of the contract know that they needed to, they need to come to the table with the paperwork for your minority businesses.… Maybe [the prime firm was] hoping that it would be overlooked. But the state also has a situation where we are supposed to report on payments being received.… The State knows that MBEs are not strong enough to carry receivables for a long time. They want you to get paid fairly quickly. Fairly quickly. So, they send us paperwork. So I think it would have been found out.… The relationship is great right now. I think they are, have been surprised with our performance. They're happy.
>
> When I worked on the National Harbor project, they actually had an MBE monitoring program which wasn't perfect but it was pretty good. I mean they have documentation from us. Paperwork. How much money we were getting paid. I mean, it wasn't perfect but it was one of the better ones I've seen. They need to do that statewide.

In contrast to the experiences of MBEs, several prime vendors had found it very difficult to substitute a non-performing MBE.

> "Do another good faith effort and try to get another minority sub when you are 80% into the project." … Well, we did what we could, I mean, but the work was normal work that we would self-perform as well. Rather than delay the project any more, they allowed us to go ahead and do some of the work while we did the solicitation, which was kind of counter-productive and useless anyway, because we're 80% done and they are letting you continue to do the work.
>
> You're going to find another one within the budget and he is available to just step right in? That just doesn't happen. I mean, when I'm faced it I like to go to battle with them. I can't find anybody. End of story. I defy them to do something bad to me because I tell them I'll sue them, and I will.… I'll make an effort. You know, I'll contact whatever firms I might be able to contact, whether minority or non-minority, and see what kind of response I get. If it is going to cost me more money, and you know, I offer the state to pay for more money, well no, it's your problem. I say, no. I'm not paying more money. And by that time, I'm already booked and locked in and they usually cave. But I shouldn't have to do that.
>
> We've gone in and we've said, you know, there's no way we can reach this goal. I mean I've had underperforming subs that I've had to then, you know, bring them back in and get them to do more work and I go back to the state and I say, this is a problem. And the state has basically come to me and said, yea, you know, what we hear from some people is that you know, sometimes you just have to write them that check and then do the work

on your own.… That's not going to happen. I'm never going to pay somebody for not, for not doing work. I'm not going to pay somebody for doing substandard work either. But that's the solution that I'm getting back from the State…. [But] that's not how I've been dealing with it. I mean I just basically, I underperform on my goal, that's the only way. We do the best we can and we're still coming up, you know, between five and ten percent short.… So far there hasn't been any retribution back because I can come in and I can say look, you know, we projected [we would meet the goal but]…because our service is so specialized…if we have a job where we've got work out on the Beltway, then I'm going to bring in this MBE subcontractor and they're going to supply me all of my maintenance and traffic on the Beltway. Well I've had contracts since 1999, I've never done a project on the Beltway.… That's the types of things that we're all having to do because I have to at least on paper show how that 25 percent is feasible…. That's the unfortunate part about it. Because I think the, you know, the program works.

I got a job for six months I'm trying to close out because of two minority subs. [The State] see[s] the letters.… They know what's going on. They're not going to want to go to these setasides because then they're the ones that are going to have to babysit. Not all. I've got plenty of minority subs that are good.… Maybe they got the job because they're minority but once they got the job they go with it. There's plenty [than can perform]. But there is definitely because of a, such a high goal, that there are so many that I have to handhold and do everything. And they cost me. It's ultimately our reputation on the line. There's not a thing [the State] can do about it from my perspective and their viewpoint, you know. It's a minority goal; you got to meet it. You just got to.

I've never, you know, heard anyone say to us, you need you have to keep an underperforming MBE or DBE on the job. You know, the issue is, if it puts you in a bind or meeting your schedule, your timeline than trying to go through all the process of replacing them. Then the cost goes up.

The challenge that contractors face out here is if you do have someone who isn't performing, you know, going through the necessary steps to remove them is costing too much time and money and effort. It's easier to help them.

We had an MBE company, frankly, that sold its business. We were in the middle of the project. And, you know, the state came back and said we had to replace with an MBE firm but we couldn't because of the particular situation of where we were, etc., etc. They made us go through an incredible process to try to find people to fit within the budget. And it finally had to go all the way up the ladder to get an approval for a waiver which was very frustrating.…Twenty-five percent, I would tell you straightforward it is not a goal. It is a quota and I don't care what anybody wants to say about it. If you don't have 25 percent right now there are very few waivers being issued.… If you don't have 25 percent on bid day, you're out.… The process says that you can have all your information on bid day as far as a waiver is concerned. But I must tell you that the logistics of doing that is near impossible.

The way the program works from MDOT's perspective is if the firm is really doing a poor job and the agency recognizes it, the agency will be okay with us transferring money

from one MBE to another but what we normally need to do just for paperwork sake is get the MBE we are taking money away from to approve on the bottom line, we get them to countersign that they are willing to transfer the money to another MBE which can ruffle feathers and, especially if we are saying that it is because they are doing a lousy job. Sometimes we transfer money from one MBE because we had 400,000 on a landscape architect and there is no landscape architecture on this job, we do a lot of open end work and if the open end contract never gave us a task that has landscape architecture and we are near the end of the contract but we have work that another MBE could be doing that is a little bit easier to get one MBE to sign over to another if we have a good relationship with the MBE.

We have [been able to substitute a non-performing MBE, but], it is not easy and remember that we said that we get our work through doing good deeds, we are judged as a team but in the end the leader of the team is [firm name]. We are responsible for every one of our consultants so we will not let a minority consultant fail. We will supplement them every way we possibly can even if we still are paying them their percentage of whatever they were meant to get of the contract, we will bring in another consultant to work along side of them and/or do it ourselves along side of them and that is why I like the mentoring programs because right from the start it is understood we are going to work very closely and try to bring their work up to the highest standard because it reflects us.

Contract goals are not recalculated to reflect change orders, deletions or additions.

There have been instances, several, where for whatever reason, this is a design-build project, some design changed, scope of work changed so the DBE that was planned they no longer needed their services. So, we just had to document it. But the goal had to be made up somewhere else.… The goal does not get recalculated.… We haven't done any waivers yet. We've actually found other ways to make our goals as well.

When I submit my change order for this work the state's there looking over and says well, where's your 30 percent participation? Even though those consultants aren't involved in the change.

7. Access to information

State outreach activities were lauded as assisting MBEs to obtain subcontracts.

Most of the large transportation firms in Maryland were [at MDOT's recent matchmaking session for M/DBEs and prime firms]. There were 22 large transportation firms there. They didn't just send their marketing people. They sent their decision makers. They sent their project managers. They sent their vice presidents. We had one-on-one conversations. I mean, we had scheduled one-on-one interviews. Most of the primes surveyed afterwards said that, in fact, they found a few subconsultants that they thought looked very qualified and they're willing to put on contracts in the future.

Maryland State Transportation has what they call eMarketplace but it's hard so, what am I going to say, understand or access. I mean PennDOT, Pennsylvania's Department of

> Transportation, you go into their contract management system, you click on construction inspection and it shows you all the advertisements. But eMarketplace isn't organized that way.

Some certified firms felt that the State does not do enough to assist them after they become certified.

> The state does a good job of having minority opportunities and to bid on them to get the goal but I think they do a very poor job of once you actually get a contract to help you with understanding the rules and regulations.… For new companies that have never done work with the state, the state is not the easiest person to work with.… There's nowhere that teaches you how to work for the state as a minority contractor.

> We receive several state bids via email, fax, and by going to 'Bid Boards' online. We normally find that the company will go with the lowest bidder. We do not get the results until after the decision has been made. Often times, we find that a company may go with the lower price on printing, but ends up paying the same cost- or more, after shipping charges have been applied. We also find that with State bids, the quotes are not always compared apples to apples; some of the specs of the bid are not given in full detail, allowing the vendors to give different costs on different materials.

> [By contrast, the Pennsylvania Department of Transportation is] always making contact with us, they call us, is there anything we can do for you.

Minority and majority firms across all industries repeatedly agreed that one stop shopping for services and information for MBEs would help; MBEs should be "besieged" with information. State purchasing is broadly diffused, and more help navigating through the bureaucracy was needed. Many firms were unaware of the Governor's Office of Business Advocacy's efforts to assist businesses to contract with the State.

While many firms had some familiarity with eMaryland Marketplace, many were confused about whether there is a cost if they are successful bidders and what they felt is the complexity of the process. There was also some confusion about which procurement opportunities are posted there. MBEs also mentioned the need to identify to whom to market their services in each agency. The MBE liaisons were not considered to be very knowledgeable in all cases about overall procurement policies and procedures.

8. MBEs' Efforts to Seek Work as Prime State Contractors

a. Unbundling

All small firms agreed that the size of many state procurements prevents them from competing. Everyone thought that "unbundling" contracts would help, over and above reserving solicitations selected for inclusion in the Small Business Reserve Program. Contracts could be broken out by region, for example. This would reduce the number of task order contracts, for which MBEs are mostly only able to participate as subcontractors.

Bundling is…particularly a problem for MBEs when you haven't been in there influencing that contract so it comes out packaged in a way that it says, in order to win this contract, essentially you have to work in this department for ten years before you ever got. Well, it's, it's ridiculous.

I would like to see smaller projects come out more.… We would like to go in as a prime but we can't do that [because of the size of the contracts].

I personally would rather be a prime on a little warehouse or small project than to work as a [sub]consultant doing some small aspect of a large project. Because when you're the prime you can hire, you can grow, you can learn more. Even though the fee is about the same it allows you the sophistication to grow. And if there's no program that allows us to do that we're still going to be held back.

Absolutely, I'd really like to see that as an architecture firm. As I mentioned before, the subcontracting experience I've had they just easily just eliminate us right off the contract. So, I'd really like to see larger contracts broken up. I think that's a wonderful idea.

Bundling work to [a] size where only large concerns meet the owner requirements to pursue the work [is] still a common practice.

One of the things I think that would be successful for professional services is that they unbundle those contracts so that not only can an MBE be an MBE, you know, we can participate as the prime contractor as well.

b. Experience requirements

Many MBEs, and a good number of non-MBEs, believed that the State sets unreasonably high experience thresholds, bonding requirements (especially for non-construction projects), and insurance minimums. All these criteria seriously hamper their ability to compete as prime contractors, and as subcontractors when primes push down the State's bonding and insurance requirements. That small businesses often must pay more for bonds and insurance than larger established firms adds to the problem.

[The State requires] ten years of experience working in this particular area. Well the only way I'm going to have that is if I was on the current contract.… You would have to be a blind person not to see that [work is being targeted to specific firms].

MDOT transportation proposals require you to have MDOT experience and for a company to have a number of jobs in that exact discipline and will not accept experience with other state agencies. And I think that is a huge barrier to doing business in Maryland.

We can't even get on teams because…the GCs are forced to team with the people they've gone with in the past [to meet the experience requirements that provide more points for prior working relationships].… So, we can't even get on these teams because they're going to keep going back to the same [MBEs].

> Remove monetary qualifications from RFP's such as: "In order to bid on this contract, contractors must have had gross receipts of $12 million the previous year." A business gross receipts does not equate to qualifications. Besides, some businesses fabricate their gross receipts, so the measurement of a business qualifications should not be tied with how much business it did the previous year.

c. Counting MBE prime participation

Those MBEs seeking work as prime contractors suggested that the State follow the DBE Program regulations that permit certified firms to count their self-performance towards meeting the goals.[289]

> If you're…an MBE firm, you do not get any consideration for being the prime.… As long as you, as long as you're willing to take a subservient role, we'll give you something.

> You can't count yourself in terms of the points as a prime and actually when I realized what it will take to go through A, being certified and B, going through trying to account for all that you have to go through, I kind of weigh that against the business development process of trying to go after business. And I truly said, I don't see it to be beneficial for me to do this which is why I turn my attention to working with corporations, non profits and the federal government because I could justify that are a lot better, I just saw it as not worth the time and effort to do.

> [The key is] to take us from an MBE [subcontractor] to a prime [contractor].

Inability to obtain prime work was particularly acute for architects.

> As an architect, you know, you, it's rare that you would be going in as a sub to another architect. So, therefore, you know, there's no advantage.

> I could meet the DBE. Matter of fact, I usually meet it even on private sector projects because I always work with a, with an MBE mechanical engineer and most of the time with an MBE structural engineer, okay. So, I can meet that goal. I can exceed that goal. But I don't get any additional points for being an MBE.… The State of Maryland may meet their twenty percent or five percent, blah blah blah. But in terms of their primes, you'll see none of them are architects. None of them.

> Myself as the prime, I don't get to count my own MBE status. I get zero benefit from being an architect prime so it results in my having to become a sub consultant to other entities, it can be like HVAC upgrades for the school systems, they require the MBE participation in that case, you know, we are a sub to other kinds of work that is really not the normal. It is not something that an architect will usually do, I mean I am glad to do it,

[289] 49 C.F.R. §26.55(a).

but it is not giving me significant work.… On the one side of the of the solicitation form it says we want your firm, we encourage minority businesses to apply. On the right hand side of the page it says you need to have three projects as prime contractor. So, you know, then the MBE firm, if we don't have three prime projects, we cannot be considered because the MBE law positions us as a subcontractor and so the left and right hand page are at odds with each other.

I go to these sessions from time to time where you know, they want a roomful of local and minority-owned businesses and then I waste my time. I get so frustrated. This happens over and over and over again.… The project's already designed.

[This is a h]uge barrier for those of us in here who are designers.

9. Support services for MBEs

There was broad consensus that MBEs need more assistance. This includes support for bonding, financing, safety compliance, quality control, estimating, marketing, accounting, and legal services.

Some general contractors recognized that MBEs often lack managerial experience, and suggested the state provide more support.

A lot of the guys that set up in business are field guys that have decided, I'm going to start a business. More power to them. Good luck to you. But they don't understand [how to run a business].… They don't understand the back office end and all that goes into it. And whether you like it or not contracting to a certain extent, here's one of the bigger problems, is a relationship industry.… If the State actually sat there and looked at all the minorities and actually classified them to levels of work that they could do and then looked at the total state program. Do this on a big basis so, okay, the state wants to do a hundred million dollars' worth of work and the state wants to sub out 20 percent. That's 20 million dollars. Take all your minorities. Base what their capacity of work is, and see what that number is compared to this number. Then figure out, how many of those minorities actually do public work.

[The State] can concentrate on things like training for the job. You know, like we talked about SCORE- type of program, where you hire executives to help find funding, bonding. And I know there are some programs out there for that, but none of the minorities seem to know it. You know, it is there but it is certainly not well used. Things like one stop shopping could help minorities. Every minority, every firm says, yeah that's a great idea. What number do you call if somebody requests it? The state doesn't have it. It's been brought up five years ago. They just don't implement things.… They need to have one telephone line and have somebody who knows everything.… I mean, I don't know what GOMA does. At the secretarial level they have a whole bunch of high-priced people there and I couldn't tell you what they do.… You would think GOMA would run the directory if it is for the whole state, rather than MDOT.… I think it's a resource problem.

Minority and majority firms felt that mentor-protégé initiatives would be helpful.

> [Maryland] needs to have a mentoring program associated with it so that a prime can be encouraged to use these zero to five years of experience firms and it has to have teeth so that the prime gets a benefit out of taking under its wing a firm that's zero to five years. And then the networking has to dovetail with that, as was mentioned over here because there are primes that don't realize that there are companies that are expertly qualified in the zero to five range that can help them in their services.
>
> Your protégé cannot be someone that you have had a prior relationship with because [large firms] only want to work with protégés that they have already worked with and you're back to that whole entrenched relationship and it's difficult to break in.
>
> My sense is that in many cases we are less qualified. And so given a chance you know, we're going to struggle and have to try to perform and find our right place in the marketplace. Because we're smaller. Because we're learning. And that's where the mentor-protégé program comes into place.
>
> I've actually been a mentor because I think one of the good things…the State's doing they're reaching out to companies like mine that are successful [to] tell people the horror stories, tell them the war stories so at least they're prepared rather than just think, everything's going to be hunky-dory once you get your MBE cert. So that's one of the things we're doing right. What I don't like is because as this lady was just saying, they changed the rules on the mentor-protégé program so that the larger firms now basically become the smaller firm and what they're providing to the protégé is bonding capacity, a lot of times, working capital and whatever. And to me again that does not meet the letter of the law. If you're going to take one MBE firm because they decide that they're going to mentor that company and you're going to give them working capital and bonding capacity versus somebody like me that has to bid against this company on my own [as a general contractor], you're basically again creating an unfair playing field.
>
> What we often will do is establish mentoring programs where we will take one of our very best engineering firms and then bring in an African American smaller firm, you know quite frankly most of our jobs are bigger, you know they are 5, 10, 20, 50, 60, 100 million dollars so we will bring in a smaller minority firm to work with another firm that has maybe more experience and is larger and has more in-depth experience.… We often mentor architectural firms as well, small architectural firms and we have seen them, we have had mixed results I would have to say. But nevertheless, we are constantly doing that. We are looking for firms to mentor. But mentoring itself does not meet the requirement.
>
> I personally treat, when we have a sub I try to sit down with the owners and give them advice and help them in their business dealings and hope that they respond by growing in a positive way.
>
> The answer would be extremely yes to that [suggestion of receiving goal credit in a formal mentoring program for professional services firms].

> I really like mentoring programs and we are involved in a lot of them but traditionally we don't get credit for them. So if there was a way to get credit for them we would do it more often.… Because we compete at a very high level we are not fearful of that competition. I think smaller architectural firms are fearful of creating that competition. We have put several companies in business, smaller architectural firms so we find in the end they are really not our competition on the larger projects that we go after.

10. Payment

MBE subcontractors working outside of MDOT complained about late payments by prime contractors, and their inability to obtain assistance from the State.

> I go to almost every MBE liaison officer on a construction project. These guys drag it out because I'm a small company. And they think, well what are you going to do? You know, if she goes out and she doesn't have the wherewithal to go against my bond and whatever and it really frosts me that people at the state level that are so MBE passionate have no advocacy officer…[the State staffer says I] feel sorry for you but that's between you and the GC. We can't get involved in it and whatever.… They go to all this trouble to try to help create opportunities. Then you actually get an opportunity. You're working and they try to string you out. Then they're nowhere to be found.

There was praise for the State Highway Administration's website that allows subcontractors to track the status of payments to their prime contractors. In fact, the MDOT modes were seen to do a better job of responding to payment problems than other agencies.

Some MBEs found the monthly forms confirming payments to them as subcontractors to be too burdensome when their portion of the project was completed or had yet to start.

11. State Personnel's Roles and Responsibilities

We also interviewed MBE Liaisons and other agency procurement personnel about their experiences with the Program, and their roles and responsibilities. In general, MBEs reported that the MBE Liaisons could be more effective. The Liaisons' lack of involvement in the management of the contract reduces their ability to address Program issues. The overall consensus was that the MBE Liaisons need more authority and more tools to resolve problems.

Liaisons and agency procurement staff generally agreed with that assessment. Some Liaisons performed other procurement functions, especially in the smaller agencies and universities. This lessened the focus upon MBE issues and compliance. Some reported that one person is responsible for everything related to the Program, including goal setting, vendor outreach, pre-bid conferences, bid or proposal reviews, site visits, data tracking, and reporting to oversight agencies. Some fair practices offices further are responsible for compliance with the Americans with Disabilities Act, employee assistance programs, drug testing, equal employment opportunity compliance, and other issues. This overload was reported to lead to less than effective contract compliance monitoring and staff burnout.

The barrier is not a lack of regulatory authority. The MBE provisions of COMAR were generally seen as adequate; it is the implementation that needs to be bolstered.

> The mechanisms are in place. Now whether somebody knows that at a procurement officer's level, they certainly should, and there should be some process in place to review those periodically.

Recent improvements in documenting MBE participation and holding successful bidders to their MBE commitments should help ensure more integrity and real results for the Program.

> Each subcontractor that was listed does receive a letter letting it be known that they are participating and what their requirements are to do their monthly reporting accordingly

Liaisons want to spend more time assisting MBEs at the beginning of contract process.

> [Subcontractors] are uneducated on exactly what the bid process is and what their responsibility should be once they sign these forms for the prime. How many subs go, Oh yeah, we sign those all the time and they never follow up, so if it doesn't turn out good for the state, the relationship is basically primarily between the state and the prime. We have no contract with the subs.… [The State has not done] a good job in making sure that on the front end that the prime and sub have sat down and understand, we know you're supposed to be working together. I mean, that's not done. The State does not have the resources to do it because I don't know about in anyone else's agency, but in [department], the MBE office has a whole gambit of things and probably we do a lot more now that we have such a short staff in the procurement offices. Some of the things that the procurement office just doesn't [do]…so we have taken hold of doing some of those things, but we have not educated as a whole. We have gone out and certified all of these people to be MBE's, but we have not told them, here's what you need to be doing on a consistent basis and that's for everybody.

A lack of good compliance monitoring software further weakened the Liaisons' effectiveness. There was consensus that a software system that notifies subcontractors of contract award, progress and payments, and holds prime contractors payments until all compliance documents are presented with the pay application would instantly create greater compliance and ease staff burdens. This would help to address the fact that the project managers who approve payments are not the people responsible for the MBE Program.

Lack of consistency and standardization across agencies was mentioned as another general concern. This leads to confusion and weakens the State's overall program.

> One of the things that can present a challenge to a program is to have inconsistent processes and evaluation factors.… [MDOT now has] a far more consistent decision making and evaluation process.… [Firms] might think that maybe we're too stringent or another agency is too free, so I agree about the [need for] consistency.

GOMA is working much more closely recently with agencies to assist with contract goal setting and consideration of waiver requests.

> [GOMA recommends that] if you're the person who is responsible and have to live with this contract, the first thing you need to do is to contact the prime contractor, find out who's the point person for monthly reporting, who's the point person responsible for making sure that the goals are met and that MBE's are used, and then who are the all of the MBE's and what we recommend is that you put all of them either in a room together or on a conference call together within the first two weeks of the contract. The sooner the better and you go down the laundry list of things that everybody needs to know with the prime on the phone, all of the subcontractors on the phone, and you say, okay, here are the rules of this game. The first reports are due on the 15th of May. If you don't send the report, you'll hear by the 17th of May. And you go down the laundry list. You talk to them about what are the rules for replacement. What are the rules when you have a nonperforming MBE? What does the prime contractor have to do? Subcontractors? You give out the phone number, email address, and name of the state person who you should call if you have a problem that's MBE related. You go down that list and then you open up the floor for questions at the end of that conference call so that anybody on the call can ask a question and everybody hears the answer at the same time.

MBEs also need to become more familiar with their rights, including to prompt payment.

> GOMA gets their share of late payment complaints from minority businesses. So, it is happening. Prime contractors are lagging behind more than we would like to see, on making payments to MBE's. Unfortunately, a lot of MBE's don't know about the state's prompt payment policy outside of construction, that it does exist, and those same criteria apply to non-construction contracts, in terms of remedies that they can bring up for failure to receive prompt payment.

Liaisons want to be able to provide more information to MBEs and make the overall procurement process more transparent for all firms.

> The general catchall solution for some of the problems or roadblocks that minorities see is they want transparency. They want to know what opportunities exist and they spend so much time trying to figure out what agencies are buying what and when and how. And, um, you know, if we spend more time, sort of, giving out names of people, um websites to minority businesses, so they can figure this out, and they are at a disadvantage in that they don't have, you know, a half-time person who can spend, you know, 20 hours a week searching for this information. And so, they want to know where the opportunities are, how can they easily get to them, and that is one of the biggest complaints that we get.… You can put systems in place.… I don't know the answers to how we get quickly, in real time, information to minority businesses about upcoming opportunities. I don't know the answer, but that is a real problem and we got to really think collectively about how to solve that problem.

More outreach for the Small Business Reserve Program was also cited as a critical need.

> The businesses that sell what the state buys on a regular basis, many of them still don't know that the program exists, and many of them are not getting the notifications because

> they're not on E-Maryland marketplace that whole issue of exposing the smaller minority business community to the upcoming opportunities
>
> One of the problems from the beginning of the Small Business Reserve Program is that agencies are hesitant to place, to put the SBR stamp on procurements that are above a certain dollar threshold.… An SBR agency can still get credit for a small business reserve award, even if they didn't designate it upfront. So, what they do is they hedge their bets.… They're not designating them. They're not setting them aside and that sort of defeats the purpose because, how many other small businesses may have bid on that, but they looked at it and said that's an open procurement, I can't compete with IBM on that, so I'm not gonna bid on that.

There was recognition of the issues involved in substituting MBEs during contract performance.

> There's a variety of reasons why people will… need to replace MBE or DBE firms.… We already know that for a lot of them because they have to, but sometimes, we're finding they will select the lowest MBE or DBE, knowing probably that the price is not reasonable or whatever, but because they are actually sometimes looking for somebody that will subsequently fail and they can point that out. Other times they are heavier handed in terms of dealing with the DBE's and treating them differently, treating them harsher, that kind of thing, giving them the general cold shoulder, we don't want you here kind of thing and that can and will impact people's work. And other times, there's a legitimate scenario where maybe it's a qualified MBE or DBE, but maybe they're stretched too thin and in other words they have a lot of people that like working with them because they do good work and they are just stretched a little bit. And then you know it may just be that they're not able to perform. So, there's a number of reasons, but I think the underlying thing you go into it as a prime that you don't want to use this MBE or DBE you know I think that kind of tells on itself in a number of different ways.
>
> One of the things we always say is that when you're doing that kind of due diligence to see whether it's proper to replace an MBE, never take the prime's word for it. You always have to contact the MBE and get their side of the story and that's a lot of times, it gets ugly because then the real story comes out about what's going on with that supposed nonperformance. A lot of times it's not an issue of nonperformance.

Outside of MDOT, there was concern from State personnel that Liaisons were too far removed from senior management to effectively advocate for MBEs. Moreover, MBE staff did not routinely sign off on contract awards, prime contractor payments or contract closeouts.

Without exception, Liaisons and procurement staff urged the provision of more State supportive services to increase MBE capacities. In addition, more efforts to certify eligible firms must be made.

Several MBEs and non-MBEs suggested moving the responsibility for compliance from the agencies to GOMA. Some also suggested that certification outside the federal DBE program be moved to GOMA.

A cabinet level you know, group that would administer the [certification] program rather than MDOT would be best.… Maybe it ought to be directly in the Governor's office.

12. Maryland's Race- and Gender-Neutral Programs

a. Small Business Assistance

Many MBEs were mostly unaware of the State's extensive programs to assist small businesses. Given the need for increased supportive services for MBEs, greater dissemination of information about existing help would facilitate the development of MBEs across industries.

Few firms were familiar with the State's small business lending programs. However, some MBEs had received surety bonding and other assistance through Maryland's Small Business Development Financing Authority and other agencies.

I've been very successful in financing. Borrowed from [the Department of Business and Economic Development] twice. I paid one off and owe $4,000 on a second one. So we're almost done. SBA, borrowed from SBA. Almost done with that one.… Borrowed from [a state supported fund]. I have a $350,000 line of credit from them.… [They] work for me really well because I have a contract and so I have a line of credit so I can borrow against my receivables and that's what I do.… I love them. They're great to work with.… You have to give them the report of what you're selling and then you do an invoice to your client and your client pays.

MSBDFA supported, they gave me my performance bond. They supported my performance bond for the MBE, the contract I told you I was bidding on. There was four of us that got through.

Some prime contractors recognized the need for supportive services for MBEs.

If [the question is whether] small businesses in general need assistance with insurance, bonding, any of the other services out there, my answer is yes.… And is it because they're minority? Is it because they're small? You know, I don't know, you know, is it the challenging times that are out here right now that all businesses are facing? It's probably all of it combined. But I do know from working in this realm for quite some time that there are some, there is a need [for a] supportive services program they get, you know, programs they get funding from the federal government to invest in businesses and help build up their infrastructure and get them the support that they need.

You have some small firms that may be good but need a little help. You know, they might be a little late on getting their payroll together. The paperwork is astronomical.

b. Small Business Reserve Program

Many participants, both MBEs and non-MBEs, urged the State to raise the eligibility size limits and expand the types of contracts included in the Small Business Reserve ("SBR") Program.

> The SBR program in Maryland is a sham.… The State of Maryland, these little SBR contracts are so teeny it's unbelievable. They've got to up. They've got to upgrade the SBR program.
>
> I'm in that too and it's been nothing.
>
> I have signed up for that and, and absolutely nothing.
>
> It seems like no attention whatsoever is paid to the small business portion of it.… the MBE [program] gets real high profile yet the small business [reserve] it's like there's no benefit to being a part of small business registration or anything like that.… they should have equal footing.
>
> We do [qualify] but nothing comes our way
>
> I think they should increase the size.
>
> Could they maybe look in some other arenas for some things to set aside for some specialty contracts?… [Include] some of the specialty, you know, the specialty needs that they have other than you know, supply and you know, the toilet paper

Many owners were unaware of the SBR Program.

> I just heard about that program in the interview session.

X. Recommendations for a Revised MBE Program

As detailed above, we conducted a thorough examination of the evidence regarding the experiences of minority- and women-owned firms in Maryland's geographic and procurement market area. To meet strict scrutiny, we have analyzed evidence of such firms' utilization by the State on its prime contracts and subcontracts, as well MBEs' experiences in obtaining contracts in the public sector and economy-wide. We gathered statistical and anecdotal data to provide the State with the evidence necessary to consider whether it has a compelling interest in remedying identified discrimination in its market area, and if so, how to narrowly tailor any race- and gender-based remedies adopted. Based upon our results, we make the following recommendations.

A. Continue and Augment Race- and Gender-Neutral initiatives

1. Expand the Small Business Reserve Program

Maryland should consider expanding this important race- and gender-neutral program. As discussed in the focus groups, there was general support for this initiative. In fact, business owners want the Program to have a broader reach. We concur. More contracts and larger contracts should be included. This is the primary structured approach to providing prime contracting opportunities to MBEs and other small firms. As demonstrated throughout this report, access to prime contract opportunities is even more limited for MBEs than for subcontracts, so this element should be strengthened.

To accomplish this, the State should take three steps. First, raise the size standards for Program eligibility. The size limits are relatively low, permitting only the smallest firms to participate. Yet, firms greater than these thresholds are often not able to compete against much larger firms that dominate their industries, and so receive little benefit. The SBA size standards, also applicable to the DBE Program for federally-assisted transportation contracts, could serve as the basis for evaluation of Maryland's limits. Next, increase the size of contracts set aside. Third, expand the types of contracts reserved, with an emphasis on professional services contracts, where smaller firms, such as architects, are fully capable of performing as well as or better than large businesses.

Finally, we again urge Maryland to collect race and sex data on firms participating in the Program. This will facilitate the next study of the MBE Program, which should include review of the effectiveness of the Small Business Reserve Program in remedying disparities on a race- and gender-neutral basis, and the effect, if any, of the small business set-aside on participation in the MBE Program.

2. Increase Contract "Unbundling"

While Maryland has made strides to segment contracts to facilitate bidding by MBEs and small firms, including prohibiting State agencies from bundling two or more procurement requirements that were previously performed under separate contracts into one contract, further attention on this important tool should be paid. One suggestion is to require agencies to make an annual

"bundling" forecast, where strategies to increase opportunities for small firms and the extent of unavoidable bundling will be detailed.

3. Review Surety Bonding, Insurance and Experience Requirements

Maryland should continue to review surety bonding and insurance requirements to ensure that amounts are no greater than necessary to protect the State's interests. There was widespread agreement amongst MBEs, non-MBEs and State staff that more particularized requirements would greatly assist all firms. This might include reducing or eliminating insurance requirements on smaller contracts, adopting standard professional liability insurance limits, and removing the cost of the surety bonds from the calculation of lowest apparent bidder on appropriate solicitations.

Some construction and design MBEs believed that the State sets unreasonably high experience thresholds that shut them out of projects they could perform. These standards were viewed as anti-competitive and drafted for the benefit of big firms already doing State work. Maryland should review qualification requirements to ensure that MBEs and small firms are not unfairly disadvantaged and that there is adequate competition for State work. For example, equivalent experience, especially that gained by working for other government agencies, should be permitted to increase access for small firms and guard against unfair incumbent advantages.

4. Ensure Prompt Payments

Despite the Prompt Payment Directive enacted in 2008, many firms complained about slow payment by the State to them as prime firms and by prime contractors to them performing as subcontractors. An electronic contract tracking system, whereby contractors and subcontractors could see where the prime contractor's invoice is in the process, would be helpful. It would also facilitate subcontractors' ability to know whether and when their prime contractor has been paid. This addresses the complaint by subcontractors that prime contractors often withhold payment unnecessarily, despite the requirement that prime contractors "pay when paid." Further, as suggested by the MBE Liaisons, small firms need to become better educated about their rights; perhaps some detailed information could be provided upon certification.

5. Ensure Bidder Non-Discrimination and Fairly Priced Subcontractor Quotations

Many MBEs voiced concerns that prime contractors were not soliciting their subcontractor quotes in good faith on State projects, and failed to solicit them at all on non-goals projects. Many prime contractors reported that MBEs unfairly increase prices, leading to higher contract prices. To investigate these claims, Maryland could require bidders to submit all subcontractor quotes received on larger projects and maintain the records on all formally procured contracts, regardless of size. The prices and scopes can then be compared to ensure that bidders are in fact soliciting and contracting with subcontractors on a non-discriminatory basis and whether MBEs

are inflating quotes. A similar approach was part of the court-approved DBE plan for the Illinois Department of Transportation.[290]

6. Improved Contracting and Procurement Data Collection and Retention Procedures to Facilitate Future Monitoring of MBE and non-MBE activity

a. Prime Contracting and Purchasing Activity

Not all State agencies or State agency personnel routinely populate the State's financial and contract management information systems with all the information necessary for performing disparity studies. Examples include:

- Federal tax identification numbers are still not in universal use throughout the State;
- Where federal tax identification numbers *were* in use, they were not always used consistently among different agencies;
- Contractor phone number and address information was not always entered completely;
- Prime contractor MBE status and type were not universally collected or retained;
- Unique identification fields for contracts and purchases were not universally used, nor used consistently across or even within agencies; in particular with respect to blanket purchase orders, contract renewals, and change orders.

This situation could be improved through increased training and guidance for State contracting and purchasing personnel and by introducing additional controls into the State's financial and contract management information systems to require data entry personnel to enter all the requisite information for any given contract or purchase. A challenge for Maryland is to implement such improvements across a relatively decentralized system of contracting and purchasing encompassing numerous distinct State procurement agencies.

b. Records Retention and Format

A small number of procurement agencies were unable to provide five full years of historical data, citing state records retention laws with three-year time periods. If the MBE program continues to rely on a five-year sunset review cycle, state records retention laws should be reviewed for consistency with the data collection requirements of the MBE Program.

c. First-Tier Subcontractor, Subconsultant, and Supplier Activity

Most State procurement agencies were able to track MBE subcontractor, subconsultant, and supplier activity. However, data for non-MBE subcontractors, subconsultants, and suppliers still are not tracked. Although in general this does not hinder the State's ability to report on MBE activity to policy makers, it does hinder the ability to perform the periodically mandated

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[290] *Northern Contracting II*, at 87 ("IDOT requires contractors seeking prequalification to maintain and produce solicitation records on all project … Such evidence will assist IDOT in investigating and evaluating discrimination complaints.").

availability and disparity study. For disparity studies, non-MBE subcontracting records are equally as important as MBE subcontracting records. As with prime contract reporting enhancements discussed above, it is a challenge for the State to implement non-MBE subcontractor data collection and retention enhancements across a relatively decentralized system of contracting and purchasing encompassing numerous distinct State procurement agencies.

B. Implement Race- and Gender-Conscious Remedies

Based upon this Study, Maryland has a strong basis in evidence to implement a race- and gender-based program. This record establishes that minorities and women in the Maryland market area continue to experience statistically significant disparities in their access to State and private sector contracts and to those factors necessary for business success, leading to the inference that discrimination may be the cause of those disparities. Further, individuals recounted their experiences with discriminatory barriers to their full and fair participation in the State's contracting activities as well as economy-wide. The Study provides the statistical and anecdotal evidence to answer in the affirmative the question whether there is strong qualitative evidence that establishes Maryland's compelling interest in remedying race and gender discrimination. There is ample evidence that affirmative intervention is needed to dismantle the vestiges of the private sector system of racial and gender exclusion. It is clear that continuing the use of MBE goals would clearly not be motivated by the illegitimate racial stereotypes or bias, or blatant racial politics that strict constitutional scrutiny seeks to "smoke out." Unless it continues to take action, Maryland will likely be a passive participant in a discriminatory marketplace. Moreover, as found in Chapter VII, there remain large and often statistically significant disparities between the availability of MBEs and their utilization on State contracts, in most procurement categories for most types of MBEs, despite the State's aggressive current efforts. These results support the need for continued remedial action

In adopting a new MBE statute, Maryland should revive the general outlines of the current Program and consider the following suggestions.

1. Increase Certification Outreach

In general, there was praise for the State's certification process and staff. Most firm owners understood that the strict application of rigorous standards was necessary for Program integrity. There were assertions that "front" companies still slip through the process, especially those owned by White women with family ties to the industry. Vigilance must be maintained to ensure that only those truly disadvantaged by their race or gender receive the benefit of the preference.

To address concerns about a lack of qualified MBEs, and to increase the pool of firms that can be used to meet contract goals, Maryland should conduct additional outreach to uncertified minority- and women-owned firms. The Study identified many businesses owned by minorities and women that are not State certified. The State should aggressively pursue firms certified with other governments (cities, counties, etc.), as well as those identified through the Study, to encourage applications.

2. Set Overall, Aspirational MBE Goals for Annual State Spending

The Study's estimates of the availability of M/WBEs in Maryland's market area are provided in Chapter IV. These form the starting point for consideration of setting the overall, aspirational targets for State spending with MBEs. This snapshot of firms doing business in Maryland's geographic and procurement market place does not *per se* set the level of MBE utilization to which the State should aspire each year. As discussed in Chapters V and VI, current MBE availability is depressed by the effects of discrimination. A case can be made for setting goals that reflect a discrimination-free market place rather than the results of a discrimination infected market place.[291] On the other hand, since Maryland's utilization of MBEs is below the estimates of current headcount, the most narrowly tailored and achievable approach is to use those estimates as the basis for overall targets.

Maryland should continue the policy that each agency must develop an annual plan for projected MBE utilization to detail the anticipated procurements and the level of MBE participation the agency will seek to achieve.

We also recommend that Maryland remove payments made to utilities from contracts covered by the Program. Not only is it highly unusual for a contracting affirmative action program to cover such contracts but also it can cloud the picture of actual State efforts to increase opportunities for MBEs because of the high dollar of these payments, which are not available for MBE participation.

3. Set Contract Specific Goals

Regardless of whether and on what basis the State adopts overall, annual aspirational targets, the courts insist that governments set goals on particular contracts much more narrowly. Contract goals cannot simply be the rote application of the annual goals. Contract goals must be based upon the demonstrated availability of MBEs to perform the anticipated weighted scopes of the project's subcontracting, as well as the agency's progress towards meeting its overall, annual goals. While it is certainly easier to apply the statutory goals to each contract, to do so may be held to be constitutionally fatal. It also increases the burden on bidders and State personnel of compliance reviews on unrealistic targets. Narrowly tailored contract goals will also reduce vendors' temptation to use brokers, who add little value to the transaction other than goal credit or to make contractual commitments that will not be kept.

This Study's availability estimates provide an objective starting point for contract goal setting. Contract goals may be higher or lower than the annual goals. Indeed, if there are few or no subcontracting opportunities, no goals should be set. Particular attention should be paid to contracts involving special trades or services in which there are few subcontracting opportunities and plentiful MBE availability, to ensure that bidders are not being asked to make good faith efforts to subcontract to their direct competitors.

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[291] *See* 49 CFR §26.45(d)(DBE goal must reflect the recipient's "determination of the level of DBE participation you would expect absent the effects of discrimination").

In addition, the size of the contract is relevant to goal setting: if the subcontracting opportunities are small, perhaps a goal should not be set, as the costs of compliance outweigh any benefits to MBEs. A comprehensive data tracking and contracts monitoring system will ease the burdens of contract goal setting. If the State finds that it is meeting or exceeding its annual goals, it should consider reducing the use of contract goals to ensure that the Program's implementation remains narrowly tailored.

While some agencies are properly setting contract goals, there is reason to believe some are not. The contract-by-contract goal setting process must be standardized across agencies. Further, MBE Liaisons should be included as early as possible in the contracting process. We suggest that the Liaison must sign off on all goals before the solicitation is advertised. This will facilitate consideration of MBE issues and provide earlier opportunities to reduce contracting barriers for such firms.

It is often difficult to set goals on "on call" or "task order" contracts because the scope of the work is not fully developed, prohibiting a complete MBE utilization plan. Moreover, the MBEs listed have no guarantee of any amount of work and so cannot plan their schedules. Prime contractors acting in good faith often had no significant subcontracting opportunities on a particular task, making it very difficult to meet overall contract goals and creating ambiguity about contract compliance. One suggestion was to increase the amount of subcontractor participation that is "undesignated" at the time of bid, so that the prime contractor may apportion MBE participation as the project develops. In conjunction with increasing the scope of the Small Business Reserve Program, the State should set aside smaller single discipline task order contracts for competition only amongst small firms.

We further suggest that goals be set on the design portions of design-build projects. MBE architects in particular are often shut out of these major procurements because the goals are met solely through construction subcontractors.

a. Count MBE Prime Contractor Participation Towards Meeting Contract Goals

Maryland currently implements its Program through only the use of subcontracting goals. MBE prime firms cannot count their participation towards meeting a contract goal, although the State does count those dollars towards its overall, annual goal. We strongly recommend that the State follow the federal approach, which permits a firm to count its self-performance, minus any work subcontracted to non-certified firms.[292] This approach, which would also require that the MBE prime make good faith efforts to meet the subcontracting goal, serves three important objectives. First, it creates opportunities for MBEs to act as prime vendors, which increases their capacities. The greatest disparities are in access to prime contracts, and no court has approved direct race-based setasides to address this problem; counting prime utilization at least does not exacerbate the effects of discrimination. Second, it increases the pool of competitive firms for state dollars, thereby benefiting taxpayers. Finally, it reduces the reliance on subcontracting goals that may

[292] *See* 49 C.F.R. § 26.55(a)(1) ("Count the entire amount of that portion of a construction contract…that is performed by the DBE's own forces").

work to the detriment of nonminority male-owned firms that compete in those areas where there is good MBE availability (*e.g.*, guardrails, striping, etc).

b. Count Lower Tier MBE Utilization

On large projects, there are often opportunities for MBEs to participate, which should be encouraged. Counting verifiable lower tier utilization will increase opportunities for MBEs and provide flexibility for general contractors to meet goals.

c. Establish Control Contracts

We continue to urge Maryland to bid some contracts that it determines have significant opportunities for MBE participation without any MBE goals. These "control contracts" can illuminate whether MBEs are used or even solicited in the absence of goals. Such unremediated markets data will be probative of whether Maryland still needs to implement MBE goals to level the playing field for its contracts.

4. Review Contract Award Procedures

Once goals have been set on a contract, it is critical that standards for contract award be clarified, standardized and enforced across all agencies.

a. Scrutinize MBEs' Commercially Useful Function

All proposed MBE utilization must be carefully evaluated to determine whether the firm is serving a commercially useful function. Even a firm that is legitimately owned by a minority or woman can be used as a "pass through" or "front" on a specific contract. Commercially useful function means responsibility for the execution of a distinct element of the work of the contract and carrying out the MBE's responsibilities by actually performing, managing, and supervising the work involved, or fulfilling its responsibilities as the joint venture partner. Some MBEs and non-MBEs stated that brokers are often used to meet goals, particularly in industries with little subcontracting. It should be noted that the setting of contract goals based upon the real subcontractable scope of work will reduce the incentives to claim credit for work that is not commercially useful to meet artificial goals.

b. Standardize and Disseminate Good Faith Efforts Policies and Procedures

The courts have categorically held that strict scrutiny's flexibility test requires that waivers of goals be available to a bidder who made good faith efforts. A bidder who makes good faith efforts must be treated the same as one who met the goals. To do otherwise— that is, to favor utilization above good faith efforts— will likely be held to be an impermissible race- and gender-based quota.

Many non-MBEs reported that they believed that waivers were not available, especially on professional services contracts. This misperception needs to be corrected and accurate information about the waiver standards and process fully disseminated. Agency staff needs

training in how to evaluate waivers, so that the Program does not operate as a quota. The State needs to ensure, probably under GOMA's supervision, that all agencies and their personnel understand the criteria and apply them consistently.

In the last study, we recommended that Maryland revise the "10 day rule" governing post-submission changes by prime bidders to their MBE utilization plans. It did so, which is a significant improvement. However, the pendulum may have swung too far, in that each MBE and the percentage of the total dollar amount of the contract it will perform must be provided at bid submission. Given that construction firms take bids up to almost the literal last minute, we suggest some flexibility for those solicitations. Perhaps a very short window (*e.g.*, two hours) should be permitted so that bidders can submit complete and accurate paperwork.

c. Develop Standard Contractual Terms and Conditions for Program Enforcement

Many business owners and MBE Liaisons complained the Program often lacks "teeth." While COMAR does permit the imposition of contract sanctions for a contractor's failure to meet the provisions of its contract regarding MBE utilization, it appears that language implementing this critical Program element is either lacking in the actual contract documents or unclear. The State should enforce contract sanctions for default, up to and including termination, when the contractor has violated the contract terms, conditions and applicable regulations, and develop a set of remedies commensurate with the manner of default that can be reasonably and effectively enforced short of termination.

5. Monitor Contract Performance

Once a contract with MBE commitments has been awarded, it is crucial that those commitments be monitored and that sanctions for non-conformance with the contract be credible. Perhaps the most common criticism of the operations of the MBE Program (excluding MDOT) is the lack of consistent contract monitoring. MBE Liaisons are too overwhelmed to conduct thorough ongoing compliance audits, and contract closeout is very late in the process to determine that a prime contractor has failed to utilize MBEs or that firms have not been paid. The implementation of the planned comprehensive data tracking and monitoring system is a necessary element of a successful Program. Further, MBEs and other subcontractors need access to information on when the prime contractor received the notice to proceed and when progress payments have been made.

There are several "off the shelf" M/WBE compliance monitoring software packages now available that would greatly assist with this process.

We further recommend that prime firms not be permitted to substitute those MBEs listed in the original compliance documents, even with another certified firm, without prior written approval of both the project manager and the MBE Liaison. Substitutions of the subcontractor should be permitted only under limited circumstances such as:

- Unavailability after receipt of reasonable notice to proceed.

- Failure of performance.
- Financial incapacity.
- Refusal by the subcontractor to honor the bid or proposal price.
- Mistake of fact or law about the elements of the scope of work of a solicitation where agreement upon a reasonable price cannot be reached.
- Failure of the subcontractor to meet insurance, licensing or bonding requirements; or
- The subcontractor's withdrawal of its bid or proposal.

6. Enhance Program Administration

Many focus group respondents described what they felt was the lack of training for MBE Liaisons in procurement policies and procedures, the lack of training for procurement officials in the intricacies of the Program, and overall lack of standardization and consistency across agencies in Program implementation. The State should consider centralizing oversight of the compliance aspects of the Program in GOMA, with staff responsible for a group of agencies and interfacing with their MBE Liaisons. Because of its unique responsibility of administering both the State MBE and federal DBE Programs, MDOT would continue its certification responsibilities for both the MBE and DBE Programs, as well as its oversight of compliance at the MDOT modal administrations.

Liaisons sought the same level of authority to review contracts as other procurement officials, to enable them to promote the Program's objectives and troubleshoot problems with MBE issues. They should be given the authority to directly participate and intervene in the process of developing, awarding and performing contracts. Further, better coordination between the MBE officials and the project mangers was mentioned by all types of firms and all types of owners as vital to Program success.

7. Adopt a Statewide Mentor-Protégé Program

Many focus group participants, MBEs and non-MBEs, supported expanding current MDOT efforts to facilitate and reward mentoring relationship to other the State agencies. Many prime vendors reported that they already engage in informal mentoring, but would like to receive recognition and credit towards meeting contract goals. Following the guidelines of the USDOT DBE Program[293] and other successful initiatives, perhaps Maryland can develop some pilot efforts in the larger agencies, such as DGS, for construction and professional services firms, including providing credit towards meeting contract goals for participation in such a program.

[293] 49 C.F. R. Part 26, Appendix D, "Mentor-Protégé" Program Guidelines."

8. Develop Performance Measures for Program Success

Virtually all focus group participants agreed that greater support to develop and grow MBEs is needed. While recognizing the systemic barriers faced by minorities and women in the construction industry, developing quantitative performance measures for certified firms and overall Program success would provide benchmarks for evaluating the Program. Possible benchmarks are the achievement of business development plans similar to those used in the Small Business Administration's 8(a) Program, including revenue targets for certified firms; increased prime contracting by MBEs; and increased graduation rates. It will be important to track the progress of graduated firms to evaluate whether they succeed without the Program, and if not, why not.

9. Periodically Review the Program

Maryland should continue the longstanding and prudent legislative requirement that the Program be reviewed every five years, and that only if there is strong evidence of discrimination should it be continued. The Program's goals and operations must also be evaluated to ensure that they remain narrowly tailored to current evidence. As has been Maryland's practice for a decade, a sunset date for the statute providing that the Program will end unless reauthorized should be included.

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Appendix A—Master Directory Sources

A. Entities whose lists of M/WBE firms that were duplicative of previously collected lists

African American Business Association of Montgomery County
African American Chamber of Commerce of Montgomery County
Anne Arundel County Economic Development Corporation
Arlington County
Baltimore City Public School System
Baltimore County Dept of Economic Development
Baltimore County Office of Fair Practices and Community Affairs
Baltimore County Public Schools
Baltimore-Washington International Airport
Bowie State University
Cecil County
Charles County Economic Development Commission
City of Annapolis, Small and Minority Business Enterprise Development
City of Baltimore
Coppin State University
Dorchester County
Dulles International Airport
Frederick County – Office of Economic Development
Frostburg State University
Greater Baltimore Committee
Harford County
Howard County Government Administration Office
Maryland Aviation Administration
Maryland Department of Business and Economic Development
Maryland Department of General Services
Maryland Department of Labor, Licensing & Regulation
Maryland Department of Public Safety and Correctional Services
Maryland Dept of Budget and Management
Maryland Dept of Education
Maryland Dept of Human Resources
Maryland Dept of Information Technology (through DBM)
Maryland Dept of Juvenile Services
Maryland Dept of Mental Health and Hygiene
Maryland Environmental Service
Maryland Interagency Commission for Public School Construction
Maryland Mass Transit Administration-Baltimore
Maryland Minority Contractors Association, Inc.
Maryland Port Authority
Maryland Small Business Development Center – Frederick County
Maryland Small Business Development Center – Garrett County
Maryland Small Business Development Center – Central Region

Maryland Stadium Authority
Maryland State Highway
Maryland State Lottery Agency
Maryland State Police
Maryland Transit Administration
Maryland Transportation Authority
Maryland Vehicle Administration
MDOT – The Secretary's Office
Minority Business Advocacy Council
Montgomery County
Montgomery County Minority Procurement Officer
Morgan State University
National Association of Women in Construction – Virginia – Central Virginia
National Association of Women in Construction – Virginia – Blue Ridge
National Association of Women in Construction - Virginia – Roanoke
National Association of Women in Construction – Virginia – Richmond
National Association of Women in Construction – Washington DC
National Association of Women in Construction – Maryland (chapter 135)
National Association of Women in Construction – Delaware (chapter 96)
Naval Air Systems Command
Prince George County Public Schools
Prince George's County
Prince George's County Minority Business Opportunity Commission
Queen Anne's County – Department of Economic Development and Agriculture
Queen Anne's County – Department of Business & Tourism
Salisbury State University
St. Mary's County, MD
Towson University
University of Baltimore
University of Maryland Baltimore
University of Maryland Baltimore County
University of Maryland College Park
University of Maryland Eastern Shore
University of Maryland University College
Virginia Department of Transportation
Washington County
Washington Suburban Sanitary Commission
West Virginia Small Business Development Center
Women Presidents' Educational Organization

B. Entities from which lists or directories were not obtained

Allegany County
Allegany County Chamber of Commerce
Asian Pacific American Chamber of Commerce

Baltimore American Indian Center
Baltimore City Chamber of Commerce
Baltimore Development Corporation
Berkeley County
Berkeley County Chamber of Commerce
Brunswick MD Economic Development Commission
Calvert County Economic Development Corporation
Caroline County
Cecil County
Coalition of Korean American Organizations
DC Sports and Entertainment Commission
District of Columbia Public Schools
Downtown Frederick Partnership
Downtown Partnership of Baltimore
Economic Alliance of Greater Baltimore
Empower Baltimore
Entrepreneur Council of Frederick MD
Fiesta DC
Frederick County Chamber of Commerce
Harford County
Host Marriott
Howard County Chamber of Commerce
Japan-America Society
Jefferson County Chamber of Commerce
Jefferson County Development Authority
Kent County Chamber of Commerce
Kent County, MD
Maryland Commission for Women
Maryland Small Business Development Center – Capital Region Serving
Maryland Small Business Development Center – Northern Region
Maryland State Conference of NAACP Branches
Minority Business Enterprise Coalition
National Black Chamber of Commerce
Norfolk International Airport
Ocean City Chamber of Commerce
Prince George's County
Prince George's County Black Chamber of Commerce
Queen Anne's County Chamber of Commerce
Salisbury – Wicomico Economic Development
Small Business Resource Center (Baltimore)
Somerset County, MD
Southern Maryland Consortium of African American Community Organizations
St. Mary's County Chamber of Commerce
St. Mary's County Community Development Corporation Inc.
St. Mary's County, MD
Talbot Chamber of Commerce

Upper Shore Workforce Investment Board
Virginia Department of Transportation
Virginia State Conference of NAACP Branches
West Virginia Secretary of State
Wicomico County, MD
Women Business Owners of Montgomery County
Women's Business Network
Women's Transportation Seminar – National
Women's Transportation Seminar – Baltimore
Worchester County, MD
American Subcontractors Association of Baltimore
Annapolis & Anne Arundel Chamber of Commerce
Asian American Business Development Council
Baltimore Black Pages
Baltimore Gas & Energy Supplier Diversity Program
Baltimore Washington Corridor Chamber of Commerce
Black Chamber of Commerce of Anne Arundel County
Building Congress and Exchange of Metropolitan Baltimore
Calvert County Chamber of Commerce
Cecil County Chamber of Commerce
Charles County Business Network
Charles County Chamber of Commerce
Charles County Technology Council
Chesapeake Women's Network
City of Frederick Department of Economic Development
DC Department of Public Works
Dorchester County Chamber of Commerce
Frederick County – Fort Detrick Business Development Office
Garrett County Chamber of Commerce
Howard County
Jacob France Institute (University of Baltimore)
Maryland Chamber of Commerce
Maryland Hispanic Chamber of Commerce
Mid-Atlantic Hispanic Chamber of Commerce – District of Columbia
Mid-Atlantic Hispanic Chamber of Commerce – Bowie
Mid-Atlantic Hispanic Chamber of Commerce – Hyattsville
Mid-Atlantic Hispanic Chamber of Commerce – Gaithersburg/Rockville/Germantown
Mid-Atlantic Hispanic Chamber of Commerce – Frederick
Mid-Atlantic Hispanic Chamber of Commerce – Hagerstown/Washington City
Mid-Atlantic Hispanic Chamber of Commerce – Northern Virginia
Minority Business & Consumer Resource Directory
Montgomery County Chamber of Commerce
National Association of Minority Contractors (DC)
National Association of Women in Construction
Prince George's Chamber of Commerce Small and Minority Business Committee
Richmond Metropolitan Business League

Talbot County, MD
UGI Electric
USAMRMC Office of Small Business Programs
West Virginia Small Business Development Center
City of Richmond Virginia
Concerned Black Women of Calvert County
DC Conference of NAACP Branches
Frederick County African American Chamber of Commerce
Governor's Commission on Hispanic Affairs
Governor's Commission on Indian Affairs
Greater Baltimore Black Chamber of Commerce
Hispanic Chamber of Commerce of Montgomery County
Korean American Association of the State of Maryland
Korean Business Enterprise Association
Korean MBE Association
Korean Society of Maryland
Maryland Alliance of Black Chambers of Commerce
Minority Building Industry Association
Prince George's Hispanic/Latino Chamber of Commerce
Virginia Asian Chamber of Commerce
Virginia Hispanic Chamber of Commerce
West Virginia Dept of Commerce
Women Construction Owners and Executives
Allegany Trade/Business Association
Baltimore Hispanic Chamber of Commerce
Baltimore Orioles
Caribbean-American Chamber of Commerce and Industry for the Greater Washington Area Network
Dominion Electric
Greater Washington Hispanic Chamber of Commerce
Maryland Small Business Development Center – Allegany County
Maryland Small Business Development Center – Washington County
Maryland Small Business Development Center – Southern Region
Maryland Small Business Development Center – Eastern Region
Maryland/DC Minority Supplier Development Council
National Association of Minority Contractors
National Association of Women Business Owners – Baltimore Regional
National Association of Women Business Owners – Greater DC
National Association of Women Business Owners – National Chapter
Tri-State Minority Supplier Development Council
Virginia Minority Supplier Development Council
Women Business Owners of Prince George's County
Women Entrepreneurs of Baltimore
Women's Business Enterprise National Council
Women's Transportation Seminar

Appendix B—State Procurement Agencies Subject to Article 14-301

Maryland Department of Aging
Maryland Department of Agriculture
Maryland State Archives
Office of the Attorney General
Maryland Automobile Insurance Fund
Baltimore City Community College
Board of Public Works
Bowie State University
Department of Budget & Management
Department of Business and Economic Development
Canal Place Preservation & Development Authority
Comptroller of Maryland
Coppin State University
Maryland Schools for the Deaf
Maryland State Department of Education
State Board of Elections
Maryland Department of the Environment
Maryland Environmental Service
State of Maryland Executive Department
Maryland Food Center Authority
Frostburg State University
Department of General Services
Department of Health & Mental Hygiene
Maryland Higher Education Commission
Department of Housing & Community Development
Maryland Commission on Human Relations
Department of Human Resources
Department of Information Technology
Maryland Insurance Administration
Department of Juvenile Services
Department of Labor, Licensing and Regulation
Maryland State Lottery Agency
Department of the Military
Morgan State University
Department of Natural Resources
Office of the People's Counsel
Department of Planning
Department of Maryland State Police
Office of the State Prosecutor
The Public Defender System
The Department of Public Safety & Correctional Services
Public School Construction Program
Public Service Commission
Maryland Public Broadcasting Commission
Maryland State Retirement Agency
Salisbury University
Saint Mary's College of Maryland
The Maryland Stadium Authority
Subsequent Injury Fund
Uninsured Employers' Fund Board
MD Teachers & State Employees Supplemental Retirement Plans
Towson University
Maryland Department of Transportation – Maryland Aviation Administration
Maryland Department of Transportation – Motor Vehicle Administration
Maryland Department of Transportation – Office of the Secretary
Maryland Department of Transportation – Maryland Port Administration
Maryland Department of Transportation – State Highway Administration
Maryland Department of Transportation – Maryland Transit Administration
Maryland Department of Transportation – Maryland Transportation Authority
Maryland State Treasurer's Office
University of Baltimore
University of Maryland, Baltimore
University System of Maryland, Baltimore County
University System of Maryland, College Park
University System of Maryland, Eastern Shore
University System of Maryland, University College
Maryland Department of Veterans Affairs
Worker's Compensation Commission

Appendix B—State Procurement Agencies Subject to Article 14-301

Appendix C—Glossary

Aggregation, aggregated: Refers to the practice of combining smaller groups into larger groups. In the present context this term is typically used in reference to the presentation of utilization, availability, or related statistics according to industry. For example, statistics presented for the "Construction" sector as a whole are more aggregated than separate statistics for "Building Construction," "Heavy Construction," and Special Trades Construction" industries. See also "Disaggregation, disaggregated."

Anecdotal evidence: Qualitative data regarding business owners' accounts of experiences with disparate treatment and other barriers to business success.

Availability: A term of art in disparity studies that refers to the percentage of a given population of businesses owned by one or more groups of interest. For example, Table A indicates that M/WBE availability in Construction is 32.39 percent, indicating our estimate that 32.39 percent of all the construction establishments in the State's relevant market area are owned by minorities or women. *See also* Utilization, Disparity Ratio.

Baseline Business Universe: The underlying population of business establishments that is used in an availability analysis. The denominator in an M/WBE availability measure.

Capacity: This term has no single definition. See Chapter II for an extended discussion of this concept and its role in disparity studies.

MSA: Metropolitan Statistical Area. As defined by the federal Office of Management and Budget, contains at least one urbanized area that has a total population of 50,000 or more, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.

Constitutional significance or **substantive significance:** An indication of the how large or small a given disparity is. Under the EEOC's "four-fifths" rule, a disparity ratio is substantively significant if it is 0.8 or less on a scale of 0 to 1 or 80 or less on a scale of 1 to 100.

***De novo*:** "Anew." A *de novo* review is a completely new review of evidence held in a higher or appellate court as if the original trial court's review had never taken place.

Decennial: Refers to the census conducted every decade by the U.S. Census Bureau. The last decennial census was conducted in 2000. The next is currently underway as of this writing (in 2010).

Demand-side: Refers to activity on the demand-side of an economic market. For example, when State agencies hire contractors or vendors they are creating market demand. *See also* "Supply-side."

Dependent variable: In a regression analysis, a variable whose value is postulated to be influenced by one or more other, "independent" or "exogenous" or "explanatory," variables. For example, in business owner earnings regressions, business owner earnings is the dependent

variable, and other variables, such as industry, geographic location, or age are the explanatory variables. *See also* "Independent variable," "Exogenous variable."

Disaggregation, disaggregated: Refers to the practice of splitting larger groups into smaller groups. In the present context this term is typically used in reference to the presentation of utilization, availability, or related statistics according to industry. For example, statistics presented for "Building Construction," "Heavy Construction," and Special Trades Construction" industries are more disaggregated than statistics for the "Construction" sector as a whole.

Disparate impact: A synonym for "disparity," often used in the employment discrimination litigation context. A disparate impact occurs when a "good" outcome for a given group occurs significantly less often than expected given that group's relative size, or when a "bad" outcome occurs significantly more often than expected.

Disparity ratio: A measure derived from dividing utilization by availability and multiplying the result by 100. A disparity ratio of less than 100 indicates that utilization is less than availability. A disparity ratio of 80 or less can be taken as evidence of disparate impact. *See also* Availability, Constitutional Significance, Utilization.

Econometrics, econometrically: Econometrics is the field of economics that concerns itself with the application of statistical inference to the empirical measurement of relationships postulated by economic theory. *See also* "Regression."

Endogenous variable: A variable that is correlated with the residual in a regression analysis or equation. Endogenous variables should not be used in statistical tests for the presence of disparities. See also "Exogenous variable."

Exogenous variable: A variable that is uncorrelated with the residual in a regression analysis or equation. Exogenous variables are appropriate for use in statistical tests for the presence of disparities. *See also* "Endogenous variable," "Independent variable," "Dependent variable."

SFY: State Fiscal Year. Maryland's State Fiscal Year runs from July 1 through June 30.

First-tier subcontractors: Subcontractors or suppliers hired directly by the prime contractor.

Independent variable: In a regression analysis, one or more variables that are postulated to influence or explain the value of another, "dependent" variable. For example, in business owner earnings regressions, business owner earnings is the dependent variable, and other variables, such as industry, geographic location, or age are the independent or explanatory variables. *See also* "Dependent variable," "Exogenous variable."

MBE: Minority-Owned Business Enterprise. A business establishment that is 51% or more owned and controlled by racial or ethnic minorities (*i.e.* African Americans, Hispanics, Asians, or Native Americans).

Mean: A term of art in statistics, synonymous in this context with the arithmetic average. For example, the mean value of the series 1, 1, 2, 2, 2, 4, 5 is 2.43. This is derived by calculating the

sum of all the values in the series (*i.e.* 17) and dividing that sum by the number of elements in the series (*i.e.* 7).

Median: A term of art in statistics, meaning the middle value of a series of numbers. For example, the median value of the series 1, 1, 2, 2, 2, 4, 5 is 2.

Microdata or micro-level data: Quantitative data rendered at the level of the individual person or business, as opposed to data rendered for groups or aggregates of individuals or businesses. For example, Dun and Bradstreet provides micro-level data on business establishments. The Census Bureau's *Survey of Business Owners*, provides grouped or aggregated data on businesses.

Misclassification: In the present context, this term refers to a situation when a listing or directory of minority-owned or women-owned firms has incorrectly classified a firm's race or gender status. For example, when a firm listed as Hispanic-owned is actually African American owned, or when a firm listed as White female-owned is actually White male-owned. *See also* "Nonclassification."

NAICS: North American Industry Classification System. The standard system for classifying industry-based data in the U.S. Superceded the Standard Industrial Classification (SIC) System in 1997. *See also* "SIC."

Nonclassification: In the present context, this term refers to a type of misclassification when a listing or directory has not identified firms as minority-owned or women-owned when, in fact, they are. See "Misclassification."

PUMS: Public Use Microdata Sample. Both the decennial census and the American Community Survey publish PUMS products.

p-value: A standard measure used to represent the level of statistical significance. It states the numerical probability that the stated relationship is due to chance alone. For example, a p-value of 0.05 or 5% indicates that the chance a given statistical difference is due purely to chance is 1-in-20. *See also* "Statistical Significance."

Regression, multiple regression, multivariate regression: A type of statistical analysis which examines the correlation between two variables ("regression") or three or more variables ("multiple regression" or "multivariate regression") in a mathematical model by determining the line of best fit through a series of data points. Econometric research typically employs regression analysis. *See also* "Econometrics."

SBO: The Census Bureau's *Survey of Business Owners* statistical data series. Part of the five-year *Economic Census* series.

Setaside, setasides: A contracting practice where certain contracts or classes of contracts are reserved for competitive bidding exclusively among a given subset of contractors, for example minority-owned and women-owned contractors.

SIC: Standard Industrial Classification System. Prior to 1997, the standard system for classifying industry-based data in the U.S. Superceded by the North American Industry Classification System (NAICS). *See also* "NAICS."

Statistical significance: A statistical outcome or result that is unlikely to have occurred as the result of random chance alone. The greater the statistical significance, the smaller the probability that it resulted from random chance alone. *See also* "p-value."

Stratified: In the present context, this refers to a statistical practice where random samples are drawn within different categories or "strata" such as time period, industry sector, or DBE status.

Substantive significance or **constitutional significance:** An indication of the how large or small a given disparity is. Under the EEOC's "four-fifths" rule, a disparity ratio is substantively significant if it is 0.8 or less on a scale of 0 to 1.

Supply-side: Refers to activity on the supply-side of an economic market. For example, when new businesses are formed, other things equal, the supply of contractors to the market is increased. See also "Demand-side."

t-test, t-statistic, t distribution: Often employed in disparity studies to determine the statistical significance of a particular disparity statistic. A t-test is a statistical hypothesis test based on a test statistic whose sampling distribution is a t-distribution. Various t-tests, strictly speaking, are aimed at testing hypotheses about populations with normal probability distributions. However, statistical research has shown that t-tests often provide quite adequate results for non-normally distributed populations as well.

Two-tailed (or two-sided) statistical test: A "two-tailed" test means that one is testing the hypothesis that two values, say u (utilization) and a (availability), are equal against the alternate hypothesis that u is not equal to a. In contrast, a one-sided test means that you are testing the hypothesis that u and a are equal against the alternate hypothesis u is not equal to a in only one direction. That is, that it is either larger than a or smaller than a.

Utilization: A term of art in disparity studies that refers to the percentage of a given amount of contracting and/or procurement dollars that is awarded or paid to businesses owned by one or more groups of interest. For example, Table B indicates that M/WBE utilization in Construction is 12.39 percent, indicating our estimate that 12.39 percent of the $7.9B of construction spending in our sample (or roughly $979M) was awarded to minorities or women. *See also* Availability, Disparity Ratio.

WBE: Women-Owned Business Enterprise: A business establishment that is 51% or more owned and controlled by nonminority women. In this Study, unless otherwise indicated, WBE refers to nonminority women-owned firms.

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