NERA
ECONOMIC CONSULTING

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

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About the Project Team

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.

NERA's clients value our ability to apply and communicate state-of-the-art approaches clearly and convincingly, our commitment to deliver unbiased findings, and our reputation for quality and independence. Our clients rely on the integrity and skills of our unparalleled team of economists and other experts backed by the resources and reliability of one of the world's largest economic consultancies. With its main office in New York City, NERA serves clients from over 20 offices across North America, Europe and Asia Pacific.

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.

NERA Senior Vice President Dr. Jon Wainwright led the NERA project team for this Study. Dr. Wainwright heads NERA's disparity study practice and is a nationally recognized expert on business discrimination and affirmative action. He has authored books, papers, and numerous research studies on the subject, and has been repeatedly qualified to testify on these and other issues as an expert in state and federal courts. At NERA, Dr. Wainwright directs and conducts economic and statistical studies of discrimination for attorneys, corporations, governments and non-profit organizations. He also directs and conducts research and provides clients with advice on adverse impact and economic damage matters arising from their hiring, performance assessment, compensation, promotion, termination, or contracting activities.

About the Project Team

CR Dynamics is a City of Baltimore certified MBE owned by Charles and Patricia Ramos. CR Dynamics is one of the top contact/call centers in the United States, providing services to private industry and government agencies. Over the past ten years, their perceptiveness in delivering critical program management supported with high-tech solutions has become invaluable to their clients. CRD provides a variety of services, including provision of help desk services, inbound travel counseling, order taking, reservations and outbound market research survey work. On this project, CRD provided CATI survey services for both the race/gender misclassification survey and the mail survey non-respondent survey.

Attorney Don O'Bannon, Esq. of Bryan Cave, LLP. Don O'Bannon is Of Counsel with Bryan Cave LLP in Dallas, Texas. He is the former director of Business Diversity and Development for DFW International Airport and the immediate past chairman of the Airport Minority Advisory Council. Don is a past recipient of the M/WBE Advocate of the Year award from the Fort Worth Metropolitan Chamber of Commerce, the Business Advocate of the Year award from the Dallas-Fort Worth Hispanics Contractors' Association, and the Chairman's Award from the Dallas-Fort Worth Black Contractors' Association. On this Study, Mr. O'Bannon provided a review of case law, conducted interviews with City personnel and with local business owners and drafted selected study recommendations.

Keller Professional Services is a City of Baltimore certified MBE owned by Ms. Debra Keller-Greene. Keller Professional Services specializes in human resource management and workforce development consulting services that solve complex business problems. They offer expert management advice tailored to meet their clients' business needs. Their clients are both regional and national and include local and state governments, non-profit organizations, public and private corporations, as well as local businesses of various sizes. KPS has been named twice as one of Maryland's Top 100 Minority Business Enterprises by the Governor's Office of Minority Affairs. On this project, Keller Professional Services provided assistance with focus group logistics and management.

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 contract and subcontract data collection, the mail survey and the business owner interviews.

Report Qualifications/Assumptions and Limiting Conditions

This report is for the exclusive use of the City of Baltimore (the "City"). There are no third-party beneficiaries with respect to this report, and NERA Economic Consulting does not accept any liability to any third party.

Information furnished by others, upon which all or portions of this report is based, is believed to be reliable but has not been independently verified, unless otherwise expressly indicated. Public information and industry and statistical data, including contracting, subcontracting and procurement data, are from sources we deem to be reliable; however, we make no representation as to the accuracy or completeness of such information.

The opinions expressed in this report are valid only for the purpose stated herein and as of the date of this report. No obligation is assumed to revise this report to reflect changes, events or conditions that occur subsequent to the date hereof.

All decisions in connection with the implementation or use of advice or recommendations contained in this report are the sole responsibility of the client.

In portions of this report, NERA has commented on legal issues. NERA's comments are based on its understanding of relevant law and industry best practice, as informed by legal counsel retained by NERA. However, NERA's comments are not, and should not be construed as, legal advice to the City. NERA recommends that the City seek and obtain advice from its own legal counsel in connection with its affirmative action programs and with this report.

Contents

List of Tables ix

Executive Summary 1
- A. Introduction 1
- B. Legal Standards for Government Affirmative Action Contracting Programs 1
- C. Defining the Relevant Markets 3
- D. M/WBE Availability in the City of Baltimore's Market Area 3
- E. Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings 5
- F. Statistical Disparities in Credit/Capital Markets 8
- G. M/WBE Public Sector Utilization vs. Availability in the City of Baltimore's Contracting and Purchasing Markets, 2007–2012 9
- H. Anecdotal Evidence 14
- I. The City of Baltimore's M/WBE Program: Overview and Feedback Interviews 15
- J. Recommendations for Revised Contracting Policies and Procedures 16

I. Introduction 19
- A. Study Outline 19

II. Defining the Relevant Markets 23
- A. Preparing the Master Contract/Subcontract Database 23
- B. Geographic Market Definition for Contracting and Procurement 32
- C. Product Market Definition for Contracting and Procurement 35

III. M/WBE Availability in the City of Baltimore's Market Area 45
- A. Introduction 45
- B. Identifying Business Establishments in the Relevant Markets 46
- C. Estimates of M/WBE Availability 71

IV. Market-Based Disparities in Business Formation and Business Owner Earnings 89
- A. Introduction 89
- B. Race and Gender Disparities in Earnings 93
- C. Race and Gender Disparities in Business Formation 105
- D. Expected Business Formation Rates—Implications for Current M/WBE Availability 115
- E. Evidence from the Survey of Business Owners 118

V. Statistical Disparities in Capital Markets 127
- A. Introduction 127
- B. Theoretical Framework and Review of the Literature 129
- C. Empirical Framework and Description of the Data 132
- D. Qualitative Evidence 137
- E. Differences in Loan Denial Rates by Race, Ethnicity or Gender 141
- F. Differences in Interest Rates Charged on Approved Loans 151
- G. Loan Approval Rates and Access to Credit 154

H. Analysis of Credit Market Discrimination in the U.S. in 1998 158
I. Analysis of Credit Market Discrimination in the U.S. in 2003 168
J. Further Analysis of Credit Market Discrimination: NERA Surveys 1999-2007.....176
K. Conclusions and Results from More Recent Analyses 179

VI. M/WBE Utilization and Disparity in City of Baltimore Contracting Activity.....185
A. Introduction.....185
B. M/WBE Utilization.....185
C. Disparity Analysis.....187
D. Current Availability versus Expected Availability 191

VII. Anecdotal Evidence of Disparities in the City of Baltimore's Market Area.....193
A. Introduction.....193
B. Business Experience Surveys 194
C. Business Owner Interviews.....211
D. Conclusion 221

VIII. The City of Baltimore's M/WBE Program: Overview and Feedback Interviews 223
A. Overview.....223
B. Outreach to Minority- and Women-owned and Other Small Businesses 227
C. Program Elements.....229
D. Bidder Non-Discrimination Policy 239
E. Business Owner Feedback Interviews 241

IX. Recommendations for Revised Contracting Policies and Procedures 253
A. Race- and Gender-Neutral Recommendations.....253
B. Race- and Gender-Conscious Recommendations.....260

References.....267

Appendix A. Glossary.....275

Appendix B. Legal Standards for Government Race- and Gender-Conscious Contracting Programs 281
A. Overview of Strict Scrutiny 281
B. Compelling Interest.....291
C. The Narrow Tailoring Analysis 299
D. Conclusion 302
E. List of Authorities.....302

Appendix C. Master M/WBE Directory Sources 305
A. Entities with lists of M/WBE firms that were duplicative of previously collected lists 305
C. Entities that had no directory, or their directory did not identify race and gender 305
D. Entities that were non responsive to repeated contacts.....306
E. Entities that declined to provide the requested information 307

Appendix D. Detailed Utilization, Availability & Disparity Tables 309

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List of Tables

Table A. Overall Estimated M/WBE Availability Percentages in the City of Baltimore's Market Area 5

Table B1. M/WBE Utilization in Contracting at the City of Baltimore (Dollars Awarded) 9

Table B2. M/WBE Utilization in Contracting at the City of Baltimore (Dollars Paid) 10

Table C1. Utilization, Availability and Disparity Results for City of Baltimore Contracting, Overall and by Contracting Category (Dollars Awarded) 11

Table C2. Utilization, Availability and Disparity Results for City of Baltimore Contracting, Overall and by Contracting Category (Dollars Paid) 12

Table D. Current Availability and Expected Availability for City of Baltimore Contracting 13

Table 2.1. Summary of Master Contract/Subcontract Database: City of Baltimore Contracts and Subcontracts by Procurement Category 26

Table 2.2. Summary of Master Contract/Subcontract Database: Prime Contracts by Year 27

Table 2.3. Summary of Master Contract/Subcontract Database: Prime Contracts by City Agency 29

Table 2.4. Distribution of Contracting Dollars by Geographic Location 33

Table 2.5. Distribution of Baltimore Contract Award Dollars by State and County, Inside the Market Area 34

Table 2.6. Distribution of Contract and Subcontract Dollars Awarded by Industry Group: Construction 36

Table 2.7. Distribution of Contract and Subcontract Dollars Awarded by Industry Group: AE-CRS 38

Table 2.8. Distribution of Contract and Subcontract Dollars Awarded by Industry Group: Services 38

Table 2.9. Distribution of Contract and Subcontract Dollars Awarded by Industry Group: CSE 41

Table 3.1. Construction—Number of Businesses and Industry Weight, by NAICS Code 48

Table 3.2. AE-CRS—Number of Businesses and Industry Weight, by NAICS Code 50

Table 3.3. Services—Number of Businesses and Industry Weight, by NAICS Code 51

Table 3.4. CSE—Number of Businesses and Industry Weight, by NAICS Code 54

Table 3.5. Construction—Number of Listed M/WBEs and Industry Weight (Dollars Awarded), by NAICS Code 57

Table 3.6. AE-CRS—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code 59

Table 3.7. Services—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code 60

Table 3.8. CSE—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code 63

Table 3.9. Listed M/WBE Survey—Amount of Misclassification, by Putative M/WBE Type 67

Table 3.10. Unclassified Businesses Survey—By Race and Gender 69

Table 3.11. Overall Estimated M/WBE Availability Percentages 72

Table 3.12. Detailed M/WBE Availability Percentages—Construction (All Contracts) (Dollars Awarded) 73

Table 3.13. Detailed M/WBE Availability Percentages—AE-CRS (All Contracts) (Dollars Awarded) 76

Table 3.14. Detailed M/WBE Availability Percentages—Services (All Contracts) (Dollars Awarded) 77

Table 3.15. Detailed M/WBE Availability Percentages—CSE (All Contracts) (Dollars Awarded) 83

Table 4.1. Annual Wage Earnings Regressions, All Industries, 2007-2011 97

Table 4.2. Annual Wage Earnings Regressions, Construction and Related Industries, 2007-2011 98

Table 4.3. Annual Wage Earnings Regressions, Goods and Services Industries, 2007-2011 99

Table 4.4. Annual Business Owner Earnings Regressions, All Industries, 2007-2011 102

Table 4.5. Business Owner Earnings Regressions, Construction and Related Industries, 2007-2011 103

Table 4.6. Business Owner Earnings Regressions, Goods and Services Industries, 2007-2011 104

Table 4.7. Self-Employment Rates in 2007-2011 for Selected Race and Gender Groups: United States and the City of Baltimore Market Area, All Industries 108

Table 4.8. Self-Employment Rates in 2007-2011 for Selected Race and Gender Groups: United States and the City of Baltimore Market Area, Construction Sector and Goods and Services Sector 109

Table 4.9. Business Formation Regressions, All Industries, 2007-2011 112

Table 4.10. Business Formation Regressions, Construction and Related Industries, 2007-2011 113

Table 4.11. Business Formation Regressions, Goods and Services Industries, 2007-2011 114

Table 4.12. Actual and Potential Business Formation Rates in the City of Baltimore Market Area 117

Table 4.13. Disparity Ratios from the 2007 Survey of Business Owners, United States, All Industries 120

Table 4.14. Disparity Ratios from the 2007 Survey of Business Owners, State of Maryland, All Industries 121

Table 4.15. Disparity Ratios from the 2007 Survey of Business Owners, United States, Construction and AE-CRS 122

Table 4.16. Disparity Ratios from the 2007 Survey of Business Owners, State of Maryland, Construction and AE-CRS 123

Table 4.17. Disparity Ratios from the 2007 Survey of Business Owners, United States, Goods and Services 124

Table 4.18. Disparity Ratios from the 2007 Survey of Business Owners, State of Maryland, Goods and Services 125

Table 5.1. Selected Population-Weighted Sample Means of Loan Applicants from 1993 NSSBF Data 135

Table 5.2. Selected Sample Means of Loan Applicants—SATL 136

Table 5.3. Problems Firms Experienced During Preceding 12 Months—USA 138

Table 5.4. Problems Firms Experienced During Preceding 12 Months—SATL 138

Table 5.5. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months—USA 139

Table 5.6. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months—SATL 139

Table 5.7. Types of Problems Facing Your Business, by Race and Gender 141

Table 5.8. Determinants of Loan Denial Rates—USA 144

Table 5.9. Determinants of Loan Denial Rates—SATL Division 145

Table 5.10. Alternative Models of Loan Denials 149

Table 5.11. Models of Credit Card Use–USA 151

Table 5.12. Models of Credit Card Use–SATL 151

Table 5.13. Models of Interest Rate Charged—USA 153

Table 5.14. Models of Interest Rate Charged—SATL 154

Table 5.15. Racial Differences in Failing to Apply for Loans Fearing Denial 156

Table 5.16. Models of Failure to Obtain Credit Among Firms that Desired Additional Credit 157

Table 5.17. What is the Most Important Problem Facing Your Business Today? 159

Table 5.18. Determinants of Loan Denial Rates—USA 162

Table 5.19. Determinants of Loan Denial Rates—SATL 163

Table 5.20. More Loan Denial Probabilities 165

Table 5.21. Models of Interest Rate Charged 167

Table 5.22. Racial Differences in Failing to Apply for Loans Fearing Denial 167

Table 5.23. Models of Credit Card Use 168

Table 5.24. What is the Most Important Problem Facing Your Business Today? 170

Table 5.25. Determinants of Loan Denial Rates—USA 172

Table 5.26. Determinants of Loan Denial Rates—SATL 173

Table 5.27. Models of Interest Rate Charged 174

Table 5.28. Models of Credit Card Use 175

Table 5.29. Racial Differences in Failing to Apply for Loans Fearing Denial 176

Table 5.30. Determinants of Loan Denial Rates—Nine Jurisdictions 178

Table 5.31. Determinants of Interest Rates—Nine Jurisdictions 179

Table 6.1. M/WBE Utilization at the City of Baltimore (Dollars Awarded) 186

Table 6.2. M/WBE Utilization at the City of Baltimore (Dollars Paid) 187

Table 6.3. Utilization, Availability, and Disparity Results for City of Baltimore Contracting, Overall and by Contracting Category (Dollars Awarded) 188

Table 6.4. Utilization, Availability, and Disparity Results for City of Baltimore Contracting, Overall and by Contracting Category (Dollars Paid) 190

Table 6.5. Current Availability and Expected Availability for City of Baltimore Contracting 192

Table 7.1. Race, Gender and Contracting Category of Mail Survey Respondents 195

Table 7.2. Survey Respondents Indicating They Had Worked or Attempted to Work for Public Sector Agencies in the Last Five Years 196

Table 7.3. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Gender While Participating in Business Dealings 198

Table 7.4. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Gender While Participating in Business Dealings (Rankings) 200

Table 7.5. Prevalence of Disparate Treatment Facing M/WBEs 202

Table 7.6. Prevalence of Disparate Treatment Facing M/WBEs, by Type of Business Dealing 203

Table 7.7. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts—Sample Differences 205

Table 7.8. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Regression Results 206

Table 7.9. Percent of M/WBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with Goals Seldom or Never *Hire* Them on Projects without Such Goals 207

Table 7.10. Percent of M/WBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with Goals Seldom or Never *Solicit* Them on Projects without Such Goals 208

Table AD.1. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore Construction Contracting (Dollars Awarded) 310

Table AD.2. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore Construction Contracting (Dollars Paid) 319

Table AD.3. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore AE-CRS Contracting (Dollars Awarded) 329

Table AD.4. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore AE-CRS Contracting (Dollars Paid) 332

Table AD.5. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore Services Contracting (Dollars Awarded) 335

Table AD.6. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore Services Contracting (Dollars Paid) 357

Table AD.7. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore CSE Contracting (Dollars Awarded) 380

Table AD.8. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore CSE Contracting (Dollars Paid) 400

Executive Summary

A. Introduction

The City of Baltimore ("the City" or "Baltimore") commissioned this Study to evaluate whether minority-owned and women-owned business enterprises in the City's market area have full and fair opportunities to compete for its prime contracts, purchases and associated subcontracts.

To ensure compliance with constitutional mandates and M/WBE program best practices, the City of Baltimore commissioned NERA Economic Consulting to examine the past and current status of M/WBEs in its geographic and product markets for contracting and procurement. The results of the Study provide the evidentiary record necessary for the City'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 compete on a fair basis in the City's contracting and procurement activity.

This Study finds statistical evidence consistent with the presence of business discrimination against M/WBEs in the private sector of the City of Baltimore's market area. These findings are presented in Chapters IV and V. Statistical analyses of the City's own contracting and purchasing, which also document evidence consistent with business discrimination, are contained in Chapters II, III and VI. As a check on our statistical findings, documented in Chapter VII, 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 market area, both M/WBE and non-M/WBE.

B. Legal Standards for Government Affirmative Action Contracting Programs

To be legally defensible, a race-based program must meet the judicial test of constitutional strict scrutiny. Strict scrutiny is the highest level of judicial review and consists of two elements:

- The government must establish its "compelling interest"[1] in remedying race discrimination by showing "a strong basis in evidence"[2] of the persistence of discrimination. Such evidence may consist of demonstrating that the entity is a "`passive participant' in a system of racial exclusion…."[3]

- Any remedies adopted must be narrowly tailored to that discrimination; that is, "the means chosen to accomplish the government's asserted purpose are specifically and narrowly framed to accomplish that purpose."[4]

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[1] *Croson*, 488 U.S. at 492.

[2] *Id.* at 500 (citing *Wygant v. Jackson Board of Education*, 476 U.S. 267, 277 (1986)).

[3] *Id.* at 492.

[4] *Sherbrooke*, 345 F.3d at 971 (citing *Grutter v. Bollinger*, 539 U.S. 306, 333 (2003)).

The compelling interest prong has been met through two types of proof:

- Statistical evidence of "identified discrimination in [the relevant] industry,"[5] typically established by showing the underutilization of minority-owned firms relative to their availability in the jurisdiction's market area known as disparity indexes or disparity ratios.[6]

- Anecdotal evidence of race-based barriers to the full and fair participation of minority-owned firms in the market area and in seeking contract opportunities with the agency.[7]

The narrow tailoring prong has been met through the assessment of several factors:

- Consideration of alternative, race-neutral means to increase M/WBE participation;[8]

- The flexibility of the program requirements, including the availability of waver provisions;[9]

- The duration of the proposed relief;[10]

- The relationship of numerical participation goals to the availability of M/WBEs in the relevant market;[11]

- The impact of the relief on third parties;[12] and

- The overinclusiveness or underinclusiveness of the racial classifications.[13]

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5 *Croson*, 488 U.S. at 505.

6 *See* J. Wainwright and C. Holt, *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, 2010, pp. 5-6.

7 *Concrete Works of Colorado, Inc. v. City and County of Denver,* 36 F.3d 1513, 1520 (10th Cir. 1994) ("*Concrete Works II*") ("Personal accounts of actual discrimination or the effects of discriminatory practices may, however, vividly complement empirical evidence. Moreover, anecdotal evidence of a municipality's institutional practices that exacerbate discriminatory market conditions are often particularly probative. Therefore, the government may include anecdotal evidence in its evidentiary mosaic of past or present discrimination."). *See also Adarand VII*, 228 F.3d at 1166 ("Both statistical and anecdotal evidence are appropriate in the strict scrutiny calculus, although anecdotal evidence by itself is not.").

8 *Croson*, 488 U.S. at 507, citing *United States v. Paradise*, 480 U.S. 149, 171 (1987). *See also Adarand Constructors, Inc. v. Pena,* 515 U.S. 200, 237-238 (1995) ("Adarand III").

9 *Paradise*, 480 U.S. at 171; *Adarand VII,* 228 F.3d at 1177.

10 *Croson*, 488 U.S. at 498, 509. *See also Paradise*, 480 U.S. at 171.

11 *Paradise*, 480 U.S. at 171.

12 *Id*.

13 *Croson*, 488 U.S. at 506.

In *Adarand Constructors, Inc. v. Peña,*[14] the Court extended the analysis of strict scrutiny to race-based federal enactments such as the federal ("DBE") Program. Just as in the state and local government context, the national government must have a compelling interest for the use of race, and the remedies adopted must be narrowly tailored to meet that interest.

Appendix B provides an overview of constitutional standards and case law and outlines the legal and program development issues the City of Baltimore should consider in evaluating its M/WBE Program, with emphasis on critical issues and evidentiary concerns.

C. Defining the Relevant Markets

Chapter II describes how the relevant geographic and product markets were defined for this Study. These definitions were derived empirically, based on the Master Contract/Subcontract Database assembled for the Study. The relevant geographic and product markets were then used to focus and frame the quantitative and qualitative analyses in the remainder of the Study.

The Master Contract/Subcontract Database contains information on 7,477 prime contracts and 4,736 associated subcontracts active during 2007-2012. These contracts and purchases had a total award value of $2.489 billion and a total payment value of $1.959 billion (see Table 2.1).[15] Contracts and subcontracts in the database were catalogued according to fiscal year and whether they were for Construction; Architecture, Engineering and other Construction-related Professional Services ("AE-CRS"); Services; or Commodities, Supplies and Equipment ("CSE"). The firms performing these contracts and subcontracts were catalogued according to geographic location, primary industry, race and gender.

The Master Contract/Subcontract Database was analyzed to determine the geographic radius around the City of Baltimore that accounts for at least 75 percent of aggregate contract and subcontract spending. The City's relevant geographic market area was determined to include the Baltimore-Towson, MD Metropolitan Statistical Area ("MSA"). The Baltimore-Towson, MD MSA includes the City of Baltimore, Anne Arundel County, Baltimore County, Carroll County, Harford County, Howard County and Queen Anne's County (see Tables 2.4 and 2.5).

The Master Contract/Subcontract Database was also analyzed to determine those detailed industry categories that collectively account for 99 percent of contract and subcontract spending by the City of Baltimore. We determined that the City's product market includes firms in 228 different North American Industrial Classification System ("NAICS") Industry Groups and 523 NAICS Industries (see Tables 2.6 through 2.9).

D. M/WBE Availability in the City of Baltimore's Market Area

Chapter III estimates the percentage of firms in the City of Baltimore's relevant market area that are owned by minorities or women. For each industry category, M/WBE availability is defined

[14] 515 U.S. 200 (1995) ("*Adarand III*").

[15] Payments on contracts that were not substantially complete at the time of the Study data collection were excluded from the paid dollar totals.

as the number of M/WBEs divided by the total number of businesses in the City's contracting market area, weighted by the dollars attributable to each detailed industry. Determining the total number of establishments in the relevant market is more straightforward than determining the number of minority- or women-owned establishments 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. Availability estimates for more detailed industries within the major procurement categories appear in Tables 3.12 through 3.15.

Table A. Overall Estimated M/WBE Availability Percentages in the City of Baltimore's Market Area

	African American	Hispanic	Asian/ Pacific Islander	Native American	Minority	Non-minority Female	M/WBE	Non-M/W/BE
OVERALL								
AWARD DOLLARS	10.27	1.89	3.97	0.33	16.46	11.83	28.28	71.72
PAID DOLLARS	11.10	1.76	3.63	0.34	16.83	12.85	29.68	70.32
CONSTRUCTION								
AWARD DOLLARS	10.64	2.11	1.86	0.32	14.93	11.33	26.25	73.75
PAID DOLLARS	11.26	2.06	1.81	0.33	15.47	11.88	27.34	72.66
AE-CRS								
AWARD DOLLARS	8.53	1.94	6.31	0.20	16.99	10.65	27.64	72.36
PAID DOLLARS	9.77	1.64	5.90	0.17	17.48	12.59	30.07	69.93
SERVICES								
AWARD DOLLARS	12.83	1.63	3.38	0.51	18.35	14.72	33.06	66.94
PAID DOLLARS	13.41	1.57	3.51	0.45	18.94	15.52	34.46	65.54
CSE								
AWARD DOLLARS	9.56	1.52	3.56	0.52	15.16	11.24	26.40	73.60
PAID DOLLARS	9.56	1.52	3.56	0.52	15.16	11.24	26.40	73.60

Source: See Table 3.11.

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" or "Asian/Pacific Islander" refers to an individual having origins in the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands; "Native American" refers to an individual having origins in any of the original peoples of North America or of Hawai'i. Businesses owned by members of these groups are collectively referred to as M/WBEs.

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

Chapter III demonstrates that current M/WBE availability levels in the City of Baltimore market area, as measured in Chapter II, are substantially lower in most instances 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.[16] 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 in 2007–2011 in the construction sector were 34.7 percent lower in the City of Baltimore market area than for nonminority males who were otherwise similar in terms of geographic location, industry, age and education (see Table 4.2). This difference is large and statistically significant. Large, adverse, and statistically significant wage disparities were also observed for Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting two or more races and nonminority women. These disparities are consistent with the presence of market-wide discrimination. Observed disparities for these groups ranged from a low of -20 percent for Hispanics to a high of -35 percent for African Americans and Asians/Pacific Islanders. Similar results were observed when the analysis was restricted to the goods and services sector or expanded to the economy as a whole. 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 City of Baltimore market area were different enough from elsewhere in the country or the economy to alter any of the basic conclusions regarding wage and salary disparities. 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 found, for example, that annual earnings for self-employed African Americans in 2007–2011 in the construction sector were 37 percent lower in the City of Baltimore market area than for nonminority males who were otherwise similar in terms of geographic location, industry, age and education (see Tables 4.4 to 4.6). This difference is large and statistically significant. Large, adverse, and statistically significant wage disparities were also observed for Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting two or more races and nonminority women. These disparities are consistent with the presence of market-wide discrimination. Observed disparities for these groups ranged from a low of -17 percent for

[16] 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*. 64.

Hispanics to a high of -44 percent for nonminority women. Similar results were observed when the analysis was restricted to the goods and services sector or expanded to the economy as a whole. As with the wage and salary disparity analysis, we enhanced our basic statistical model to test whether minority and female business owners in the City of Baltimore 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 affect 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 business formation rates may 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 (see Tables 4.7 to 4.12). As with earnings, in most cases we observed large, adverse, and statistically significant disparities consistent with the presence of discrimination in these markets in the overall economy, in the construction sector and in the goods and services sector. In the construction sector, for example, business formation rates for African Americans were 8.8 percentage points lower than for comparable nonminority males. For other groups, disparities ranged from a low of 5.2 percentage points lower for Asians/Pacific Islanders to a high of 9.7 percentage points lower for nonminority females. Overall, business formation rates for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting two or more races and nonminority women, were substantially and statistically significantly lower than the corresponding nonminority male business formation rate. Similar results were observed in the goods and services sector and in the economy as a whole.[17]

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) (see Tables 4.13 to 4.18). 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 State of Maryland.[18] The size of the disparities facing minority-owned firms in Maryland is very large. For example, although 20.06 percent of all firms in Maryland are owned by African Americans, they earned only 3.44 percent of all sales and receipts. Hispanic-owned firms are 5.1 percent of all firms in Maryland, yet they earned only 2.2 percent of all sales and receipts. Asian-owned firms are 7.1 percent of all firms in Maryland, but earned only 5.8 percent of sales and receipts. Native American-owned firms are 0.65 percent of all firms in Maryland, but earned only 0.17 percent of sales and receipts. Women-owned firms were 33.8 percent of all firms in Maryland, but these firms earned only 11.3 percent of sales and receipts.

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[17] The only two exceptions to this were for Asians/Pacific Islanders in Goods and Services sector and in the economy-wide sector.

[18] In general, with this particular dataset, it is not possible to analyze geographies below the state level.

F. Statistical Disparities in Credit/Capital Markets

In Chapter V, 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 prevent such businesses from opening in the first place. This analysis has been held by some courts to be probative of a public entity's compelling interest in remedying discrimination.[19] We provide qualitative and quantitative evidence supporting the view that M/WBE firms, particularly African American-owned firms, suffer discrimination in this market.

The SSBF datasets are constructed for the nation as a whole and for nine Census divisions. The City of Baltimore market area is part of the South Atlantic division (SATL), which includes the State of Maryland and eight surrounding states.[20] To render the results as narrowly tailored as possible, we included indicator variables in our statistical analyses to determine whether the results for the SATL were different from those for the nation as a whole. We determined that the national results also apply in general to the SATL.

The main 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 (see Tables 5.15, 5.22, 5.29).

- When minority-owned firms did apply 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 (see Tables 5.8, 5.9, 5.18, 5.19, 5.25, 5.26).

- When minority-owned firms did receive a loan they were obligated to pay higher interest rates on the loans than comparable nonminority-owned firms (see Tables 5.13, 5.14, 5.21, 5.27).

- Far more minority-owned firms report that credit market conditions are a serious concern than is the case for nonminority-owned firms (see Tables 5.3, 5.4, 5.5, 5.6, 5.7, 5.17, 5.24).

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[19] *See, e.g., Northern Contracting, Inc. v. Illinois Department of Transportation*, No. 00-C-4515, 2005 WL. 2230195 (N.D. Ill. Sept. 8, 2005); *Concrete Works of Colorado v. City and County of Denver,* 321 F.3d 950, *cert. denied*, (10th Cir. 2003).

[20] The SATL includes Maryland as well as Delaware, Florida, Georgia, North Carolina, South Carolina, Virginia, West Virginia and the District of Columbia.

- 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 (see Tables 5.5, 5.6).

- 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 SATL, which includes the City of Baltimore 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 City of Baltimore market area in the small business credit market. This discrimination is particularly acute for African American-owned small businesses where, even after adjusting for differences in assets, liabilities, and creditworthiness, the loan denial rates remain substantially higher than for nonminority male-owned small businesses.

G. M/WBE Public Sector Utilization vs. Availability in the City of Baltimore's Contracting and Purchasing Markets, 2007–2012

Chapter VI analyzes the extent to which M/WBEs were utilized on contracts active at the City of Baltimore during 2007-2012 and compares this utilization rate to the availability of M/WBEs in the relevant market area.

Tables B1 and B2 provide an executive summary of the utilization findings for the Study by industry category and M/WBE type. Table B1 shows M/WBE and non-M/WBE utilization measured by dollars awarded. Table B2 shows M/WBE and non-M/WBE utilization measured by dollars paid.

Table B1. M/WBE Utilization in Contracting at the City of Baltimore (Dollars Awarded)

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	CSE (%)	Overall (%)
African American	14.96	6.98	12.30	4.33	10.35
Hispanic	9.44	0.32	1.30	0.24	3.60
Asian/Pacific Islander	1.97	22.64	3.21	1.17	5.33
Native American	2.30	0.00	0.09	0.00	0.79
Minority Total	28.67	29.94	16.90	5.74	20.07
Nonminority female	5.55	4.67	5.00	2.69	4.55
M/WBE Total	34.22	34.61	21.90	8.43	24.62
Non-M/WBE Total	65.78	65.39	78.10	91.57	75.38
Total (%)	100.00	100.00	100.00	100.00	100.00
Total($)	831,339,375	390,992,888	641,029,665	626,037,253	2,489,399,181

Source and Notes: See Table 6.1.

Table B2. M/WBE Utilization in Contracting at the City of Baltimore (Dollars Paid)

M/WBE Type	Procurement Category				
	Construction (%)	**AE-CRS** (%)	**Services** (%)	**CSE** (%)	**Overall** (%)
African American	15.13	6.11	10.75	4.33	9.69
Hispanic	12.16	0.33	0.67	0.24	4.35
Asian/Pacific Islander	2.35	21.71	3.72	1.17	4.30
Native American	2.19	0.00	0.06	0.00	0.75
Minority Total	31.82	28.14	15.21	5.74	19.08
Nonminority female	5.92	3.55	6.26	2.69	4.73
M/WBE Total	37.75	31.69	21.46	8.43	23.81
Non-M/WBE Total	62.25	68.31	78.54	91.57	76.19
Total (%)	100.00	100.00	100.00	100.00	100.00
Total($)	656,536,439	201,663,015	475,008,803	626,037,253	1,959,245,510

Source and Notes: See Table 6.2.

Next, we compared the use of M/WBEs on City of Baltimore contracts and subcontracts to our measure of M/WBE availability in the City's market area. If M/WBE utilization is lower than measured availability in a given category, we report this result as a disparity. Table C1 provides a top-level summary of our disparity findings for the Study for each major procurement category using dollars awarded. Table C2 provides comparable results using dollars paid.

Table C1. Utilization, Availability and Disparity Results for City of Baltimore Contracting, Overall and by Contracting Category (Dollars Awarded)

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
OVERALL			
African American	10.35	10.27	
Hispanic	3.60	1.89	
Asian/Pacific Islander	5.33	3.97	
Native American	0.79	0.33	
Minority	20.07	16.46	
Nonminority female	4.55	11.83	38.50 ****
M/WBE total	24.62	28.28	87.06 *
CONSTRUCTION			
African American	14.96	10.64	
Hispanic	9.44	2.11	
Asian/Pacific Islander	1.97	1.86	
Native American	2.30	0.32	
Minority	28.67	14.93	
Nonminority female	5.55	11.33	49.03 ****
M/WBE total	34.22	26.25	
AE-CRS			
African American	6.98	8.53	81.82
Hispanic	0.32	1.94	16.43 ****
Asian/Pacific Islander	22.64	6.31	
Native American	0.00	0.20	0.00 ****
Minority	29.94	16.99	
Nonminority female	4.67	10.65	43.87 ****
M/WBE total	34.61	27.64	
SERVICES			
African American	12.30	12.83	95.81
Hispanic	1.30	1.63	79.45
Asian/Pacific Islander	3.21	3.38	95.22
Native American	0.09	0.51	18.52 ****
Minority	16.90	18.35	92.11
Nonminority female	5.00	14.72	34.00 ****
M/WBE total	21.90	33.06	66.25 ****
CSE			
African American	4.33	9.56	45.31 ****
Hispanic	0.24	1.52	15.46 ****
Asian/Pacific Islander	1.17	3.56	32.77 ****
Native American	0.00	0.52	0.00 ****
Minority	5.74	15.16	37.83 ****
Nonminority female	2.69	11.24	23.98 ****
M/WBE total	8.43	26.40	31.93 ****

Source: Table 6.3.

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 the disparity is significant at a 5% level or better (95% confidence). "****" indicates significance at a 1% level or better (99% confidence). (2) An empty cell in the Disparity Ratio column indicates that no adverse disparity was observed for that category.

Table C2. Utilization, Availability and Disparity Results for City of Baltimore Contracting, Overall and by Contracting Category (Dollars Paid)

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
OVERALL			
African American	9.69	11.10	87.31
Hispanic	4.35	1.76	
Asian/Pacific Islander	4.30	3.63	
Native American	0.75	0.34	
Minority	19.08	16.83	
Nonminority female	4.73	12.85	36.79 ****
M/WBE total	23.81	29.68	80.21 ***
CONSTRUCTION			
African American	15.13	11.26	
Hispanic	12.16	2.06	
Asian/Pacific Islander	2.35	1.81	
Native American	2.19	0.33	
Minority	31.82	15.47	
Nonminority female	5.92	11.88	49.89 ****
M/WBE total	37.75	27.34	
AE-CRS			
African American	6.11	9.77	62.50 ****
Hispanic	0.33	1.64	20.29 ****
Asian/Pacific Islander	21.71	5.90	
Native American	0.00	0.17	0.00 ****
Minority	28.14	17.48	
Nonminority female	3.55	12.59	28.19 ****
M/WBE total	31.69	30.07	
SERVICES			
African American	10.75	13.41	80.17 *
Hispanic	0.67	1.57	42.56 ***
Asian/Pacific Islander	3.72	3.51	
Native American	0.06	0.45	14.17 ****
Minority	15.21	18.94	80.29 ***
Nonminority female	6.26	15.52	40.32 ****
M/WBE total	21.46	34.46	62.29 ****
CSE			
African American	4.33	9.56	45.31 ****
Hispanic	0.24	1.52	15.46 ****
Asian/Pacific Islander	1.17	3.56	32.77 ****
Native American	0.00	0.52	0.00 ****
Minority	5.74	15.16	37.83 ****
Nonminority female	2.69	11.24	23.98 ****
M/WBE total	8.43	26.40	31.93 ****

Source and Notes: Table 6.4.

Finally, Chapter VI compares current levels of M/WBE availability in the City of Baltimore's 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 market area, however, as documented in Chapters IV, V, VI and VII of this Study, then expected availability will *exceed* current availability. Expected availability percentages for the City of Baltimore's overall contracting and by major contracting category are presented below in Table D. Expected availability exceeds actual current availability in 26 of the 28 cases observed.

Table D. Current Availability and Expected Availability for City of Baltimore Contracting

Contracting Category & M/WBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability (%)	Expected Availability (%)	Current Availability (%)	Expected Availability (%)
OVERALL				
African American	10.27	14.72	11.26	16.14
Hispanic	1.89	2.28	2.06	2.49
Asian/Pacific Islander	3.97	3.50	1.81	1.60
Native American	0.33	0.47	0.33	0.47
Minority	16.46	24.35	15.47	22.89
Nonminority female	11.83	15.74	11.88	15.81
M/WBE total	28.28	40.78	27.34	39.43
CONSTRUCTION				
African American	10.64	16.58	9.77	15.23
Hispanic	2.11	3.40	1.64	2.64
Asian/Pacific Islander	1.86	2.36	5.90	7.49
Native American	0.32	1.99	0.17	1.06
Minority	14.93	22.59	17.48	26.44
Nonminority female	11.33	23.03	12.59	25.60
M/WBE total	26.25	43.68	30.07	50.04
AE-CRS				
African American	8.53	13.29	13.41	20.90
Hispanic	1.94	3.12	1.57	2.53
Asian/Pacific Islander	6.31	8.01	3.51	4.46
Native American	0.20	1.25	0.45	2.80
Minority	16.99	25.70	18.94	28.65
Nonminority female	10.65	21.65	15.52	31.55
M/WBE total	27.64	46.00	34.46	57.35

Contracting Category & M/WBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability (%)	Expected Availability (%)	Current Availability (%)	Expected Availability (%)
SERVICES				
African American	12.83	23.54	9.56	17.54
Hispanic	1.63	1.80	1.52	1.68
Asian/Pacific Islander	3.38	3.12	3.56	3.29
Native American	0.51	0.72	0.52	0.73
Minority	18.35	26.92	15.16	22.24
Nonminority female	14.72	19.81	11.24	15.13
M/WBE total	33.06	46.61	26.40	37.22
CSE				
African American	9.56	17.54	11.26	20.66
Hispanic	1.52	1.68	2.06	2.27
Asian/Pacific Islander	3.56	3.29	1.81	1.67
Native American	0.52	0.73	0.33	0.47
Minority	15.16	22.24	15.47	22.69
Nonminority female	11.24	15.13	11.88	15.99
M/WBE total	26.40	37.22	27.34	38.54

Source: Table 6.5.

H. Anecdotal Evidence

Chapter VII 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 City of Baltimore and other public entities in the market area shows that business discrimination continues to fetter M/WBE business opportunities in the City's relevant markets.

We found that M/WBEs in the City of Baltimore's market area, and African Americans in particular, 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. Some of the largest disparities were observed in applying for surety bonds, applying for commercial loans, applying for commercial insurance, functioning without hindrance or harassment on the work site, working or attempting to work on private sector prime contracts and subcontracts, joining or dealing with trade associations, and having to meet quality standards not required of comparable non-M/WBE firms.

We also found 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 VII also presents the results from a series of in-depth personal interviews conducted with M/WBEs and non-M/WBEs from the City of Baltimore's market area. Similar to the survey responses, the interviews strongly suggest that minorities and women continue to suffer discriminatory barriers to full and fair access to City of Baltimore, other public sector, and private sector contracts. Participants reported discriminatory attitudes and negative perceptions and expectations of minorities' and women's competence; workplace harassment; not being paid on equal terms; exclusion from industry and information networks; discrimination in access to commercial loans and surety bonds; barriers to obtaining public sector contracts; and barriers to obtaining work on contracts without goals or private sector projects.

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 City of Baltimore would be a passive participant in a discriminatory local market area. It is also highly relevant for narrowly tailoring any M/WBE goals that are established.

I. The City of Baltimore's M/WBE Program: Overview and Feedback Interviews

Chapter VIII provides a review of the City of Baltimore's M/WBE Program and Ordinance, followed by a summary of business owner experiences with these policies and procedures obtained from our interviews. We interviewed 145 business owners and representatives, as well as City staff, to solicit their feedback regarding these programs. Our interviews covered the following subjects:

- The significance of the City's M/WBE Program;
- Supportive Services;
- Certification standards and processes;
- Access to information about upcoming opportunities;
- Contract size, specifications and procurement methods;
- Meeting M/WBE goals;
- Contract solicitations;

- Contract monitoring;
- Payment; and
- Front companies.

J. Recommendations for Revised Contracting Policies and Procedures

Finally, in Chapter IX we present the following suggested recommendations for revised contracting policies and procedures, based upon the Study's results and findings and upon our views on best practices contracting diversity programs.

1. Race- and Gender-Neutral Recommendations

- ❖ Increase Efforts to Ensure Prompt Payment on City of Baltimore Contracts
- ❖ Ensure Bidder Non-Discrimination
- ❖ Review Surety Bonding, Insurance and Experience Requirements
- ❖ Increase Contract Unbundling
- ❖ Provide Greater Access to Information For Upcoming Contract Opportunities
- ❖ Facilitate Increased Access to Capital
- ❖ Adopt a Mentor-Protégé Program
- ❖ Continue to Provide Supportive Services for Construction Firms and Expand Supportive Services for Non-Construction Firms
- ❖ Implement a Small Local Business Reserve Program
- ❖ Improve Contract and Subcontract Data Collection and Retention

2. Race- and Gender-Conscious Remedies

- ❖ Adopt a Renewed M/WBE Ordinance and Accompanying Program Regulations
- ❖ Revise Certification Eligibility Standards
    - ▪ Adopt a social disadvantage test
    - ▪ Adopt an economic disadvantage test
    - ▪ Review firm size standards
    - ▪ Review the certification waiting period

- Permit individual consideration of business location
- Increase certification outreach
- Consider reciprocal certification opportunities

❖ Contract Award Policies and Procedures

- Standardize good faith efforts waiver requirements and related policies
- Standardize M/WBE program implementation across City departments
- Scrutinize commercially useful function and increase contract monitoring

❖ M/WBE Goal-Setting

- Adopt annual aspirational M/WBE goals
- Count M/WBE prime participation towards meeting M/WBE goals
- Count lower tier M/WBE participation towards meeting M/WBE goals
- Continue to set contract-specific goals

❖ MWBOO Authority and Operational Resources

❖ Continue the M/WBE Program Sunset Review Process

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I. Introduction

The City of Baltimore (the "City" or "Baltimore") commissioned this Study to evaluate whether minority-owned and women-owned business enterprises in the City's market area have full and fair opportunities to compete for its prime contracts and associated subcontracts.

To ensure compliance with constitutional mandates and M/WBE best practices, the City of Baltimore commissioned NERA Economic Consulting to examine the past and current status of M/WBEs in its geographic and product markets for contracting and procurement. The results of the Study provide the evidentiary record necessary for the City'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 compete on a fair basis in the City's contracting and procurement activity.

This Study finds statistical evidence consistent with the presence of business discrimination against M/WBEs in the private sector of the City's market area. These findings are presented in Chapters IV and V. Statistical analyses of the City's own contracting and purchasing, which also document evidence consistent with business discrimination, are contained in Chapters II, III and VI. As a check on our statistical findings, documented in Chapter VII, 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 market area, both M/WBE and non-M/WBE.

The City of Baltimore has a long record of commitment to including minority-owned and women-owned firms in its contracting activities. As will be documented in this Study, during 2007 through 2012 the City has continued to be a source of demand in the regional economy for the products and services provided by M/WBEs—demand that, in general, is found to be lacking in the private sector of the Baltimore economy and the surrounding region.

As documented below in Chapter VI, the City's prior efforts have produced positive results—M/WBEs earned between 24-25 percent of the City's contracting and subcontracting dollars on contracts active during 2007 through 2012. Strict scrutiny requires a "strong basis in evidence"[21] for concluding that discrimination persists and "narrowly tailored"[22] measures to address that discrimination. These legal principles guide and inform our work for the City of Baltimore in this Study.

A. Study Outline

To ensure compliance with constitutional mandates and M/WBE best practices, the City of Baltimore commissioned NERA to examine the past and current status of M/WBEs in its geographic and product markets for Construction, AE-CRS, Services and CSE. The results of the 2014 Study provide the evidentiary record necessary for the City's consideration of whether to

[21] *Id*. at 500 (citing *Wygant v. Jackson Board of Education*, 476 U.S. 267, 277 (1986)).

[22] *Id.* at 506-508. *See also, Wygant,* 476 U.S. at 274.

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 City's contracting activity.

The 2014 Study finds both statistical and anecdotal evidence of business discrimination against M/WBEs in the private sector of the City's market area. As a check on our statistical findings, we surveyed the contracting experiences and credit access experiences of M/WBEs and non-M/WBEs in the market area and we also conducted a series of in-depth personal interviews with local business enterprises, both M/WBE and non-M/WBE. Statistical analyses of the City's public sector contracting behavior appear below in Chapters II, III and VI.

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

Chapter I: Introduction

Chapter II: What is the relevant geographic market for the City of Baltimore and how is it defined? What are the relevant product markets for the City and how are they defined?

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

Chapter IV: 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 City's market area less likely to be self-employed than similarly situated nonminority males? How do the findings in the City's market area differ from the national findings on these questions? How have these findings changed over time?

Chapter V: 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 VI: To what extent have M/WBEs been utilized by the City on contracts and purchases active during 2007-2011, and how does this utilization compare to the availability of M/WBEs in the relevant market area?

Chapter VII: How many M/WBEs experienced disparate treatment in 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 VIII: What general policies and procedures govern the City's M/WBE program? What were some of the most frequently encountered comments from M/WBEs and non-M/WBEs concerning the City's contracting affirmative action programs?

In assessing these questions, we present in Chapters II through VII 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.

Finally, Chapter IX contains our recommendations, based on the Study's findings and conclusions and our knowledge of M/WBE program best practices.

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II. Defining the Relevant Markets

A. Preparing the Master Contract/Subcontract Database

1. Overview

In the *Croson* decision, the Supreme Court indicated that the *national* findings by Congress 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. For this reason, the first step in our evaluation of M/WBE availability and participation for the City of Baltimore is to define the relevant market area for its contracting and procurement activity. Markets have both a geographic dimension and a product, or industry, dimension.[23] Both aspects of market definition are considered in this chapter. For this Study, we define the relevant geographic market area based on the City of Baltimore's historical contracting and subcontracting records. This market dimension is determined empirically by examining the zip code distribution of utilized contractors and subcontractors.

Narrow tailoring also applies to product markets. The extent of disparity may differ from industry to industry just as it does among geographic locations.[24] Documenting the specific industries that comprise the City of Baltimore's contracting activities and the relative importance of each to contract and subcontract spending is important because it 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 awarded or paid 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 fewer 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.[25] 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 City of Baltimore'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 City of Baltimore's specific market area and contracting circumstances.

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

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

[25] Executive Office of the President, Office of Management and Budget (2007).

2. City of Baltimore Contracting and Purchasing

With assistance from the City of Baltimore, NERA collected all prime contract and purchase order records ("prime contracts") spanning Fiscal Years 2007 through 2012.[26] These data were retrieved from Board of Estimates records compiled and maintained by the City's Minority and Women's Business Opportunity Office ("MWBOO") and supplemented with records from the City Purchasing Department. For each prime contract from the study period, we identified the business name and address of the prime contractor or vendor, contract or purchase description, contract number, start date, initial award amount and total current paid amount. Additionally, we cross-referenced business names and addresses with City of Baltimore vendor lists and lists of certified M/WBE firms to obtain contractor race and gender information.

Prime contract data was classified into one of four major procurement categories: (1) Construction, (2) Construction-Related Professional Services ("AE-CRS") such as architectural, engineering, surveying and testing services, (3) Other Professional and General Services ("Services") and (4) Commodities, Supplies and Equipment ("Commodities"). Additionally, contracts were classified as large purchases if the initial award amount was $50,000 or more and classified as small purchases otherwise.[27] In this manner, a total of 7,893 prime contracts and purchase orders (hereafter "prime contracts" or "contracts") during the study period were identified from City of Baltimore records. Collectively, these contracts had an award value of $2.733 billion.

Not all of these contracts were likely to have subcontract opportunities, however. In particular, contracts for commodities, supplies and equipment rarely have subcontract opportunities; nor do contracts valued at under $50,000.

We identified 1,728 City of Baltimore contracts valued at $50,000 or more in the categories of Construction, AE-CRS and Services. These 1,728 contracts, although only 21.9 percent of all contracts in the study universe, collectively accounted for more than $2.074 billion in contract awards, or 75.9 percent of all award dollars in the universe. We conducted a careful review of the available subcontract data for these 1,728 records. As a result of this review, we determined that the available subcontract records were incomplete. In consultation with the City of Baltimore, NERA developed a plan to directly contact the prime contractors and vendors associated with these contracts in order to verify the existing data and supplement it with additional subcontract records where appropriate. As noted above, prime contracts and purchases valued at $50,000 or greater in Construction, AE-CRS and Services were included in this data collection effort. Prime contracts and purchases of Commodities, Supplies and Equipment, or in amounts less than $50,000, were not included in the data collection effort due to the limited opportunities for subcontracting in these areas. These contracts did, however, remain in the overall study universe.

[26] That is, July 1, 2006 through June 30, 2012.

[27] ART. 5, § 28-48.

After an intensive data collection effort and with the assistance of the City of Baltimore, we were ultimately able to obtain the associated subcontract information for 1,312 prime contracts, or 75.9 percent of all prime contracts sampled, and 4,736 associated subcontracts. The total dollar value of the 1,312 prime contracts, according to City of Baltimore records, was $1.768 billion, or 85.2 percent of all awarded prime contract dollars during the study period. These percentages are sufficiently large to be well representative of the entire universe of City of Baltimore contracts and subcontracts being examined for this Study.

Dollar values reported by prime contractors did not always match City of Baltimore records exactly. According to prime-reported amounts, the total awarded dollar value of the 1,312 prime contracts was $1.830 billion. In order to achieve consistency with the subcontract dollar values we collected, we use prime reported dollar amounts for the remainder of the relevant analyses in this report. In all, a total of 1,312 prime contracts and 4,736 associated subcontracts were collected from prime contractors, with a total awarded value (as reported by prime contractors) of approximately $1.830 billion and a total paid value (as reported by prime contractors) of $1.483 billion. These 1,312 prime contracts and 4,736 associated subcontracts were then combined with the 6,165 prime contracts and purchases without significant subcontracting opportunities. Together, as shown below in Tables 2.1 through 2.3, these prime contracts and subcontracts comprise the Master Contract/Subcontract Database compiled for this Study.

Table 2.1 shows, for each major procurement category, the total number of prime contracts and associated subcontracts awarded, the total number of prime contracts and associated subcontracts substantially completed,[28] total dollars awarded, and total dollars paid. Table 2.2 shows comparable information for each year of the study period. Table 2.3 shows comparable information for each major City department.

[28] For purposes of the Study, a contract was considered to be substantially complete if at least 75 percent of the total award amount had been paid.

Table 2.1. Summary of Master Contract/Subcontract Database: City of Baltimore Contracts and Subcontracts by Procurement Category

CONTRACT CATEGORY	NUMBER OF AWARDED CONTRACTS	NUMBER OF PAID CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
CONSTRUCTION			831,339,375	656,536,439
Prime Contracts	538	503	471,123,180	367,357,028
Subcontracts	2,265	1,943	360,216,195	289,179,412
AE-CRS			390,992,888	201,663,015
Prime Contracts	359	237	236,981,496	118,120,786
Subcontracts	1,228	633	154,011,392	83,542,229
SERVICES			641,029,665	475,008,803
Prime Contracts	2,555	2,462	575,553,592	400,681,482
Subcontracts	1,243	792	65,476,073	74,327,321
CSE			626,037,253	626,037,253
Prime Contracts	4,025	4,025	626,037,253	626,037,253
Subcontracts	0	0	0	0
GRAND TOTAL			2,489,399,181	1,959,245,510
Prime Contracts	7,477	7,227	1,909,695,521	1,512,196,548
Subcontracts	4,736	3,368	579,703,660	447,048,962

Source: NERA calculations from Master Contract/Subcontract Database.

Note: Prime Contract dollar amounts are net of subcontract amounts.

Table 2.2 shows the total number of prime contracts awarded during each year of the Study period and total dollar payments associated with those contracts, by major procurement category.

Table 2.2. Summary of Master Contract/Subcontract Database: Prime Contracts by Year

PROCUREMENT CATEGORY & YEAR	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED ($)	DOLLARS PAID ($)
CONSTRUCTION			
2007	65	936,305	936,305
2008	78	1,158,826	1,158,826
2009	57	885,372	885,372
2010	46	855,287	855,287
2011	22	448,883	448,883
2012	8	178,950	178,950
TOTAL	538	831,339,374	656,536,439
AE-CRS			
2007	20	313,543	313,543
2008	26	369,988	369,988
2009	15	224,310	224,310
2010	16	293,713	293,713
2011	13	223,839	223,839
2012	5	122,667	122,667
TOTAL	359	390,992,889	201,663,015
SERVICES			
2007	420	5,844,762	5,844,762
2008	396	5,562,495	5,562,495
2009	404	5,965,070	5,965,070
2010	320	5,113,290	5,113,290
2011	157	2,967,668	2,967,668
2012	72	1,514,322	1,514,322
TOTAL	2555	641,029,662	475,008,802

Table 2.2. Summary of Master Contract/Subcontract Database: Prime Contracts by Year, cont'd

PROCUREMENT CATEGORY & YEAR	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED ($)	DOLLARS PAID ($)
CSE			
2007	904	70,458,073	70,458,073
2008	846	126,656,773	126,656,773
2009	877	109,989,138	109,989,138
2010	679	171,137,019	171,137,019
2011	479	80,176,706	80,176,706
2012	240	67,619,544	67,619,544
TOTAL	4025	626,037,253	626,037,253
GRAND TOTAL			
2007	1409	77,552,682	77,552,682
2008	1346	133,748,081	133,748,081
2009	1353	117,063,890	117,063,890
2010	1061	177,399,309	177,399,309
2011	671	83,817,096	83,817,096
2012	325	69,435,484	69,435,484
TOTAL	7477	2,489,399,178	1,959,245,509

Source: See Table 2.1.

Table 2.3. Summary of Master Contract/Subcontract Database: Prime Contracts by City Agency

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
CONSTRUCTION	538	831,339,375	656,536,439
BALTIMORE HOUSING	2	9,605	9,605
CIRCUIT COURT	1	9,139	9,139
COMPTROLLER	2	22,811	22,811
FINANCE-PURCHASES	137	44,238,595	23,028,094
GENERAL SERVICES	18	18,517,066	14,358,508
MAYORAL OFFICES	2	20,774	20,774
OTHER	3	30,142	30,142
PARKING AUTHORITY	10	190,700	190,700
POLICE	5	34,892	34,892
PUBLIC WORKS	217	550,534,456	429,920,443
RECREATION AND PARKS	31	19,686,513	18,137,957
TRANSPORTATION	110	198,044,681	170,773,373
AE-CRS	359	390,992,888	201,663,015
BALTIMORE HOUSING	5	1,298,300	495,299
FINANCE-PURCHASES	61	2,407,121	2,331,721
FIRE	1	1,200	1,200
GENERAL SERVICES	5	1,448,139	368,078
OTHER	3	43,634	43,634
PARKING AUTHORITY	5	294,897	294,897
PLANNING	4	29,723	29,723
POLICE	4	12,120	12,120
PUBLIC WORKS	186	297,433,846	170,441,280
RECREATION AND PARKS	18	11,519,610	4,158,026
TRANSPORTATION	67	76,504,299	23,487,036

Table 2.3. Summary of Master Contract/Subcontract Database: Prime Contracts by City Agency, cont'd

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
SERVICES	2,555	641,029,665	475,008,803
BALTIMORE HOUSING	84	2,053,132	2,035,901
CIRCUIT COURT	29	3,395,579	2,572,996
CIVIL RIGHTS	15	102,621	102,621
COMM. ON AGING (CARE)	63	1,755,403	1,749,012
COMPTROLLER	24	15,345,458	15,166,758
FINANCE-OTHER	14	1,537,584	1,536,515
FINANCE-PURCHASES	1,622	494,571,741	339,059,661
FIRE	14	153,871	153,871
GENERAL SERVICES	15	36,740,451	35,504,693
HUMAN RESOURCES	17	409,075	409,075
LAW DEPARTMENT	18	4,847,145	6,175,490
MAYORAL OFFICES	52	2,313,590	2,088,607
OTHER	128	3,963,760	3,658,875
PARKING AUTHORITY	43	23,040,892	19,460,119
PLANNING	10	1,471,212	1,336,370
POLICE	242	7,936,053	7,954,053
PUBLIC WORKS	87	34,201,176	24,142,966
RECREATION AND PARKS	40	2,919,324	669,324
STATE'S ATTORNEY	14	251,758	251,758
TRANSPORTATION	24	4,019,839	10,980,136

Table 2.3. Summary of Master Contract/Subcontract Database: Prime Contracts by City Agency, cont'd

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
COMMODITIES	4,025	626,037,253	626.037.253
BALTIMORE HOUSING	7	99,800	99.800
CIVIL RIGHTS	2	4,478	4.478
COMM. ON AGING (CARE)	1	19,395	19.395
COMPTROLLER	1	54,000	54.000
FINANCE-OTHER	5	1,000,715	1.000.715
FINANCE-PURCHASES	3,817	615,024,619	615.024.619
FIRE	18	172,807	172.807
GENERAL SERVICES	3	1,583,788	1.583.788
MAYORAL OFFICES	9	100,814	100.814
OTHER	31	381,766	381.766
PARKING AUTHORITY	13	1,617,965	1.617.965
PLANNING	2	32,443	32.443
POLICE	48	537,864	537.864
PUBLIC WORKS	40	2,595,796	2.595.796
RECREATION AND PARKS	6	125,535	125.535
STATE'S ATTORNEY	3	43,419	43.419
TRANSPORTATION	19	2,642,050	2.642.050

Table 2.3. Summary of Master Contract/Subcontract Database: Prime Contracts by City Agency, cont'd

DEPARTMENT	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED	DOLLARS PAID
OVERALL	7,477	2,489,399,181	1,959,245,510
BALTIMORE HOUSING	98	3,460,837	2,640,606
CIRCUIT COURT	30	3,404,718	2,582,136
CIVIL RIGHTS	17	107,099	107,099
COMM. ON AGING (CARE)	64	1,774,798	1,768,407
COMPTROLLER	27	15,422,269	15,243,570
FINANCE-OTHER	19	2,538,299	2,537,230
FINANCE-PURCHASES	5,637	1,156,242,077	979,444,096
FIRE	33	327,878	327,878
GENERAL SERVICES	41	58,289,443	51,815,068
HUMAN RESOURCES	17	409,075	409,075
LAW DEPARTMENT	18	4,847,145	6,175,490
MAYORAL OFFICES	63	2,435,178	2,210,195
OTHER	165	4,419,302	4,114,418
PARKING AUTHORITY	71	25,144,454	21,563,681
PLANNING	16	1,533,378	1,398,536
POLICE	299	8,520,929	8,538,929
PUBLIC WORKS	530	884,765,274	627,100,485
RECREATION AND PARKS	95	34,250,981	23,090,841
STATE'S ATTORNEY	17	295,177	295,177
TRANSPORTATION	220	281,210,868	207,882,594

Source: See Table 2.1.

B. Geographic Market Definition for Contracting and Procurement

To determine the geographic dimension of the City of Baltimore'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 establishment identified in the database. Using this location information, we then calculated the percentage of City of Baltimore contract and subcontract dollars awarded to establishments by state and county during the study period.

As discussed above, the geographic market area is defined as that region which accounts for approximately 75 percent of overall contracting and procurement spending by a given state or local government. Contractors and vendors with locations in the Baltimore-Towson, MD Metropolitan Statistical Area (MSA) account for the large majority of contracting and procurement expenditures by the City of Baltimore during the study period.[29] As shown in Table 2.4, the overall share of expenditures inside this market area is 75.0 percent of dollars awarded and 73.0 percent of dollars paid. The share exceeds 75.0 percent in Construction, AE-CRS and Services regardless of whether dollars awarded or dollars paid is used as the metric. The share is highest in AE-CRS, followed by Construction, Services and finally CSE.[30] For purposes of this Study, therefore, we define the relevant geographic market area to be the Baltimore-Towson, MD MSA.

Table 2.4. Distribution of Contracting Dollars by Geographic Location

Location	Construction (%)	AE-CRS (%)	Services (%)	CSE (%)	Total (%)
Dollars Awarded					
Inside Baltimore Market Area	80.0	93.8	77.3	54.1	75.0
Outside Baltimore Market Area	20.0	6.2	22.7	45.9	25.0
Dollars Paid					
Inside Baltimore Market Area	81.0	90.9	75.5	54.1	73.0
Outside Baltimore Market Area	19.0	9.1	24.5	45.9	27.0
Dollars Awarded					
Inside Maryland	86.8	97.1	84.9	60.8	81.4
Outside Maryland	13.2	2.9	15.1	39.2	18.6
Dollars Paid					
Inside Maryland	88.3	95.3	83.1	60.8	79.8
Outside Maryland	11.7	4.7	16.9	39.2	20.2

Source: See Table 2.1.

Within the market area, the geographic distribution of contract and procurement dollars across all procurement categories is shown in Table 2.5. Almost half of all dollars are awarded to firms with locations inside the City of Baltimore, followed in descending order by firms with locations in the Maryland counties of Baltimore, Howard, Anne Arundel, Harford, Carroll and Queen Anne's.

[29] The Baltimore-Towson, MD MSA includes Anne Arundel County, Baltimore County, Baltimore City, Carroll County, Harford County, Howard County and Queen Anne's County.

[30] For informational purposes, Table 2.4 also shows the share of awards and payments inside and outside the State of Maryland.

Table 2.5. Distribution of Baltimore Contract Award Dollars by State and County, Inside the Market Area

STATE	COUNTY	AMOUNT ($)	PERCENT	CUMULATIVE PERCENT
MD	Baltimore City	886,656,690	47.51	47.51
MD	Baltimore	620,209,090	33.23	80.74
MD	Howard	167,316,076	8.97	89.71
MD	Anne Arundel	122,857,545	6.58	96.29
MD	Harford	45,442,005	2.43	98.72
MD	Carroll	17,375,345	0.93	99.65
MD	Queen Anne's	6,442,745	0.35	100.00

Source: See Table 2.1.

Outside the market area, areas other than Commodities with a significant amount of spending activity (defined, somewhat arbitrarily, as counties that accounted for more than approximately 0.25 percent of total spending among three or more vendors) included:

CONSTRUCTION

Montgomery, PA
Prince Georges, MD
Montgomery, MD
Allegheny, PA
Charles, MD
York, PA
Fairfax, VA
Chester, PA
Loudoun, VA
Lancaster, PA
Fulton, GA
Hennepin, MN
Onondaga, NY
Frederick, MD
Erie, NY
Middlesex, MA
Wicomico, MD
District of Columbia, DC

AE-CRS

Montgomery, MD
Prince Georges, MD
Jefferson, KY
Allegheny, PA
Lancaster, PA
Middlesex, MA
District of Columbia, DC
Arlington, VA
Fairfax, VA
Loudoun, VA

SERVICES

Montgomery, MD
Prince Georges, MD
Fairfax, VA
Middlesex, MA
Washington, MD
District of Columbia, DC
Wake, NC
Philadelphia, PA
Gwinnett, GA
Loudoun, VA
Hartford, CT
Cook, IL
Broward, FL
Somerset, NJ
Delaware, PA
Mecklenburg, NC
Maricopa, AZ
Chester, PA
Norfolk, MA
New York, NY
Albany, NY
Ramsey, MN
Frederick, MD
Montgomery, PA
Essex, NJ
Dallas, TX
King, WA
Contra Costa, CA
Suffolk, MA

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 Groups within each contracting and procurement category, as measured by total dollars expended. The relevant NAICS codes and their associated dollar weights appear below in Tables 2.6 through 2.9 for Construction, AE-CRS, Services and CSE, respectively.

Each Industry Group (four-digit NAICS) identified in Tables 2.6 through 2.9 consists of several more detailed Industries (five- and six-digit NAICS) and, as well, is part of a more aggregated Industry Sub-sector (three-digit NAICS). Overall, City of Baltimore contracting expenditures occur in 80 NAICS Industry Sub-sectors, 228 NAICS Industry Groups and 523 NAICS Industries. In Construction, contract spending occurs across 51 NAICS Industry Sub-sectors, 120 NAICS Industry Groups and 222 NAICS Industries. In AE-CRS, spending occurs across 21 NAICS Industry Sub-sectors, 47 NAICS Industry Groups and 70 NAICS Industries. In Services, spending occurs across 65 NAICS Industry Sub-sectors, 169 NAICS Industry Groups and 338

NAICS Industries. In CSE, spending occurs across 56 NAICS Industry Sub-sectors, 145 NAICS Industry Groups and 289 NAICS Industries.

Clearly, many industries are part of the City of Baltimore's contracting activities. However, it is clear from Tables 2.6 through 2.9 that actual contracting and subcontracting opportunities are not distributed evenly among all industries. In fact, the distribution of contract expenditures is highly skewed. In Construction, for example, we see from Table 2.6 that just five Industry Groups alone (NAICS 2373, 2362, 2382, 2371 and 2381) account for over two-thirds of all award dollars, and 15 Industry Groups account for over 90 percent, with the remainder distributed among 105 additional Industry Groups.

Table 2.6. Distribution of Contract and Subcontract Dollars Awarded by Industry Group: Construction

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
2373	Highway, Street, and Bridge Construction	19.69	19.69
2362	Nonresidential Building Construction	18.50	38.19
2382	Building Equipment Contractors	12.54	50.74
2371	Utility System Construction	11.64	62.37
2381	Foundation, Structure, and Building Exterior Contractors	6.42	68.79
2389	Other Specialty Trade Contractors	5.86	74.66
4233	Lumber and Other Construction Materials Merchant Wholesalers	3.35	78.00
2361	Residential Building Construction	2.87	80.87
3333	Commercial and Service Industry Machinery Manufacturing	2.16	83.04
5416	Management, Scientific, and Technical Consulting Services	1.67	84.70
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	1.28	85.98
4841	General Freight Trucking	1.28	87.26
5616	Investigation and Security Services	1.12	88.38
3273	Cement and Concrete Product Manufacturing	0.86	89.24
2383	Building Finishing Contractors	0.85	90.09
5413	Architectural, Engineering, and Related Services	0.79	90.88
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	0.77	91.65
2379	Other Heavy and Civil Engineering Construction	0.75	92.40
3323	Architectural and Structural Metals Manufacturing	0.69	93.09
3312	Steel Product Manufacturing from Purchased Steel	0.64	93.74
4842	Specialized Freight Trucking	0.62	94.36

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
5619	Other Support Services	0.58	94.94
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	0.56	95.50
5614	Business Support Services	0.52	96.02
4441	Building Material and Supplies Dealers	0.36	96.38
3329	Other Fabricated Metal Product Manufacturing	0.36	96.74
5617	Services to Buildings and Dwellings	0.35	97.08
5612	Facilities Support Services	0.26	97.35
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.24	97.59
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	0.23	97.82
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	0.22	98.04
5629	Remediation and Other Waste Management Services	0.22	98.26
3339	Other General Purpose Machinery Manufacturing	0.13	98.39
4931	Warehousing and Storage	0.12	98.51
3315	Foundries	0.12	98.63
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	0.09	98.72
4471	Gasoline Stations	0.09	98.81
3241	Petroleum and Coal Products Manufacturing	0.08	98.89
2213	Water, Sewage and Other Systems	0.08	98.96
4232	Furniture and Home Furnishing Merchant Wholesalers	0.06	99.02
	Balance of industries (80 industry groups)	0.98	100.00
	TOTAL - $831,339,375		

Source: See Table 2.1.

In AE-CRS (Table 2.7), there is an even more concentrated pattern—one Industry Group alone (NAICS 5413) accounts for more than four-fifths of all award dollars, with the balance distributed among 46 additional Industry Groups.

Table 2.7. Distribution of Contract and Subcontract Dollars Awarded by Industry Group: AE-CRS

NAICS Sub-sector	NAICS Description	Percentage	Cumulative Percentage
5413	Architectural, Engineering, and Related Services	83.76	83.76
5416	Management, Scientific, and Technical Consulting Services	7.39	91.16
5419	Other Professional, Scientific, and Technical Services	4.06	95.21
2371	Utility System Construction	1.17	96.38
5629	Remediation and Other Waste Management Services	0.82	97.21
2362	Nonresidential Building Construction	0.50	97.70
5418	Advertising, Public Relations, and Related Services	0.45	98.16
5415	Computer Systems Design and Related Services	0.31	98.46
2361	Residential Building Construction	0.26	98.72
2382	Building Equipment Contractors	0.25	98.98
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	0.16	99.14
	Balance of industries (36 industry groups)	0.86	100.00
	TOTAL - $390,992,888		

Source: See Table 2.1.

In Services (Table 2.8), 12 Industry Groups account for more than half of all awards, 19 Industry Groups account for two-thirds, and 47 Industry Groups account for 90 percent, with the remainder distributed among 122 additional Industry Groups.

Table 2.8. Distribution of Contract and Subcontract Dollars Awarded by Industry Group: Services

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
5415	Computer Systems Design and Related Services	6.64	6.64
5241	Insurance Carriers	6.55	13.19
5613	Employment Services	5.87	19.05
3342	Communications Equipment Manufacturing	5.74	24.79
5616	Investigation and Security Services	4.66	29.45
5622	Waste Treatment and Disposal	3.83	33.29
5172	Wireless Telecommunications Carriers (except Satellite)	3.59	36.88
5416	Management, Scientific, and Technical Consulting Services	3.16	40.04
5413	Architectural, Engineering, and Related Services	2.92	42.96
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	2.71	45.68

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
2382	Building Equipment Contractors	2.71	48.38
5617	Services to Buildings and Dwellings	2.63	51.01
7223	Special Food Services	2.62	53.63
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	2.57	56.19
6221	General Medical and Surgical Hospitals	2.53	58.73
8129	Other Personal Services	2.31	61.04
8111	Automotive Repair and Maintenance	2.30	63.34
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	1.92	65.26
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	1.91	67.16
5179	Other Telecommunications	1.62	68.79
8112	Electronic and Precision Equipment Repair and Maintenance	1.61	70.39
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	1.56	71.95
2389	Other Specialty Trade Contractors	1.27	73.22
5112	Software Publishers	1.14	74.37
4539	Other Miscellaneous Store Retailers	1.12	75.48
3231	Printing and Related Support Activities	1.06	76.55
5418	Advertising, Public Relations, and Related Services	0.87	77.42
3366	Ship and Boat Building	0.86	78.28
5629	Remediation and Other Waste Management Services	0.86	79.14
6214	Outpatient Care Centers	0.83	79.96
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	0.80	80.77
4841	General Freight Trucking	0.76	81.53
2383	Building Finishing Contractors	0.73	82.26
5411	Legal Services	0.67	82.93
5414	Specialized Design Services	0.66	83.59
2373	Highway, Street, and Bridge Construction	0.66	84.24
5611	Office Administrative Services	0.66	84.90
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	0.62	85.52
2361	Residential Building Construction	0.60	86.12
2381	Foundation, Structure, and Building Exterior Contractors	0.59	86.71
5419	Other Professional, Scientific, and Technical Services	0.57	87.28
2211	Electric Power Generation, Transmission and Distribution	0.55	87.83

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
6216	Home Health Care Services	0.52	88.35
8114	Personal and Household Goods Repair and Maintenance	0.51	88.86
2362	Nonresidential Building Construction	0.47	89.33
5223	Activities Related to Credit Intermediation	0.47	89.80
6219	Other Ambulatory Health Care Services	0.45	90.26
4411	Automobile Dealers	0.44	90.70
6242	Community Food and Housing, and Emergency and Other Relief Services	0.42	91.12
4889	Other Support Activities for Transportation	0.39	91.51
3323	Architectural and Structural Metals Manufacturing	0.38	91.89
4884	Support Activities for Road Transportation	0.38	92.28
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	0.36	92.63
4882	Support Activities for Rail Transportation	0.32	92.95
8139	Business, Professional, Labor, Political, and Similar Organizations	0.30	93.26
4854	School and Employee Bus Transportation	0.30	93.56
5614	Business Support Services	0.29	93.84
5242	Agencies, Brokerages, and Other Insurance Related Activities	0.28	94.12
5321	Automotive Equipment Rental and Leasing	0.28	94.40
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	0.27	94.67
6116	Other Schools and Instruction	0.26	94.93
5619	Other Support Services	0.24	95.17
4842	Specialized Freight Trucking	0.24	95.41
3362	Motor Vehicle Body and Trailer Manufacturing	0.23	95.64
8123	Drycleaning and Laundry Services	0.22	95.86
3351	Electric Lighting Equipment Manufacturing	0.20	96.06
6215	Medical and Diagnostic Laboratories	0.18	96.24
3333	Commercial and Service Industry Machinery Manufacturing	0.16	96.40
5121	Motion Picture and Video Industries	0.15	96.55
3343	Audio and Video Equipment Manufacturing	0.14	96.70
2371	Utility System Construction	0.14	96.84
4855	Charter Bus Industry	0.13	96.97
4233	Lumber and Other Construction Materials Merchant Wholesalers	0.13	97.10
4431	Electronics and Appliance Stores	0.13	97.23
6117	Educational Support Services	0.13	97.36

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
5151	Radio and Television Broadcasting	0.13	97.49
8133	Social Advocacy Organizations	0.12	97.61
5171	Wired Telecommunications Carriers	0.12	97.73
5612	Facilities Support Services	0.12	97.84
5621	Waste Collection	0.11	97.96
5311	Lessors of Real Estate	0.11	98.07
3159	Apparel Accessories and Other Apparel Manufacturing	0.11	98.18
2379	Other Heavy and Civil Engineering Construction	0.10	98.28
7115	Independent Artists, Writers, and Performers	0.10	98.38
6241	Individual and Family Services	0.10	98.48
5111	Newspaper, Periodical, Book, and Directory Publishers	0.10	98.58
8122	Death Care Services	0.09	98.67
7139	Other Amusement and Recreation Industries	0.08	98.75
7211	Traveler Accommodation	0.07	98.82
6115	Technical and Trade Schools	0.06	98.88
3339	Other General Purpose Machinery Manufacturing	0.06	98.94
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	0.06	99.00
	Balance of industries (77 industry groups)	0.96	100.00
	TOTAL - $641,029,665		

Source: See Table 2.1.

Finally, in CSE (Table 2.9), we see that six Industry Groups account for more than half of all awards, 17 Industry Groups account for three-fourths, and 36 Industry Groups together account for 90 percent, with the remainder distributed among 109 additional Industry Groups.

Table 2.9. Distribution of Contract and Subcontract Dollars Awarded by Industry Group: CSE

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
4247	Petroleum and Petroleum Products Merchant Wholesalers	13.96	13.96
4411	Automobile Dealers	9.70	23.66
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	8.81	32.47
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	6.48	38.95
4246	Chemical and Allied Products Merchant Wholesalers	5.91	44.86
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	5.47	50.33

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
3251	Basic Chemical Manufacturing	4.75	55.07
5415	Computer Systems Design and Related Services	2.61	57.68
2373	Highway, Street, and Bridge Construction	2.57	60.25
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	2.27	62.52
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	2.18	64.70
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	1.99	66.68
3362	Motor Vehicle Body and Trailer Manufacturing	1.80	68.48
8111	Automotive Repair and Maintenance	1.76	70.24
4532	Office Supplies, Stationery, and Gift Stores	1.74	71.99
3342	Communications Equipment Manufacturing	1.68	73.66
3364	Aerospace Product and Parts Manufacturing	1.52	75.19
3259	Other Chemical Product and Preparation Manufacturing	1.35	76.54
3333	Commercial and Service Industry Machinery Manufacturing	1.33	77.86
5112	Software Publishers	1.21	79.08
3152	Cut and Sew Apparel Manufacturing	1.09	80.17
4539	Other Miscellaneous Store Retailers	0.95	81.12
4239	Miscellaneous Durable Goods Merchant Wholesalers	0.94	82.06
3331	Agriculture, Construction, and Mining Machinery Manufacturing	0.79	82.85
3323	Architectural and Structural Metals Manufacturing	0.71	83.57
8112	Electronic and Precision Equipment Repair and Maintenance	0.71	84.27
5611	Office Administrative Services	0.69	84.96
4441	Building Material and Supplies Dealers	0.68	85.64
3399	Other Miscellaneous Manufacturing	0.68	86.31
3329	Other Fabricated Metal Product Manufacturing	0.63	86.94
4233	Lumber and Other Construction Materials Merchant Wholesalers	0.61	87.56
3274	Lime and Gypsum Product Manufacturing	0.57	88.12
4431	Electronics and Appliance Stores	0.53	88.65
4859	Other Transit and Ground Passenger Transportation	0.48	89.13
5179	Other Telecommunications	0.44	89.57
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	0.44	90.01
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	0.44	90.45
3254	Pharmaceutical and Medicine Manufacturing	0.43	90.88
4241	Paper and Paper Product Merchant Wholesalers	0.42	91.30

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
3366	Ship and Boat Building	0.41	91.72
4543	Direct Selling Establishments	0.40	92.11
3372	Office Furniture (including Fixtures) Manufacturing	0.38	92.50
3339	Other General Purpose Machinery Manufacturing	0.32	92.82
4461	Health and Personal Care Stores	0.31	93.13
2389	Other Specialty Trade Contractors	0.28	93.41
5417	Scientific Research and Development Services	0.28	93.69
3261	Plastics Product Manufacturing	0.27	93.96
3351	Electric Lighting Equipment Manufacturing	0.27	94.22
4232	Furniture and Home Furnishing Merchant Wholesalers	0.26	94.49
4841	General Freight Trucking	0.23	94.71
3391	Medical Equipment and Supplies Manufacturing	0.23	94.94
4413	Automotive Parts, Accessories, and Tire Stores	0.21	95.15
4481	Clothing Stores	0.21	95.37
4442	Lawn and Garden Equipment and Supplies Stores	0.20	95.57
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.20	95.77
4412	Other Motor Vehicle Dealers	0.18	95.95
6116	Other Schools and Instruction	0.17	96.12
4242	Drugs and Druggists' Sundries Merchant Wholesalers	0.17	96.29
2382	Building Equipment Contractors	0.16	96.45
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	0.16	96.61
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	0.15	96.76
3159	Apparel Accessories and Other Apparel Manufacturing	0.13	96.89
2361	Residential Building Construction	0.13	97.03
3162	Footwear Manufacturing	0.12	97.15
4511	Sporting Goods, Hobby, and Musical Instrument Stores	0.12	97.26
5111	Newspaper, Periodical, Book, and Directory Publishers	0.11	97.38
3231	Printing and Related Support Activities	0.11	97.49
4244	Grocery and Related Product Merchant Wholesalers	0.11	97.60
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	0.11	97.71
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	0.11	97.82
1114	Greenhouse, Nursery, and Floriculture Production	0.10	97.92
4421	Furniture Stores	0.10	98.02

NAICS Industry Group	NAICS Description	Percentage	Cumulative Percentage
3361	Motor Vehicle Manufacturing	0.10	98.12
3222	Converted Paper Product Manufacturing	0.10	98.21
8129	Other Personal Services	0.10	98.31
3343	Audio and Video Equipment Manufacturing	0.08	98.39
5614	Business Support Services	0.07	98.46
3311	Iron and Steel Mills and Ferroalloy Manufacturing	0.07	98.53
5414	Specialized Design Services	0.07	98.60
5416	Management, Scientific, and Technical Consulting Services	0.07	98.67
4541	Electronic Shopping and Mail-Order Houses	0.07	98.74
5621	Waste Collection	0.06	98.80
5617	Services to Buildings and Dwellings	0.06	98.86
3332	Industrial Machinery Manufacturing	0.05	98.91
5413	Architectural, Engineering, and Related Services	0.05	98.97
3255	Paint, Coating, and Adhesive Manufacturing	0.05	99.02
	Balance of industries (59 industry groups)	0.96	100.00
	TOTAL - $626,037,253		

Source: See Table 2.1.

The resulting percentage weights from these NAICS Sub-sectors, Groups, and Industries are used below in Chapter III to calculate average M/WBE availability figures for Construction, AE-CRS, Services, and CSE.[31]

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

III. M/WBE Availability in the City of Baltimore's Market Area

A. Introduction

Estimates of M/WBE availability are an important element of the City of Baltimore's disparity study since they provide benchmarks for assessing the effectiveness of its efforts to encourage M/WBE participation in public contracting and procurement. Furthermore, they provide a means by which to establish overall goals as well as contract-level goals for M/WBE participation that are tailored to its relevant market area.

Many approaches to estimating availability suffer from internal inconsistency since the data employed to construct the availability numerator (*i.e.,* the total number of M/WBE establishments in the market area) are measured differently than the data employed to construct the availability denominator (*i.e.,* the total number of establishments in the market area). For example, the numerator might be drawn from an agency's internal list of certified M/WBEs while the denominator might be drawn from Census data. Since the methods used to identify and certify firms as M/WBEs are different from the methods used by the Census Bureau to count business establishments, such approaches inevitably compare "apples to oranges."

In this Study, we employ a method for measuring availability that ensures an "apples to apples" comparison between the availability numerator and denominator. This "Custom Census" method was pioneered by NERA and has been favorably reviewed by each court that has examined it to date. The Tenth Circuit found the custom census approach to be "a more sophisticated method to calculate availability than the earlier studies [by the other consultant in this case]."[32] Likewise, this method was successful in the defense of the DBE programs for Minnesota DOT[33] and Illinois DOT,[34] as well as the M/WBE construction program for the City of Chicago.[35]

In addition to its favorable reception in the courts, when properly executed, the Custom Census method is superior to other approaches for at least three reasons. First, it provides an internally consistent and rigorous "apples to apples" comparison between establishments in the availability numerator and those in the denominator. Second, it comports with the remedial nature of most M/WBE policies by measuring overall M/WBE availability in the relevant market area as opposed to only those businesses currently certified by an agency.[36] Third, when properly executed, the Custom Census is less likely to be tainted by the effects of past and present discrimination than other methods.[37]

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[32] *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 966 (10th Cir. 2003) ("*Concrete Works IV*"), *cert. denied*, 540 U.S. 1027 (2003).

[33] *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964 (8th Cir. 2003), *cert. denied*, 541 U.S. 1041 (2004).

[34] *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7th Cir. 2007).

[35] *Builders Ass'n of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725 (N.D. Ill. 2003).

[36] *See Northern Contracting*, 473 F.3d at 723 ("We agree with the district court that the remedial nature of the federal scheme militates in favor of a method of DBE availability calculation that casts a broader net").

[37] *See* Section B.5., below, for further discussion of this point.

The Custom Census method has seven steps. These are:

1. Create a database of representative and recent City of Baltimore contracts in Construction, AE-CRS, Services and CSE;
2. Identify Baltimore's relevant geographic market from this database;
3. Identify Baltimore's relevant product market from this database;
4. Count all business establishments in the relevant market area;
5. Identify listed M/WBE establishments in the relevant market area;
6. Verify the ownership status of listed M/WBEs; and
7. Verify the ownership status of all other firms in the relevant market area.

Steps 1-3 were described above in Chapter II. Steps 4-7 are described in more detail below.

B. Identifying Business Establishments in the Relevant Markets

M/WBE availability (unweighted) is defined as the number of M/WBEs divided by the total number of business establishments in the City of Baltimore's contracting market area—what we will refer to as the Baseline Business Universe.[38] Determining the total number of business establishments in the market area, however, is more straightforward than determining the number of minority- or women-owned establishments 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 City of Baltimore.

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. 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."[39]

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

[39] *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 Eighth Circuit Court of Appeals).

However, some courts have properly refused to make the results of discrimination the benchmark for non-discrimination.[40] 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.[41]

1. Estimate the Total Number of Business Establishments in the Market

We used data supplied by Dun & Bradstreet to determine the total number of business establishments operating in the relevant geographic and product markets (these markets were discussed in the previous chapter). Dun & Bradstreet produces the most comprehensive publicly available database of business establishments in the U.S. This database contains over 15 million records and is updated continuously. Each record in Dun & Bradstreet represents a 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 NAICS code that was identified as part of the City of Baltimore's product market. Table 3.1 shows the number of businesses identified in each NAICS Industry Group within the Construction category, along with the associated industry weight according to dollars awarded. Comparable data for AE-CRS, Services and CSE appear in Tables 3.2 through 3.4.[42]

Although numerous industries are represented in the City of Baltimore's Baseline Business Universe, contracting and subcontracting opportunities are not distributed evenly among them. Indeed, the distribution of contract expenditures is highly skewed, as documented above in Chapter II.

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[40] *Concrete Works of Colorado, Inc. v. City and County of Denver, et al.*, 321 F.3d 950, 981, 983 (10th Cir. 2003), *cert. denied*, 124 S.Ct. 556 (2003) ("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*." (emphasis in the originals)). *See also Northern Contracting, Inc. v. State of Illinois, et al.*, 473 F.3d 715, 723 (7th Cir. 2007) ("We agree with the district court that the remedial nature of the federal scheme militates in favor of a method of DBE availability calculation that casts a broader net [than a simple count of the number of registered and prequalified DBEs].").

[41] *Concrete Works*, 321 F.3d at 981 (emphasis in the original). *See also* Wainwright and Holt (2010), Appendix B "Understanding Capacity," and Section B.5, below.

[42] Analogous sets of weights using paid dollars, as well as weights restricted to federally-assisted contracts, were also produced. They are similar and not published here due to space considerations.

Table 3.1. Construction—Number of Businesses and Industry Weight, by NAICS Code

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
2373	Highway, Street, and Bridge Construction	218	19.88	19.88
2362	Nonresidential Building Construction	658	18.69	38.57
2382	Building Equipment Contractors	3039	12.67	51.23
2371	Utility System Construction	108	11.75	62.98
2381	Foundation, Structure, and Building Exterior Contractors	1118	6.48	69.47
2389	Other Specialty Trade Contractors	1990	5.92	75.39
4233	Lumber and Other Construction Materials Merchant Wholesalers	285	3.37	78.76
2361	Residential Building Construction	3473	2.86	81.62
3333	Commercial and Service Industry Machinery Manufacturing	23	2.19	83.81
5416	Management, Scientific, and Technical Consulting Services	6518	1.68	85.49
4841	General Freight Trucking	1413	1.29	86.78
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	10	1.25	88.03
5616	Investigation and Security Services	293	1.08	89.11
2383	Building Finishing Contractors	1662	0.86	89.97
3273	Cement and Concrete Product Manufacturing	30	0.85	90.82
5413	Architectural, Engineering, and Related Services	2429	0.78	91.60
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	519	0.78	92.38
2379	Other Heavy and Civil Engineering Construction	93	0.76	93.14
3323	Architectural and Structural Metals Manufacturing	69	0.67	93.81
4842	Specialized Freight Trucking	122	0.63	94.44
5619	Other Support Services	12501	0.58	95.02
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	258	0.57	95.59
5614	Business Support Services	5776	0.52	96.11
4441	Building Material and Supplies Dealers	589	0.36	96.47
3329	Other Fabricated Metal Product Manufacturing	31	0.33	96.80
5617	Services to Buildings and Dwellings	2244	0.32	97.12
5612	Facilities Support Services	63	0.27	97.39
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	221	0.25	97.63
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	144	0.23	97.87
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	286	0.22	98.09
5629	Remediation and Other Waste Management Services	98	0.22	98.31
4931	Warehousing and Storage	63	0.12	98.43
3315	Foundries	1	0.12	98.55
3339	Other General Purpose Machinery Manufacturing	9	0.12	98.67
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	190	0.09	98.75
4471	Gasoline Stations	577	0.09	98.84

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
2213	Water, Sewage and Other Systems	24	0.08	98.92
3241	Petroleum and Coal Products Manufacturing	26	0.08	99.00
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	130	0.06	99.06
4232	Furniture and Home Furnishing Merchant Wholesalers	159	0.06	99.12
3261	Plastics Product Manufacturing	47	0.06	99.18
4543	Direct Selling Establishments	2	0.05	99.23
2123	Nonmetallic Mineral Mining and Quarrying	5	0.05	99.28
5419	Other Professional, Scientific, and Technical Services	5812	0.04	99.32
4821	Rail Transportation	16	0.04	99.35

Sources: 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 3.2. AE-CRS—Number of Businesses and Industry Weight, by NAICS Code

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
5413	Architectural, Engineering, and Related Services	2610	84.58	84.58
5416	Management, Scientific, and Technical Consulting Services	6026	7.46	92.04
5419	Other Professional, Scientific, and Technical Services	5812	4.10	96.13
2371	Utility System Construction	108	1.19	97.32
5629	Remediation and Other Waste Management Services	82	0.83	98.15
2362	Nonresidential Building Construction	49	0.48	98.62
5418	Advertising, Public Relations, and Related Services	196	0.37	98.99
5415	Computer Systems Design and Related Services	53	0.28	99.27
2361	Residential Building Construction	3473	0.26	99.53
2382	Building Equipment Contractors	1775	0.16	99.69
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	16	0.16	99.85
3362	Motor Vehicle Body and Trailer Manufacturing	6	0.15	100.00

Source: See Table 3.1.

Table 3.3. Services—Number of Businesses and Industry Weight, by NAICS Code

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
5415	Computer Systems Design and Related Services	2260	6.70	6.70
5241	Insurance Carriers	122	6.61	13.32
5613	Employment Services	536	5.93	19.24
3342	Communications Equipment Manufacturing	62	5.80	25.04
5616	Investigation and Security Services	709	4.71	29.75
5622	Waste Treatment and Disposal	70	3.87	33.62
5172	Wireless Telecommunications Carriers (except Satellite)	177	3.63	37.24
5416	Management, Scientific, and Technical Consulting Services	6228	3.16	40.41
5413	Architectural, Engineering, and Related Services	2500	2.93	43.33
2382	Building Equipment Contractors	3039	2.73	46.07
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	164	2.72	48.79
5617	Services to Buildings and Dwellings	3921	2.65	51.44
7223	Special Food Services	394	2.63	54.07
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	221	2.59	56.66
6221	General Medical and Surgical Hospitals	142	2.56	59.22
8129	Other Personal Services	56	2.33	61.54
8111	Automotive Repair and Maintenance	1910	2.30	63.84
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	284	1.94	65.78
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	1570	1.93	67.71
5179	Other Telecommunications	635	1.64	69.35
8112	Electronic and Precision Equipment Repair and Maintenance	234	1.62	70.96
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	158	1.58	72.54
2389	Other Specialty Trade Contractors	1990	1.28	73.82
5112	Software Publishers	181	1.16	74.98
4539	Other Miscellaneous Store Retailers	1332	1.13	76.10
3231	Printing and Related Support Activities	31	1.07	77.18
3366	Ship and Boat Building	17	0.87	78.05
5418	Advertising, Public Relations, and Related Services	525	0.85	78.90
5629	Remediation and Other Waste Management Services	98	0.85	79.74
6214	Outpatient Care Centers	113	0.83	80.57
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	298	0.81	81.38
4841	General Freight Trucking	1413	0.77	82.15
2383	Building Finishing Contractors	1265	0.70	82.85
5411	Legal Services	3836	0.67	83.52
2373	Highway, Street, and Bridge Construction	218	0.66	84.18
5414	Specialized Design Services	1142	0.66	84.84
5611	Office Administrative Services	1337	0.66	85.51
2361	Residential Building Construction	4752	0.61	86.11

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
2381	Foundation, Structure, and Building Exterior Contractors	501	0.60	86.71
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	379	0.59	87.30
6216	Home Health Care Services	344	0.53	87.83
5419	Other Professional, Scientific, and Technical Services	5812	0.52	88.35
2211	Electric Power Generation, Transmission and Distribution	96	0.52	88.87
8114	Personal and Household Goods Repair and Maintenance	280	0.51	89.39
2362	Nonresidential Building Construction	658	0.47	89.86
5223	Activities Related to Credit Intermediation	105	0.47	90.33
6219	Other Ambulatory Health Care Services	1319	0.46	90.79
4411	Automobile Dealers	380	0.45	91.24
6242	Community Food and Housing, and Emergency and Other Relief Services	35	0.43	91.66
4889	Other Support Activities for Transportation	778	0.39	92.05
4884	Support Activities for Road Transportation	293	0.39	92.44
3323	Architectural and Structural Metals Manufacturing	21	0.35	92.80
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	45	0.35	93.14
4882	Support Activities for Rail Transportation	60	0.32	93.47
8139	Business, Professional, Labor, Political, and Similar Organizations	300	0.31	93.77
4854	School and Employee Bus Transportation	60	0.30	94.07
5321	Automotive Equipment Rental and Leasing	292	0.28	94.35
5614	Business Support Services	5776	0.28	94.63
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	190	0.27	94.91
5242	Agencies, Brokerages, and Other Insurance Related Activities	1722	0.26	95.17
6116	Other Schools and Instruction	664	0.26	95.42
5619	Other Support Services	12501	0.24	95.67
3362	Motor Vehicle Body and Trailer Manufacturing	6	0.23	95.90
4842	Specialized Freight Trucking	117	0.22	96.12
8123	Drycleaning and Laundry Services	19	0.21	96.34
3351	Electric Lighting Equipment Manufacturing	6	0.20	96.54
6215	Medical and Diagnostic Laboratories	173	0.19	96.72
3333	Commercial and Service Industry Machinery Manufacturing	30	0.16	96.88
5121	Motion Picture and Video Industries	345	0.15	97.04
3343	Audio and Video Equipment Manufacturing	26	0.14	97.18
2371	Utility System Construction	108	0.14	97.32
4855	Charter Bus Industry	31	0.14	97.46
4431	Electronics and Appliance Stores	416	0.13	97.59
6117	Educational Support Services	123	0.13	97.72
5151	Radio and Television Broadcasting	101	0.13	97.85
8133	Social Advocacy Organizations	268	0.12	97.97
5171	Wired Telecommunications Carriers	108	0.12	98.09
5612	Facilities Support Services	63	0.12	98.21
5621	Waste Collection	1	0.11	98.32

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
4233	Lumber and Other Construction Materials Merchant Wholesalers	24	0.11	98.43
3159	Apparel Accessories and Other Apparel Manufacturing	14	0.11	98.54
2379	Other Heavy and Civil Engineering Construction	93	0.11	98.64
7115	Independent Artists, Writers, and Performers	730	0.10	98.75
5311	Lessors of Real Estate	1131	0.09	98.84
6241	Individual and Family Services	1203	0.09	98.93
5111	Newspaper, Periodical, Book, and Directory Publishers	156	0.09	99.01
8122	Death Care Services	117	0.08	99.09
7139	Other Amusement and Recreation Industries	65	0.07	99.17
7211	Traveler Accommodation	405	0.07	99.24
6115	Technical and Trade Schools	83	0.06	99.30
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	130	0.06	99.36
3241	Petroleum and Coal Products Manufacturing	19	0.05	99.41
6243	Vocational Rehabilitation Services	167	0.05	99.45
4821	Rail Transportation	16	0.05	99.50
3339	Other General Purpose Machinery Manufacturing	5	0.05	99.54
6231	Nursing Care Facilities (Skilled Nursing Facilities)	398	0.04	99.59
6114	Business Schools and Computer and Management Training	58	0.04	99.63
8132	Grantmaking and Giving Services	4	0.04	99.66
5182	Data Processing, Hosting, and Related Services	234	0.04	99.70
4442	Lawn and Garden Equipment and Supplies Stores	121	0.03	99.73
3219	Other Wood Product Manufacturing	9	0.03	99.76
4921	Couriers and Express Delivery Services	57	0.03	99.79
6211	Offices of Physicians	5564	0.03	99.83
3399	Other Miscellaneous Manufacturing	159	0.03	99.86
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	9	0.03	99.89
7221	Full-Service Restaurants	2762	0.03	99.92
4241	Paper and Paper Product Merchant Wholesalers	84	0.03	99.95
2213	Water, Sewage and Other Systems	24	0.03	99.97
5417	Scientific Research and Development Services	236	0.03	100.00

Source: See Table 3.1.

Table 3.4. CSE—Number of Businesses and Industry Weight, by NAICS Code

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
4247	Petroleum and Petroleum Products Merchant Wholesalers	59	14.09	14.09
4411	Automobile Dealers	649	9.80	23.89
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	753	8.88	32.77
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	235	6.55	39.31
4246	Chemical and Allied Products Merchant Wholesalers	76	5.95	45.26
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	512	5.52	50.79
3251	Basic Chemical Manufacturing	1	4.79	55.57
5415	Computer Systems Design and Related Services	2232	2.62	58.19
2373	Highway, Street, and Bridge Construction	218	2.60	60.78
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	337	2.20	62.98
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	185	1.99	64.97
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	111	1.82	66.79
3362	Motor Vehicle Body and Trailer Manufacturing	8	1.81	68.60
8111	Automotive Repair and Maintenance	2140	1.77	70.38
4532	Office Supplies, Stationery, and Gift Stores	66	1.76	72.14
3342	Communications Equipment Manufacturing	62	1.69	73.82
3364	Aerospace Product and Parts Manufacturing	10	1.54	75.36
3259	Other Chemical Product and Preparation Manufacturing	26	1.36	76.73
3333	Commercial and Service Industry Machinery Manufacturing	30	1.31	78.04
5112	Software Publishers	181	1.22	79.26
3152	Cut and Sew Apparel Manufacturing	5	1.10	80.37
4539	Other Miscellaneous Store Retailers	1332	0.96	81.33
4239	Miscellaneous Durable Goods Merchant Wholesalers	374	0.95	82.28
3331	Agriculture, Construction, and Mining Machinery Manufacturing	19	0.80	83.07
3323	Architectural and Structural Metals Manufacturing	116	0.72	83.79
8112	Electronic and Precision Equipment Repair and Maintenance	395	0.71	84.50
5611	Office Administrative Services	1337	0.70	85.20
3399	Other Miscellaneous Manufacturing	353	0.68	85.88
4441	Building Material and Supplies Dealers	418	0.67	86.55
3329	Other Fabricated Metal Product Manufacturing	31	0.62	87.17
4233	Lumber and Other Construction Materials Merchant Wholesalers	285	0.62	87.79
3274	Lime and Gypsum Product Manufacturing	2	0.57	88.36
4431	Electronics and Appliance Stores	429	0.51	88.87
4859	Other Transit and Ground Passenger Transportation	71	0.48	89.36
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	144	0.44	89.80
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	137	0.44	90.24

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
5179	Other Telecommunications	134	0.44	90.68
3254	Pharmaceutical and Medicine Manufacturing	78	0.43	91.11
4241	Paper and Paper Product Merchant Wholesalers	132	0.43	91.54
3366	Ship and Boat Building	52	0.42	91.96
4543	Direct Selling Establishments	2	0.39	92.34
3372	Office Furniture (including Fixtures) Manufacturing	16	0.38	92.73
4461	Health and Personal Care Stores	537	0.31	93.04
3339	Other General Purpose Machinery Manufacturing	79	0.30	93.34
2389	Other Specialty Trade Contractors	1767	0.29	93.62
5417	Scientific Research and Development Services	349	0.28	93.90
3351	Electric Lighting Equipment Manufacturing	6	0.27	94.17
4232	Furniture and Home Furnishing Merchant Wholesalers	159	0.27	94.43
3261	Plastics Product Manufacturing	47	0.26	94.69
4841	General Freight Trucking	250	0.23	94.92
4413	Automotive Parts, Accessories, and Tire Stores	239	0.22	95.14
4481	Clothing Stores	293	0.22	95.35
4442	Lawn and Garden Equipment and Supplies Stores	137	0.20	95.56
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	221	0.20	95.76
3391	Medical Equipment and Supplies Manufacturing	37	0.20	95.96
4242	Drugs and Druggists' Sundries Merchant Wholesalers	79	0.17	96.13
2382	Building Equipment Contractors	3016	0.16	96.29
4412	Other Motor Vehicle Dealers	194	0.16	96.46
6116	Other Schools and Instruction	512	0.16	96.62
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	60	0.16	96.78
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	21	0.15	96.92
2361	Residential Building Construction	1279	0.13	97.06
3162	Footwear Manufacturing	1	0.12	97.18
4511	Sporting Goods, Hobby, and Musical Instrument Stores	309	0.12	97.30
3159	Apparel Accessories and Other Apparel Manufacturing	2	0.11	97.41
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	5	0.11	97.51
4421	Furniture Stores	405	0.10	97.62
4244	Grocery and Related Product Merchant Wholesalers	340	0.10	97.72
1114	Greenhouse, Nursery, and Floriculture Production	48	0.10	97.82
3222	Converted Paper Product Manufacturing	2	0.10	97.91
8129	Other Personal Services	56	0.10	98.01
3231	Printing and Related Support Activities	11	0.09	98.10
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	563	0.09	98.19
3343	Audio and Video Equipment Manufacturing	26	0.08	98.28
5111	Newspaper, Periodical, Book, and Directory Publishers	72	0.07	98.35
3361	Motor Vehicle Manufacturing	7	0.07	98.42
5614	Business Support Services	5776	0.07	98.50
3311	Iron and Steel Mills and Ferroalloy Manufacturing	12	0.07	98.57
5414	Specialized Design Services	627	0.07	98.64

NAICS Code	NAICS Description	Number of Estab-lishments	Industry Weight	Cumulative Industry Weight
5621	Waste Collection	24	0.06	98.71
5617	Services to Buildings and Dwellings	1198	0.06	98.76
5413	Architectural, Engineering, and Related Services	110	0.05	98.81
4541	Electronic Shopping and Mail-Order Houses	139	0.05	98.87
3332	Industrial Machinery Manufacturing	9	0.05	98.92
5629	Remediation and Other Waste Management Services	82	0.05	98.97
2362	Nonresidential Building Construction	609	0.05	99.01
4533	Used Merchandise Stores	399	0.05	99.06
3255	Paint, Coating, and Adhesive Manufacturing	15	0.05	99.11
5416	Management, Scientific, and Technical Consulting Services	437	0.04	99.15
3359	Other Electrical Equipment and Component Manufacturing	41	0.04	99.19
5419	Other Professional, Scientific, and Technical Services	5812	0.04	99.22
3273	Cement and Concrete Product Manufacturing	2	0.04	99.26
7223	Special Food Services	394	0.04	99.30
3149	Other Textile Product Mills	68	0.03	99.33
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	923	0.03	99.36
5619	Other Support Services	12501	0.03	99.40
3363	Motor Vehicle Parts Manufacturing	14	0.03	99.43
3241	Petroleum and Coal Products Manufacturing	19	0.03	99.46
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	4	0.03	99.48
3221	Pulp, Paper, and Paperboard Mills	1	0.03	99.51

Source: See Table 3.1.

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.

Specifically, directories were included from: American Indian Search, Anne Arundel County Offices of Central Services, Baltimore City Chamber of Commerce, Baltimore County Chamber of Commerce, Baltimore Hispanic Chamber of Commerce, Baltimore Orioles, Business Research Services, Calvert County Minority Business Alliance, Central Vendor Registration of Montgomery County, City of Baltimore, City of Richmond, Coppin State University, Delaware DOT, DiversityBusiness.com, Diversity Information Resources, Frederick County, Garrett County, Governor's Commission on Asian Pacific American Affairs, Greater Baltimore Black Chamber of Commerce, Hagerstown/Washington Economic Development Commission, Howard

County, Jefferson County Development Authority, Maryland Department of Budget and Management, Maryland DOT, Maryland R*STARS Database, Maryland Washington Minority Contractors Association, Maryland-National Capital Park & Planning Commission, Metropolitan Washington Airports Authority, Minority Business Development Agency, Montgomery County, National Center for American Indian Enterprise Development, Small Business Administration, Towson University, Virginia Department of Minority Business Enterprise, Washington Metropolitan Area Transit Authority, Washington Suburban Sanitary Commission, West Virginia DOT, Women Construction Owners and Executives, Women's Business Enterprise National Council.[43]

If the listed M/WBEs identified in Tables 3.5 through 3.8 are in fact *all* M/WBEs and are the *only* M/WBEs among all of the establishments in the relevant market identified in Tables 3.1 through 3.4, then an estimate of "listed" M/WBE availability is simply the number of listed M/WBEs divided by the total number of establishments in the relevant market. 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 proportion of the M/WBEs listed in the tables is not actually minority-owned or women-owned. Second, it is likely that there are additional "unlisted" M/WBEs among all of the establishments included in Tables 3.1 through 3.8. Such businesses do not appear in any of the directories we gathered and are therefore not included as M/WBEs in these tables. 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 below in Sections 3.a and 3.b.

Table 3.5. Construction—Number of Listed M/WBEs and Industry Weight (Dollars Awarded), by NAICS Code

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumu-lative)
2373	Highway, Street, and Bridge Construction	25	19.88	19.88
2362	Nonresidential Building Construction	125	18.69	38.57
2382	Building Equipment Contractors	240	12.67	51.23
2371	Utility System Construction	15	11.75	62.98
2381	Foundation, Structure, and Building Exterior Contractors	118	6.48	69.47
2389	Other Specialty Trade Contractors	140	5.92	75.39
4233	Lumber and Other Construction Materials Merchant Wholesalers	39	3.37	78.76
2361	Residential Building Construction	124	2.86	81.62

[43] 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 C. 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 C.

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumu-lative)
3333	Commercial and Service Industry Machinery Manufacturing	2	2.19	83.81
5416	Management, Scientific, and Technical Consulting Services	1428	1.68	85.49
4841	General Freight Trucking	110	1.29	86.78
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	5	1.25	88.03
5616	Investigation and Security Services	43	1.08	89.11
2383	Building Finishing Contractors	135	0.86	89.97
3273	Cement and Concrete Product Manufacturing	4	0.85	90.82
5413	Architectural, Engineering, and Related Services	363	0.78	91.60
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	57	0.78	92.38
2379	Other Heavy and Civil Engineering Construction	10	0.76	93.14
3323	Architectural and Structural Metals Manufacturing	6	0.67	93.81
4842	Specialized Freight Trucking	19	0.63	94.44
5619	Other Support Services	351	0.58	95.02
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	20	0.57	95.59
5614	Business Support Services	429	0.52	96.11
4441	Building Material and Supplies Dealers	46	0.36	96.47
3329	Other Fabricated Metal Product Manufacturing	7	0.33	96.80
5617	Services to Buildings and Dwellings	335	0.32	97.12
5612	Facilities Support Services	27	0.27	97.39
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	14	0.25	97.63
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	5	0.23	97.87
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	12	0.22	98.09
5629	Remediation and Other Waste Management Services	10	0.22	98.31
4931	Warehousing and Storage	3	0.12	98.43
3315	Foundries	0	0.12	98.55
3339	Other General Purpose Machinery Manufacturing	0	0.12	98.67
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	22	0.09	98.75
4471	Gasoline Stations	34	0.09	98.84
2213	Water, Sewage and Other Systems	0	0.08	98.92
3241	Petroleum and Coal Products Manufacturing	3	0.08	99.00
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	13	0.06	99.06
4232	Furniture and Home Furnishing Merchant Wholesalers	20	0.06	99.12
3261	Plastics Product Manufacturing	5	0.06	99.18
4543	Direct Selling Establishments	0	0.05	99.23
2123	Nonmetallic Mineral Mining and Quarrying	0	0.05	99.28
5419	Other Professional, Scientific, and Technical Services	459	0.04	99.32
4821	Rail Transportation	1	0.04	99.35

Source and Notes: See Table 3.1.

Table 3.6. AE-CRS—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumu-lative)
5413	Architectural, Engineering, and Related Services	382	84.58	84.58
5416	Management, Scientific, and Technical Consulting Services	1348	7.46	92.04
5419	Other Professional, Scientific, and Technical Services	459	4.10	96.13
2371	Utility System Construction	15	1.19	97.32
5629	Remediation and Other Waste Management Services	4	0.83	98.15
2362	Nonresidential Building Construction	6	0.48	98.62
5418	Advertising, Public Relations, and Related Services	49	0.37	98.99
5415	Computer Systems Design and Related Services	20	0.28	99.27
2361	Residential Building Construction	124	0.26	99.53
2382	Building Equipment Contractors	115	0.16	99.69
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	1	0.16	99.85
3362	Motor Vehicle Body and Trailer Manufacturing	0	0.15	100.00

Source and Notes: See Table 3.1.

Table 3.7. Services—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumu-lative)
5415	Computer Systems Design and Related Services	698	6.70	6.70
5241	Insurance Carriers	10	6.61	13.32
5613	Employment Services	129	5.93	19.24
3342	Communications Equipment Manufacturing	11	5.80	25.04
5616	Investigation and Security Services	91	4.71	29.75
5622	Waste Treatment and Disposal	5	3.87	33.62
5172	Wireless Telecommunications Carriers (except Satellite)	4	3.63	37.24
5416	Management, Scientific, and Technical Consulting Services	1424	3.16	40.41
5413	Architectural, Engineering, and Related Services	375	2.93	43.33
2382	Building Equipment Contractors	240	2.73	46.07
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	10	2.72	48.79
5617	Services to Buildings and Dwellings	478	2.65	51.44
7223	Special Food Services	47	2.63	54.07
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	14	2.59	56.66
6221	General Medical and Surgical Hospitals	6	2.56	59.22
8129	Other Personal Services	3	2.33	61.54
8111	Automotive Repair and Maintenance	77	2.30	63.84
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	55	1.94	65.78
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	201	1.93	67.71
5179	Other Telecommunications	55	1.64	69.35
8112	Electronic and Precision Equipment Repair and Maintenance	15	1.62	70.96
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	14	1.58	72.54
2389	Other Specialty Trade Contractors	140	1.28	73.82
5112	Software Publishers	25	1.16	74.98
4539	Other Miscellaneous Store Retailers	89	1.13	76.10
3231	Printing and Related Support Activities	8	1.07	77.18
3366	Ship and Boat Building	0	0.87	78.05
5418	Advertising, Public Relations, and Related Services	116	0.85	78.90
5629	Remediation and Other Waste Management Services	10	0.85	79.74
6214	Outpatient Care Centers	33	0.83	80.57
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	12	0.81	81.38
4841	General Freight Trucking	110	0.77	82.15
2383	Building Finishing Contractors	101	0.70	82.85
5411	Legal Services	233	0.67	83.52
2373	Highway, Street, and Bridge Construction	25	0.66	84.18

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumu-lative)
5414	Specialized Design Services	410	0.66	84.84
5611	Office Administrative Services	119	0.66	85.51
2361	Residential Building Construction	182	0.61	86.11
2381	Foundation, Structure, and Building Exterior Contractors	63	0.60	86.71
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	44	0.59	87.30
6216	Home Health Care Services	50	0.53	87.83
5419	Other Professional, Scientific, and Technical Services	459	0.52	88.35
2211	Electric Power Generation, Transmission and Distribution	3	0.52	88.87
8114	Personal and Household Goods Repair and Maintenance	35	0.51	89.39
2362	Nonresidential Building Construction	125	0.47	89.86
5223	Activities Related to Credit Intermediation	3	0.47	90.33
6219	Other Ambulatory Health Care Services	86	0.46	90.79
4411	Automobile Dealers	10	0.45	91.24
6242	Community Food and Housing, and Emergency and Other Relief Services	0	0.43	91.66
4889	Other Support Activities for Transportation	31	0.39	92.05
4884	Support Activities for Road Transportation	24	0.39	92.44
3323	Architectural and Structural Metals Manufacturing	2	0.35	92.80
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	8	0.35	93.14
4882	Support Activities for Rail Transportation	4	0.32	93.47
8139	Business, Professional, Labor, Political, and Similar Organizations	5	0.31	93.77
4854	School and Employee Bus Transportation	18	0.30	94.07
5321	Automotive Equipment Rental and Leasing	5	0.28	94.35
5614	Business Support Services	429	0.28	94.63
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	22	0.27	94.91
5242	Agencies, Brokerages, and Other Insurance Related Activities	115	0.26	95.17
6116	Other Schools and Instruction	126	0.26	95.42
5619	Other Support Services	351	0.24	95.67
3362	Motor Vehicle Body and Trailer Manufacturing	0	0.23	95.90
4842	Specialized Freight Trucking	19	0.22	96.12
8123	Drycleaning and Laundry Services	4	0.21	96.34
3351	Electric Lighting Equipment Manufacturing	2	0.20	96.54
6215	Medical and Diagnostic Laboratories	15	0.19	96.72
3333	Commercial and Service Industry Machinery Manufacturing	3	0.16	96.88
5121	Motion Picture and Video Industries	61	0.15	97.04
3343	Audio and Video Equipment Manufacturing	3	0.14	97.18
2371	Utility System Construction	15	0.14	97.32
4855	Charter Bus Industry	5	0.14	97.46
4431	Electronics and Appliance Stores	40	0.13	97.59

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumu-lative)
6117	Educational Support Services	29	0.13	97.72
5151	Radio and Television Broadcasting	8	0.13	97.85
8133	Social Advocacy Organizations	13	0.12	97.97
5171	Wired Telecommunications Carriers	14	0.12	98.09
5612	Facilities Support Services	27	0.12	98.21
5621	Waste Collection	0	0.11	98.32
4233	Lumber and Other Construction Materials Merchant Wholesalers	5	0.11	98.43
3159	Apparel Accessories and Other Apparel Manufacturing	2	0.11	98.54
2379	Other Heavy and Civil Engineering Construction	10	0.11	98.64
7115	Independent Artists, Writers, and Performers	120	0.10	98.75
5311	Lessors of Real Estate	52	0.09	98.84
6241	Individual and Family Services	38	0.09	98.93
5111	Newspaper, Periodical, Book, and Directory Publishers	25	0.09	99.01
8122	Death Care Services	3	0.08	99.09
7139	Other Amusement and Recreation Industries	2	0.07	99.17
7211	Traveler Accommodation	38	0.07	99.24
6115	Technical and Trade Schools	13	0.06	99.30
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	13	0.06	99.36
3241	Petroleum and Coal Products Manufacturing	2	0.05	99.41
6243	Vocational Rehabilitation Services	21	0.05	99.45
4821	Rail Transportation	1	0.05	99.50
3339	Other General Purpose Machinery Manufacturing	1	0.05	99.54
6231	Nursing Care Facilities (Skilled Nursing Facilities)	33	0.04	99.59
6114	Business Schools and Computer and Management Training	23	0.04	99.63
8132	Grantmaking and Giving Services	0	0.04	99.66
5182	Data Processing, Hosting, and Related Services	41	0.04	99.70
4442	Lawn and Garden Equipment and Supplies Stores	17	0.03	99.73
3219	Other Wood Product Manufacturing	2	0.03	99.76
4921	Couriers and Express Delivery Services	6	0.03	99.79
6211	Offices of Physicians	390	0.03	99.83
3399	Other Miscellaneous Manufacturing	32	0.03	99.86
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	0	0.03	99.89
7221	Full-Service Restaurants	246	0.03	99.92
4241	Paper and Paper Product Merchant Wholesalers	30	0.03	99.95
2213	Water, Sewage and Other Systems	0	0.03	99.97
5417	Scientific Research and Development Services	43	0.03	100.00

Source and Notes: See Table 3.1.

Table 3.8. CSE—Number of Listed M/WBE Establishments and Industry Weight (Dollars Awarded), by NAICS Code

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumu-lative)
4247	Petroleum and Petroleum Products Merchant Wholesalers	2	14.09	14.09
4411	Automobile Dealers	16	9.80	23.89
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	83	8.88	32.77
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	17	6.55	39.31
4246	Chemical and Allied Products Merchant Wholesalers	10	5.95	45.26
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	90	5.52	50.79
3251	Basic Chemical Manufacturing	0	4.79	55.57
5415	Computer Systems Design and Related Services	695	2.62	58.19
2373	Highway, Street, and Bridge Construction	25	2.60	60.78
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers	45	2.20	62.98
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	15	1.99	64.97
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	9	1.82	66.79
3362	Motor Vehicle Body and Trailer Manufacturing	1	1.81	68.60
8111	Automotive Repair and Maintenance	95	1.77	70.38
4532	Office Supplies, Stationery, and Gift Stores	15	1.76	72.14
3342	Communications Equipment Manufacturing	11	1.69	73.82
3364	Aerospace Product and Parts Manufacturing	1	1.54	75.36
3259	Other Chemical Product and Preparation Manufacturing	3	1.36	76.73
3333	Commercial and Service Industry Machinery Manufacturing	3	1.31	78.04
5112	Software Publishers	25	1.22	79.26
3152	Cut and Sew Apparel Manufacturing	2	1.10	80.37
4539	Other Miscellaneous Store Retailers	89	0.96	81.33
4239	Miscellaneous Durable Goods Merchant Wholesalers	29	0.95	82.28
3331	Agriculture, Construction, and Mining Machinery Manufacturing	1	0.80	83.07
3323	Architectural and Structural Metals Manufacturing	11	0.72	83.79
8112	Electronic and Precision Equipment Repair and Maintenance	47	0.71	84.50
5611	Office Administrative Services	119	0.70	85.20
3399	Other Miscellaneous Manufacturing	61	0.68	85.88
4441	Building Material and Supplies Dealers	29	0.67	86.55
3329	Other Fabricated Metal Product Manufacturing	7	0.62	87.17
4233	Lumber and Other Construction Materials Merchant Wholesalers	39	0.62	87.79
3274	Lime and Gypsum Product Manufacturing	0	0.57	88.36
4431	Electronics and Appliance Stores	41	0.51	88.87
4859	Other Transit and Ground Passenger Transportation	18	0.48	89.36

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumu-lative)
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	5	0.44	89.80
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	17	0.44	90.24
5179	Other Telecommunications	11	0.44	90.68
3254	Pharmaceutical and Medicine Manufacturing	10	0.43	91.11
4241	Paper and Paper Product Merchant Wholesalers	38	0.43	91.54
3366	Ship and Boat Building	1	0.42	91.96
4543	Direct Selling Establishments	0	0.39	92.34
3372	Office Furniture (including Fixtures) Manufacturing	6	0.38	92.73
4461	Health and Personal Care Stores	28	0.31	93.04
3339	Other General Purpose Machinery Manufacturing	8	0.30	93.34
2389	Other Specialty Trade Contractors	114	0.29	93.62
5417	Scientific Research and Development Services	63	0.28	93.90
3351	Electric Lighting Equipment Manufacturing	2	0.27	94.17
4232	Furniture and Home Furnishing Merchant Wholesalers	20	0.27	94.43
3261	Plastics Product Manufacturing	5	0.26	94.69
4841	General Freight Trucking	26	0.23	94.92
4413	Automotive Parts, Accessories, and Tire Stores	14	0.22	95.14
4481	Clothing Stores	45	0.22	95.35
4442	Lawn and Garden Equipment and Supplies Stores	19	0.20	95.56
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	14	0.20	95.76
3391	Medical Equipment and Supplies Manufacturing	4	0.20	95.96
4242	Drugs and Druggists' Sundries Merchant Wholesalers	20	0.17	96.13
2382	Building Equipment Contractors	235	0.16	96.29
4412	Other Motor Vehicle Dealers	10	0.16	96.46
6116	Other Schools and Instruction	105	0.16	96.62
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	1	0.16	96.78
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	5	0.15	96.92
2361	Residential Building Construction	58	0.13	97.06
3162	Footwear Manufacturing	0	0.12	97.18
4511	Sporting Goods, Hobby, and Musical Instrument Stores	20	0.12	97.30
3159	Apparel Accessories and Other Apparel Manufacturing	0	0.11	97.41
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	0	0.11	97.51
4421	Furniture Stores	34	0.10	97.62
4244	Grocery and Related Product Merchant Wholesalers	24	0.10	97.72
1114	Greenhouse, Nursery, and Floriculture Production	3	0.10	97.82
3222	Converted Paper Product Manufacturing	0	0.10	97.91
8129	Other Personal Services	3	0.10	98.01
3231	Printing and Related Support Activities	4	0.09	98.10
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	41	0.09	98.19

NAICS Industry Group	NAICS Description	Number of Listed M/WBEs	Industry Weight	Industry Weight (Cumu-lative)
3343	Audio and Video Equipment Manufacturing	3	0.08	98.28
5111	Newspaper, Periodical, Book, and Directory Publishers	13	0.07	98.35
3361	Motor Vehicle Manufacturing	0	0.07	98.42
5614	Business Support Services	429	0.07	98.50
3311	Iron and Steel Mills and Ferroalloy Manufacturing	3	0.07	98.57
5414	Specialized Design Services	202	0.07	98.64
5621	Waste Collection	1	0.06	98.71
5617	Services to Buildings and Dwellings	58	0.06	98.76
5413	Architectural, Engineering, and Related Services	7	0.05	98.81
4541	Electronic Shopping and Mail-Order Houses	29	0.05	98.87
3332	Industrial Machinery Manufacturing	2	0.05	98.92
5629	Remediation and Other Waste Management Services	4	0.05	98.97
2362	Nonresidential Building Construction	119	0.05	99.01
4533	Used Merchandise Stores	84	0.05	99.06
3255	Paint, Coating, and Adhesive Manufacturing	1	0.05	99.11
5416	Management, Scientific, and Technical Consulting Services	106	0.04	99.15
3359	Other Electrical Equipment and Component Manufacturing	2	0.04	99.19
5419	Other Professional, Scientific, and Technical Services	459	0.04	99.22
3273	Cement and Concrete Product Manufacturing	0	0.04	99.26
7223	Special Food Services	47	0.04	99.30
3149	Other Textile Product Mills	26	0.03	99.33
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	68	0.03	99.36
5619	Other Support Services	351	0.03	99.40
3363	Motor Vehicle Parts Manufacturing	1	0.03	99.43
3241	Petroleum and Coal Products Manufacturing	2	0.03	99.46
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	0	0.03	99.48
3221	Pulp, Paper, and Paperboard Mills	0	0.03	99.51

Source and Notes: See Table 3.1.

3. Verify Listed M/WBEs

a. Introduction

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 or mentor status, recording errors, or even outright 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 phenomena as geographic relocation, ownership changes, directory compilation errors, fear of stigmatization, and limitations in M/WBE outreach, could all lead to M/WBEs being unlisted. Other things equal, 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 almost 38,000 establishments drawn from the Baseline Business Universe and measured how often they were misclassified (or unclassified) by race and/or gender.[44]

Strata were defined according to NAICS industries and listed M/WBE status.[45] In the telephone 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 37,998 establishments in our sample, 9,147 (24.1%) were listed M/WBEs and 28,851 (75.9%) were unclassified by race or gender. Of these 37,998 firms, however, 7,841 (20.6%) were excluded as "unable to contact." Exclusions resulted primarily from disconnected phone numbers and establishments that were no longer in business.[46] Of the remaining 30,157 establishments, 1,429 (24.7%) were listed M/WBEs and the remaining 22,723 establishments (75.3%) 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 (that is, firms putatively owned by nonminority males) could all be properly classified as non-M/WBEs. Both elements of the survey are described in more detail below.[47]

b. Survey of Listed M/WBEs

We selected a stratified random sample of 9,147 listed M/WBEs to verify the race and gender status of their owner(s). Of these, 1,713 (18.7 percent) were excluded as "unable to contact." Of the 7,434 remaining establishments, we obtained complete interviews from 3,237, for a response rate of 43.5 percent.

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[44] A similar method was employed by the Federal Reserve Board to deal with similar problems in designing and implementing the National Survey of Small Business Finances for 1993 and 1998. *See* Haggerty, C., K. Grigorian, R. Harter and J. D. Wolken (2000).

[45] A total of 218 separate industry strata were created based on NAICS code. All strata were then split according to listed M/WBE status to create a total of 436 strata. Generally, listed M/WBEs were sampled at a higher rate than unclassified establishments.

[46] Other reasons included changed ownership, duplicate records, and refusals. Putative M/WBEs were not more likely to be affected by this than putative non-M/WBEs.

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

Of the 3,237 establishments interviewed, 601 (18.57 percent) were actually owned by nonminority males. Misclassification varied by putative race and gender, as shown in Table 3.9. Misclassification was highest among putative Hispanic-owned establishments, followed by putative Native American-owned establishments, then Asian/Pacific Islander-owned establishments, then nonminority female-owned establishments and finally African American-owned establishments.[48] Misclassification was also observed in more than 90 percent of NAICS strata, ranging from a high of 75 percent to a low of 6.7 percent, with a median of 31.6 percent and a mean of 33.6 percent.

Table 3.9. Listed M/WBE Survey—Amount of Misclassification, by Putative M/WBE Type

Putative Race/Gender	Misclassification (Percentage Nonminority Male)	Misclassification (Percentage Other M/WBE Type)	Percentage Correctly Classified	Number of Businesses Interviewed
African American (either gender)	8.06	5.73	86.21	856
Hispanic (either gender)	26.09	30.00	43.91	230
Asian/Pacific Islander (either gender)	18.60	15.35	66.05	215
Native American (either gender)	17.02	31.92	51.06	47
Nonminority Female	22.45	10.53	67.02	1,889
All M/WBE Types	18.57	11.27	70.16	3,237

Source: NERA telephone surveys.

Notes: (1) Figures are rounded. Rounding was performed subsequent to any mathematical calculations. (2) Similar calculations, not shown here, were performed within each stratum.

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 an establishment originally listed as African American-owned was actually nonminority male-owned, then that establishment was counted as nonminority male-owned for purposes of calculating M/WBE availability.

But what about the remaining putatively African American-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 putatively African American-owned establishments that we did interview. In this example, our interviews show that 86.21 percent of

[48] 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" or "Asian/Pacific Islander" refers to an individual having origins in the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands; "Native American" refers to an individual having origins in any of the original peoples of North America.

these firms are indeed actually African American-owned, 8.06 percent are actually nonminority male-owned, 4.91 percent are actually nonminority female-owned, 0.23 percent are actually Hispanic-owned, 0.47 percent are actually Asian/Pacific Islander-owned and 0.12 percent are actually Native American-owned. Therefore, we assign each of the remaining putative African American-owned firms an 86.21 percent probability of being African American-owned, an 8.06 percent probability of being nonminority male-owned, a 4.91 percent probability of being nonminority female-owned, a 0.23 percent probability of being Hispanic-owned, a 0.47 percent probability of being Asian/Pacific Islander-owned and a 0.12 percent probability of being Native American-owned. We performed this procedure within each sample stratum and for all putative race and gender categories.

4. Verify Putative Non-M/WBEs

a. Survey of Unclassified Businesses

In the same manner as our survey of listed M/WBEs, we also examined unclassified businesses, *i.e.,* any business that was not originally identified as an M/WBE, either in Dun & Bradstreet 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 28,851 unclassified businesses from the Baseline Business Universe to verify the race and gender status of their owner(s). Of these, 6,128 (21.2 percent) were excluded as "unable to contact." Of the 22,723 remaining establishments, we obtained 8,325 complete interviews, for a response rate of 36.6 percent.

As shown in Table 3.10, of the 8,325 establishments interviewed, 6,523 (78.35 percent) were owned by nonminority males. Clearly, a large majority of unclassified businesses in the Baseline Business Universe are nonminority male-owned. Nevertheless, the survey results indicate that 21.65 percent are *not* nonminority male-owned. Among the latter, the largest group was nonminority female-owned (10.45 percent), with descending size shares accounted for by African American-owned (7.11 percent), Asian/Pacific Islander-owned (2.29 percent), Hispanic-owned (1.18 percent), and Native American-owned (0.61 percent). Misclassification was also observed in almost 98 percent of NAICS strata, ranging from a high of 81 percent to a low of 2.2 percent, with a median of 19.8 percent and a mean of 21.9 percent.

Table 3.10. Unclassified Businesses Survey—By Race and Gender

Verified Race/Gender	Number of Businesses Interviewed	Percentage of Total
Nonminority male	6,523	78.35
Nonminority female	870	10.45
African American (either gender)	592	7.11
Hispanic (either gender)	98	1.18
Asian/Pacific Islander (either gender)	191	2.29
Native American (either gender)	51	0.61
TOTAL	8,325	100.00

Source and Notes: See Table 3.9. Numbers may not add to total due to rounding.

In the same manner as the survey of listed M/WBEs, the race and gender status of unclassified establishments was changed, if necessary, according to the survey results. For example, if an interviewed establishment that was originally unclassified indicated that it was actually nonminority male-owned, then that establishment was counted as nonminority male-owned for purposes of the M/WBE availability calculation. If it indicated it was nonminority female-owned, it was counted as nonminority female, and so on. For unclassified establishments 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.

5. 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 to 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, annual individual firm 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*.[49] Business outcomes, however, can be

[49] *See* Enchautegui, et al. (1996). More recently, see Wainwright (2012), Wainwright (2010).

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 the level of annual individual firm revenues, 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, annual individual firm revenues, bonding limits, or number of employees.

Consider an extreme example where discrimination has prevented the emergence of any minority owned firms. Suppose that racial discrimination was ingrained in a city'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 refuse to work with minority firms and put pressure 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 annual individual firm revenues, bonding limits, and employees (*i.e.,* "capacity") because of discrimination than firms that have benefited from the exclusionary system.

Using annual individual firm revenues as the measure of qualifications illustrates the point. If M/WBEs are subject to market area discrimination, their annual individual firm revenues will be smaller than nonminority, male-owned businesses because they will be less successful at obtaining work. Annual individual firm revenues measure the extent to which a firm has succeeded in the market area, 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, annual individual firm revenues, 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 City of Baltimore 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.[50] 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 creditworthiness measures are held constant.[51] 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.[52]

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 M/WBE firms persists; and
- Most important, identifiable indicators of "capacity" are themselves impacted by discrimination.

C. Estimates of M/WBE Availability

Top-level estimates of M/WBE availability appear below in Table 3.11. Two sets of weighted availability measures are provided for each of the four major procurement categories of

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

[51] *See* Wainwright (2008).

[52] Wainwright (2000).

Construction, AE-CRS, Services, and CSE. The first set is weighted by award dollars for all contracts. The second set is weighted by paid dollars for substantially completed contracts.

Table 3.11. Overall Estimated M/WBE Availability Percentages

	African American	Hispanic	Asian/ Pacific Islander	Native American	Minority	Non-minority Female	M/WBE	Non-M/W/BE
OVERALL								
AWARD DOLLARS	10.27	1.89	3.97	0.33	16.46	11.83	28.28	71.72
PAID DOLLARS	11.10	1.76	3.63	0.34	16.83	12.85	29.68	70.32
CONSTRUCTION								
AWARD DOLLARS	10.64	2.11	1.86	0.32	14.93	11.33	26.25	73.75
PAID DOLLARS	11.26	2.06	1.81	0.33	15.47	11.88	27.34	72.66
AE-CRS								
AWARD DOLLARS	8.53	1.94	6.31	0.20	16.99	10.65	27.64	72.36
PAID DOLLARS	9.77	1.64	5.90	0.17	17.48	12.59	30.07	69.93
SERVICES								
AWARD DOLLARS	12.83	1.63	3.38	0.51	18.35	14.72	33.06	66.94
PAID DOLLARS	13.41	1.57	3.51	0.45	18.94	15.52	34.46	65.54
CSE								
AWARD DOLLARS	9.56	1.52	3.56	0.52	15.16	11.24	26.40	73.60
PAID DOLLARS	9.56	1.52	3.56	0.52	15.16	11.24	26.40	73.60

Sources: Dun & Bradstreet; M/WBE business directory information compiled by NERA; Master Contract/ Subcontract Database; Master Concessions Database.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

Overall, M/WBE availability in the construction sector is between 26.25 and 27.34 percent. Non-M/WBE availability is between 72.66 and 73.75 percent. Among M/WBEs, availability of African American-owned businesses is between 10.64 and 11.26 percent, availability of Hispanic-owned businesses is between 2.06 and 2.11 percent, availability of Asian/Pacific Islander-owned businesses is between 1.81 and 1.86 percent, and availability of Native American-owned businesses is between 0.32 and 0.33 percent. Availability of minority-owned businesses as a group is between 14.93 and 15.47 percent. Availability of nonminority female-owned businesses is between 11.33 and 11.88 percent.

Overall, M/WBE availability in the AE-CRS sector is between 27.64 and 30.07 percent. Non-M/WBE availability is between 69.93 and 72.36 percent. Among M/WBEs, availability of African American-owned businesses is between 8.53 and 9.77 percent, availability of Hispanic-owned businesses is between 1.64 and 1.94 percent, availability of Asian/Pacific Islander-owned businesses is between 5.90 and 6.31, percent and availability of Native American-owned businesses is between 0.17 and 0.20 percent. Availability of minority-owned businesses as a group is between 16.99 and 17.48 percent. Availability of nonminority female-owned businesses is between 10.65 and 12.59 percent.

Overall, M/WBE availability in the Services sector is between 33.06 and 34.46 percent. Non-M/WBE availability is between 65.54 and 66.94 percent. Among M/WBEs, availability of African American-owned businesses is between 12.83 and 13.41 percent, availability of Hispanic-owned businesses is between 1.57 and 1.63 percent, availability of Asian/Pacific Islander-owned businesses is between 3.38 and 3.51 percent and availability of Native American-owned businesses is between 0.45 and 0.51 percent. Availability of minority-owned businesses as a group is between 18.35 and 18.94 percent. Availability of nonminority female-owned businesses is between 14.72 and 15.52 percent.

Overall, M/WBE availability in the CSE sector is 26.40 percent. Non-M/WBE availability is 73.60 percent. Among M/WBEs, availability of African American-owned businesses is 9.56 percent, availability of Hispanic-owned businesses is 1.52 percent, availability of Asian/Pacific Islander-owned businesses is 3.56 percent, and availability of Native American-owned businesses is 0.52 percent. Availability of minority-owned businesses as a group is 15.16 percent. Availability of nonminority female-owned businesses is 11.24 percent.

Tables 3.12 through 3.15 present detailed estimates of M/WBE availability in the City of Baltimore's relevant market area for Construction, AE-CRS, Services and CSE.[53]

Table 3.12. Detailed M/WBE Availability Percentages—Construction (All Contracts) (Dollars Awarded)

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	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
Water, Sewage and Other Systems (NAICS 2213)	7.32	0.00	1.58	0.00	14.64	23.54	76.46
Residential Building Construction (NAICS 2361)	9.88	3.31	5.69	0.12	8.88	27.88	72.12
Nonresidential Building Construction (NAICS 2362)	8.30	0.64	4.91	0.22	6.45	20.53	79.47
Utility System Construction (NAICS 2371)	4.25	0.00	1.85	0.73	12.98	19.81	80.19
Highway, Street, and Bridge Construction (NAICS 2373)	6.84	5.92	2.28	1.36	7.49	23.89	76.11

[53] Similar tables using paid dollar weights were also produced but are not included here for space considerations.

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Other Heavy and Civil Engineering Construction (NAICS 2379)	3.25	0.00	3.25	2.18	12.47	21.15	78.85
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	8.99	6.49	2.24	0.48	9.71	27.92	72.08
Building Equipment Contractors (NAICS 2382)	8.70	1.51	0.23	0.17	8.58	19.19	80.81
Building Finishing Contractors (NAICS 2383)	10.51	2.87	1.58	1.42	10.72	27.10	72.90
Other Specialty Trade Contractors (NAICS 2389)	6.17	3.33	0.07	0.90	9.94	20.42	79.58
Petroleum and Coal Products Manufacturing (NAICS 3241)	9.65	0.00	0.00	0.00	6.95	16.60	83.40
Plastics Product Manufacturing (NAICS 3261)	2.13	0.00	5.89	0.00	10.14	18.16	81.84
Cement and Concrete Product Manufacturing (NAICS 3273)	7.72	4.39	0.00	0.53	13.17	25.82	74.18
Foundries (NAICS 3315)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Architectural and Structural Metals Manufacturing (NAICS 3323)	7.60	1.04	3.36	0.00	8.10	20.10	79.90
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	4.11	1.88	0.38	0.00	11.41	17.79	82.21
Other Fabricated Metal Product Manufacturing (NAICS 3329)	9.24	1.82	0.00	0.00	13.93	24.98	75.02
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	2.48	4.35	0.00	0.00	7.65	14.47	85.53
Other General Purpose Machinery Manufacturing (NAICS 3339)	2.95	0.00	0.00	0.00	3.94	6.89	93.11
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	10.53	0.00	11.05	0.00	15.53	37.11	62.89
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	5.41	0.58	1.92	0.00	11.97	19.87	80.13
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	3.53	1.16	2.02	0.00	17.65	24.36	75.64
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	6.16	0.05	1.39	0.69	6.70	15.00	85.00
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	2.28	0.00	3.49	0.00	10.16	15.93	84.07

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	2.51	1.21	1.23	0.00	6.61	11.56	88.44
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	4.46	0.00	0.88	0.33	8.31	13.98	86.02
Building Material and Supplies Dealers (NAICS 4441)	5.63	2.20	0.15	0.00	15.94	23.92	76.08
Gasoline Stations (NAICS 4471)	7.60	0.17	25.13	0.00	3.02	35.92	64.08
Direct Selling Establishments (NAICS 4543)	5.56	0.00	1.85	0.00	5.56	12.96	87.04
Rail Transportation (NAICS 4821)	0.00	0.00	0.00	0.00	6.25	6.25	93.75
General Freight Trucking (NAICS 4841)	14.37	3.66	1.16	0.26	8.40	27.85	72.15
Specialized Freight Trucking (NAICS 4842)	11.94	2.56	0.00	0.00	13.12	27.63	72.37
Warehousing and Storage (NAICS 4931)	2.23	0.00	1.12	0.00	9.23	12.57	87.43
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	8.19	1.48	0.27	0.55	11.01	21.50	78.50
Architectural, Engineering, and Related Services (NAICS 5413)	8.31	2.65	6.31	0.32	10.63	28.22	71.78
Management, Scientific, and Technical Consulting Services (NAICS 5416)	15.87	1.05	5.77	0.60	21.58	44.88	55.12
Other Professional, Scientific, and Technical Services (NAICS 5419)	15.46	0.31	4.33	0.02	21.28	41.40	58.60
Facilities Support Services (NAICS 5612)	16.27	1.59	8.86	1.59	18.25	46.56	53.44
Business Support Services (NAICS 5614)	19.27	0.17	0.38	0.10	20.96	40.88	59.12
Investigation and Security Services (NAICS 5616)	24.26	0.97	0.81	0.00	19.43	45.47	54.53
Services to Buildings and Dwellings (NAICS 5617)	8.40	2.03	2.25	1.84	11.67	26.20	73.80
Other Support Services (NAICS 5619)	18.57	0.10	0.12	0.04	19.25	38.08	61.92
Remediation and Other Waste Management Services (NAICS 5629)	6.39	2.85	0.00	0.00	13.91	23.16	76.84
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	6.38	0.00	1.14	1.14	7.22	15.88	84.12

Sources and Notes: See Table 3.11.

Table 3.13. Detailed M/WBE Availability Percentages—AE-CRS (All Contracts) (Dollars Awarded)

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Residential Building Construction (NAICS 2361)	9.88	3.31	5.69	0.12	8.88	27.88	72.12
Nonresidential Building Construction (NAICS 2362)	6.70	0.00	5.91	0.00	4.70	17.32	82.68
Utility System Construction (NAICS 2371)	4.25	0.00	1.85	0.73	12.98	19.81	80.19
Building Equipment Contractors (NAICS 2382)	6.55	1.93	0.21	0.11	9.28	18.08	81.92
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	1.32	0.00	2.63	0.00	6.00	9.95	90.05
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	0.00	0.00	0.00	0.00	3.51	3.51	96.49
Architectural, Engineering, and Related Services (NAICS 5413)	6.67	2.38	6.89	0.23	7.56	23.74	76.26
Computer Systems Design and Related Services (NAICS 5415)	13.75	10.34	6.10	0.05	9.75	39.99	60.01
Management, Scientific, and Technical Consulting Services (NAICS 5416)	15.11	0.96	5.10	0.47	22.68	44.32	55.68
Advertising, Public Relations, and Related Services (NAICS 5418)	18.61	0.00	3.92	0.00	29.75	52.27	47.73
Other Professional, Scientific, and Technical Services (NAICS 5419)	15.46	0.31	4.33	0.02	21.28	41.40	58.60
Remediation and Other Waste Management Services (NAICS 5629)	3.19	0.00	0.00	0.00	13.69	16.88	83.12
Residential Building Construction (NAICS 2361)	9.88	3.31	5.69	0.12	8.88	27.88	72.12

Sources and Notes: See Table 3.11.

Table 3.14. Detailed M/WBE Availability Percentages—Services (All Contracts) (Dollars Awarded)

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Electric Power Generation, Transmission and Distribution (NAICS 2211)	6.25	1.04	2.08	0.00	11.46	20.83	79.17
Water, Sewage and Other Systems (NAICS 2213)	7.32	0.00	1.58	0.00	14.64	23.54	76.46
Residential Building Construction (NAICS 2361)	9.39	3.01	4.62	0.74	9.86	27.62	72.38
Nonresidential Building Construction (NAICS 2362)	9.01	0.93	4.47	0.32	7.23	21.96	78.04
Utility System Construction (NAICS 2371)	4.25	0.00	1.85	0.73	12.98	19.81	80.19
Highway, Street, and Bridge Construction (NAICS 2373)	6.84	5.92	2.28	1.36	7.49	23.89	76.11
Other Heavy and Civil Engineering Construction (NAICS 2379)	3.25	0.00	3.25	2.18	12.47	21.15	78.85
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)	7.05	5.58	1.81	0.21	9.19	23.85	76.15
Building Equipment Contractors (NAICS 2382)	9.61	1.80	0.21	0.16	8.61	20.39	79.61
Building Finishing Contractors (NAICS 2383)	10.89	3.16	1.71	1.52	10.91	28.19	71.81
Other Specialty Trade Contractors (NAICS 2389)	7.69	3.10	0.12	0.72	11.83	23.45	76.55
Apparel Accessories and Other Apparel Manufacturing (NAICS 3159)	7.45	0.34	2.03	0.00	15.62	25.45	74.55
Other Wood Product Manufacturing (NAICS 3219)	0.00	0.00	1.48	0.00	11.11	12.59	87.41
Printing and Related Support Activities (NAICS 3231)	1.68	0.00	1.60	0.76	44.17	48.21	51.79
Petroleum and Coal Products Manufacturing (NAICS 3241)	5.26	0.00	0.00	0.00	0.00	5.26	94.74
Architectural and Structural Metals Manufacturing (NAICS 3323)	7.53	0.92	4.76	0.00	9.38	22.60	77.40
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)	4.11	1.88	0.38	0.00	11.41	17.79	82.21
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	11.49	2.93	0.00	0.00	5.87	20.29	79.71
Other General Purpose Machinery Manufacturing (NAICS 3339)	22.28	0.00	0.00	0.00	3.04	25.32	74.68
Communications Equipment Manufacturing (NAICS 3342)	5.44	0.74	4.47	0.00	13.95	24.60	75.40
Audio and Video Equipment Manufacturing (NAICS 3343)	5.57	0.00	7.29	0.00	5.57	18.42	81.58

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	6.14	0.00	7.06	0.00	11.10	24.31	75.69
Electric Lighting Equipment Manufacturing (NAICS 3351)	1.14	0.00	1.14	0.00	51.21	53.48	46.52
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	0.00	0.00	0.00	0.00	3.51	3.51	96.49
Ship and Boat Building (NAICS 3366)	0.00	0.00	0.00	0.00	15.07	15.07	84.93
Other Miscellaneous Manufacturing (NAICS 3399)	6.12	2.42	1.43	0.00	22.98	32.95	67.05
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	0.55	5.36	0.00	0.00	0.86	6.78	93.22
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	8.33	0.70	0.00	0.00	24.41	33.45	66.55
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	8.69	0.40	0.81	0.00	11.32	21.21	78.79
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	4.55	0.00	1.52	0.00	6.06	12.12	87.88
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	2.28	0.00	3.49	0.00	10.16	15.93	84.07
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	1.99	1.37	1.12	0.00	5.81	10.29	89.71
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	4.99	0.00	2.20	0.59	7.75	15.52	84.48
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	16.12	1.19	4.05	0.00	21.46	42.82	57.18
Automobile Dealers (NAICS 4411)	8.38	1.80	2.70	0.00	6.20	19.08	80.92
Electronics and Appliance Stores (NAICS 4431)	10.15	0.23	1.85	0.56	12.13	24.93	75.07
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	5.48	2.20	0.00	0.00	20.57	28.25	71.75
Other Miscellaneous Store Retailers (NAICS 4539)	10.81	0.15	3.73	1.79	20.45	36.94	63.06
Rail Transportation (NAICS 4821)	0.00	0.00	0.00	0.00	6.25	6.25	93.75

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
General Freight Trucking (NAICS 4841)	27.78	4.17	2.04	0.10	3.67	37.75	62.25
Specialized Freight Trucking (NAICS 4842)	12.67	5.99	1.91	0.00	9.53	30.10	69.90
School and Employee Bus Transportation (NAICS 4854)	21.05	0.32	2.26	0.32	22.59	46.54	53.46
Charter Bus Industry (NAICS 4855)	27.34	0.69	4.84	0.69	8.76	42.32	57.68
Support Activities for Rail Transportation (NAICS 4882)	28.41	0.00	0.00	8.12	10.72	47.25	52.75
Support Activities for Road Transportation (NAICS 4884)	18.39	3.90	0.68	0.00	14.67	37.64	62.36
Other Support Activities for Transportation (NAICS 4889)	19.10	4.11	0.00	0.13	13.86	37.20	62.80
Couriers and Express Delivery Services (NAICS 4921)	17.81	4.18	8.37	0.00	0.00	30.36	69.64
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	10.40	3.57	0.00	0.31	21.82	36.10	63.90
Software Publishers (NAICS 5112)	6.87	1.66	5.09	0.00	11.29	24.91	75.09
Motion Picture and Video Industries (NAICS 5121)	28.41	1.45	0.00	0.29	15.06	45.20	54.80
Radio and Television Broadcasting (NAICS 5151)	5.99	2.58	0.00	0.00	9.25	17.81	82.19
Wired Telecommunications Carriers (NAICS 5171)	13.85	3.22	3.22	0.00	10.61	30.92	69.08
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)	5.04	7.82	15.64	1.95	1.13	31.58	68.42
Other Telecommunications (NAICS 5179)	17.80	2.02	3.72	0.12	13.96	37.63	62.37
Data Processing, Hosting, and Related Services (NAICS 5182)	21.53	0.85	0.43	0.00	12.05	34.86	65.14
Activities Related to Credit Intermediation (NAICS 5223)	2.70	0.00	0.00	0.00	0.00	2.70	97.30
Insurance Carriers (NAICS 5241)	16.37	0.00	1.71	0.00	10.82	28.90	71.10
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)	5.13	0.05	0.23	0.51	12.60	18.52	81.48
Lessors of Real Estate (NAICS 5311)	5.49	0.00	0.00	0.00	13.89	19.38	80.62
Automotive Equipment Rental and Leasing (NAICS 5321)	8.94	1.71	0.05	0.00	11.36	22.08	77.92
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	5.01	1.09	0.81	1.63	12.88	21.42	78.58
Legal Services (NAICS 5411)	1.28	2.03	0.00	0.03	15.52	18.85	81.15

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	16.13	0.39	1.23	0.00	27.47	45.22	54.78
Architectural, Engineering, and Related Services (NAICS 5413)	7.19	4.15	4.69	0.56	9.89	26.48	73.52
Specialized Design Services (NAICS 5414)	18.34	0.86	3.61	0.08	37.99	60.87	39.13
Computer Systems Design and Related Services (NAICS 5415)	14.30	3.42	7.25	0.37	11.44	36.78	63.22
Management, Scientific, and Technical Consulting Services (NAICS 5416)	14.22	0.71	4.97	0.28	20.41	40.59	59.41
Scientific Research and Development Services (NAICS 5417)	15.29	0.85	4.78	0.42	26.63	47.96	52.04
Advertising, Public Relations, and Related Services (NAICS 5418)	4.97	0.03	0.73	0.01	30.57	36.33	63.67
Other Professional, Scientific, and Technical Services (NAICS 5419)	15.46	0.31	4.33	0.02	21.28	41.40	58.60
Office Administrative Services (NAICS 5611)	19.54	0.15	9.21	0.00	11.17	40.07	59.93
Facilities Support Services (NAICS 5612)	16.27	1.59	8.86	1.59	18.25	46.56	53.44
Employment Services (NAICS 5613)	8.28	0.66	2.49	0.29	25.80	37.52	62.48
Business Support Services (NAICS 5614)	19.27	0.17	0.38	0.10	20.96	40.88	59.12
Investigation and Security Services (NAICS 5616)	16.06	0.65	1.78	0.49	15.54	34.52	65.48
Services to Buildings and Dwellings (NAICS 5617)	16.17	2.09	3.06	1.84	15.73	38.89	61.11
Other Support Services (NAICS 5619)	18.57	0.10	0.12	0.04	19.25	38.08	61.92
Waste Collection (NAICS 5621)	4.29	0.00	0.00	0.00	8.57	12.86	87.14
Waste Treatment and Disposal (NAICS 5622)	8.53	0.00	0.00	0.00	8.75	17.29	82.71
Remediation and Other Waste Management Services (NAICS 5629)	6.01	2.51	0.00	0.00	13.88	22.41	77.59
Business Schools and Computer and Management Training (NAICS 6114)	16.75	0.48	5.15	0.95	29.21	52.53	47.47
Technical and Trade Schools (NAICS 6115)	7.11	0.29	1.87	0.58	65.86	75.71	24.29
Other Schools and Instruction (NAICS 6116)	15.81	0.94	4.96	1.42	20.57	43.70	56.30
Educational Support Services (NAICS 6117)	15.55	0.37	5.66	2.37	21.60	45.55	54.45
Offices of Physicians (NAICS 6211)	18.34	0.76	0.69	0.42	14.12	34.35	65.65

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Outpatient Care Centers (NAICS 6214)	27.25	0.88	0.88	0.88	20.29	50.20	49.80
Medical and Diagnostic Laboratories (NAICS 6215)	18.70	0.85	0.71	0.57	14.38	35.22	64.78
Home Health Care Services (NAICS 6216)	21.55	1.16	0.73	0.65	15.53	39.63	60.37
Other Ambulatory Health Care Services (NAICS 6219)	20.09	1.44	0.75	0.76	15.85	38.89	61.11
General Medical and Surgical Hospitals (NAICS 6221)	0.00	0.70	3.83	0.00	5.00	9.54	90.46
Nursing Care Facilities (Skilled Nursing Facilities) (NAICS 6231)	22.48	0.16	2.12	0.00	17.57	42.32	57.68
Individual and Family Services (NAICS 6241)	22.16	1.24	0.00	1.15	12.60	37.15	62.85
Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)	26.92	3.85	0.00	0.00	50.00	80.77	19.23
Vocational Rehabilitation Services (NAICS 6243)	28.57	4.44	0.00	0.29	48.04	81.35	18.65
Independent Artists, Writers, and Performers (NAICS 7115)	23.70	3.35	0.73	3.17	23.36	54.32	45.68
Other Amusement and Recreation Industries (NAICS 7139)	2.75	2.75	2.75	0.00	8.58	16.83	83.17
Traveler Accommodation (NAICS 7211)	2.46	0.25	11.39	5.24	10.88	30.21	69.79
Full-Service Restaurants (NAICS 7221)	24.26	0.17	6.65	0.04	19.04	50.16	49.84
Special Food Services (NAICS 7223)	25.67	0.06	4.71	0.00	21.33	51.77	48.23
Automotive Repair and Maintenance (NAICS 8111)	7.85	2.28	1.85	2.70	9.42	24.10	75.90
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	2.70	1.20	0.84	1.46	9.43	15.63	84.37
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	6.38	0.00	1.14	1.14	7.22	15.88	84.12
Personal and Household Goods Repair and Maintenance (NAICS 8114)	11.06	5.01	0.71	3.83	13.35	33.97	66.03
Death Care Services (NAICS 8122)	39.93	0.00	0.11	0.00	30.76	70.80	29.20
Drycleaning and Laundry Services (NAICS 8123)	38.92	0.00	0.21	0.00	31.88	71.01	28.99
Other Personal Services (NAICS 8129)	21.60	4.51	4.51	0.00	1.79	32.40	67.60
Grantmaking and Giving Services (NAICS 8132)	12.50	0.00	0.00	0.00	8.33	20.83	79.17

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Social Advocacy Organizations (NAICS 8133)	24.78	1.68	0.00	0.37	10.01	36.85	63.15
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)	12.64	0.00	0.00	0.00	8.97	21.61	78.39

Sources and Notes: See Table 3.11.

Table 3.15. Detailed M/WBE Availability Percentages—CSE (All Contracts) (Dollars Awarded)

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)	5.21	0.00	0.00	0.00	11.46	16.67	83.33
Residential Building Construction (NAICS 2361)	7.40	1.77	0.23	3.31	13.84	26.56	73.44
Nonresidential Building Construction (NAICS 2362)	10.91	1.70	3.28	0.57	9.32	25.78	74.22
Highway, Street, and Bridge Construction (NAICS 2373)	6.84	5.92	2.28	1.36	7.49	23.89	76.11
Building Equipment Contractors (NAICS 2382)	8.78	1.41	0.23	0.18	8.50	19.11	80.89
Other Specialty Trade Contractors (NAICS 2389)	12.15	2.41	0.25	0.21	17.37	32.38	67.62
Other Textile Product Mills (NAICS 3149)	3.30	3.32	7.91	0.90	41.36	56.78	43.22
Cut and Sew Apparel Manufacturing (NAICS 3152)	4.98	0.75	9.22	0.60	20.74	36.28	63.72
Apparel Accessories and Other Apparel Manufacturing (NAICS 3159)	8.62	0.00	1.72	0.00	7.76	18.10	81.90
Footwear Manufacturing (NAICS 3162)	8.62	0.00	1.72	0.00	7.76	18.10	81.90
Pulp, Paper, and Paperboard Mills (NAICS 3221)	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Converted Paper Product Manufacturing (NAICS 3222)	4.00	0.00	4.00	0.00	4.00	12.00	88.00
Printing and Related Support Activities (NAICS 3231)	1.65	0.00	1.58	0.76	44.56	48.55	51.45
Petroleum and Coal Products Manufacturing (NAICS 3241)	5.26	0.00	0.00	0.00	0.00	5.26	94.74
Basic Chemical Manufacturing (NAICS 3251)	6.02	2.41	3.61	1.20	12.05	25.30	74.70
Pharmaceutical and Medicine Manufacturing (NAICS 3254)	4.51	2.33	1.09	0.28	3.45	11.66	88.34
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)	4.42	1.77	2.65	0.88	8.84	18.55	81.45
Other Chemical Product and Preparation Manufacturing (NAICS 3259)	11.11	4.96	1.67	0.56	10.69	28.99	71.01
Plastics Product Manufacturing (NAICS 3261)	2.13	0.00	5.89	0.00	10.14	18.16	81.84
Cement and Concrete Product Manufacturing (NAICS 3273)	3.17	3.17	0.00	1.59	9.52	17.46	82.54
Lime and Gypsum Product Manufacturing (NAICS 3274)	3.17	3.17	0.00	1.59	9.52	17.46	82.54
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)	8.33	0.00	0.00	0.00	3.79	12.12	87.88
Architectural and Structural Metals Manufacturing (NAICS 3323)	7.43	1.04	3.31	0.00	8.07	19.85	80.15

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Other Fabricated Metal Product Manufacturing (NAICS 3329)	5.60	2.08	0.00	0.00	11.14	18.82	81.18
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)	2.56	0.00	0.00	0.00	6.63	9.20	90.80
Industrial Machinery Manufacturing (NAICS 3332)	2.11	0.00	0.00	0.00	10.22	12.33	87.67
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)	6.48	3.72	0.00	0.00	6.86	17.06	82.94
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)	0.95	0.00	0.00	0.00	1.27	2.22	97.78
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)	3.80	0.00	0.00	0.00	5.06	8.86	91.14
Other General Purpose Machinery Manufacturing (NAICS 3339)	5.89	0.00	3.52	0.00	5.33	14.74	85.26
Communications Equipment Manufacturing (NAICS 3342)	6.06	4.15	9.63	0.00	7.66	27.49	72.51
Audio and Video Equipment Manufacturing (NAICS 3343)	5.57	0.00	7.29	0.00	5.57	18.42	81.58
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)	1.42	0.00	2.85	0.00	9.66	13.93	86.07
Electric Lighting Equipment Manufacturing (NAICS 3351)	1.14	0.00	1.14	0.00	51.21	53.48	46.52
Other Electrical Equipment and Component Manufacturing (NAICS 3359)	3.77	0.00	1.33	0.00	7.76	12.86	87.14
Motor Vehicle Manufacturing (NAICS 3361)	0.00	0.00	0.00	0.00	6.06	6.06	93.94
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)	0.00	0.00	0.00	0.00	4.42	4.42	95.58
Motor Vehicle Parts Manufacturing (NAICS 3363)	0.00	0.00	0.00	0.00	18.30	18.30	81.70
Aerospace Product and Parts Manufacturing (NAICS 3364)	0.00	0.00	0.00	0.00	14.21	14.21	85.79
Ship and Boat Building (NAICS 3366)	0.00	0.00	0.00	0.00	13.50	13.50	86.50
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)	8.45	0.00	1.30	0.00	17.69	27.44	72.56
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)	15.63	0.00	4.44	0.00	19.80	39.88	60.12
Medical Equipment and Supplies Manufacturing (NAICS 3391)	8.87	3.40	1.04	0.00	11.99	25.29	74.71
Other Miscellaneous Manufacturing (NAICS 3399)	5.89	1.84	1.08	0.00	26.95	35.76	64.24

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)	3.33	0.41	0.93	0.00	7.29	11.95	88.05
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)	5.41	0.58	1.92	0.00	11.97	19.87	80.13
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)	5.37	1.09	0.91	0.00	22.60	29.97	70.03
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)	11.69	0.42	0.77	0.08	17.77	30.73	69.27
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)	6.16	0.05	1.39	0.69	6.70	15.00	85.00
Household Appliances and Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)	2.43	0.00	3.25	0.20	10.11	15.99	84.01
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)	2.84	1.24	1.40	0.00	6.55	12.03	87.97
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)	6.74	0.35	2.54	0.32	9.52	19.47	80.53
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)	7.86	0.30	5.01	0.00	27.67	40.84	59.16
Paper and Paper Product Merchant Wholesalers (NAICS 4241)	13.51	0.25	3.14	0.00	8.32	25.21	74.79
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)	6.27	5.00	9.05	3.73	19.62	43.67	56.33
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)	7.11	0.00	4.37	2.18	24.09	37.75	62.25
Grocery and Related Product Merchant Wholesalers (NAICS 4244)	4.16	1.94	6.76	2.66	15.01	30.52	69.48
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)	2.63	0.00	1.32	0.00	14.63	18.57	81.43
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)	0.00	5.68	5.68	0.00	1.69	13.06	86.94
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)	11.84	2.10	7.13	2.83	18.31	42.21	57.79

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Automobile Dealers (NAICS 4411)	8.36	1.80	2.70	0.00	6.21	19.08	80.92
Other Motor Vehicle Dealers (NAICS 4412)	1.79	1.65	1.65	0.00	12.84	17.93	82.07
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)	3.69	1.23	0.81	0.00	12.25	17.98	82.02
Furniture Stores (NAICS 4421)	4.78	0.00	9.90	0.00	9.58	24.26	75.74
Electronics and Appliance Stores (NAICS 4431)	9.76	0.20	1.80	0.49	12.42	24.67	75.33
Building Material and Supplies Dealers (NAICS 4441)	5.59	1.83	0.00	0.00	15.04	22.46	77.54
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)	3.43	1.17	0.00	0.00	12.51	17.12	82.88
Health and Personal Care Stores (NAICS 4461)	7.34	1.40	1.86	1.72	6.89	19.21	80.79
Clothing Stores (NAICS 4481)	10.21	0.66	3.43	0.34	20.64	35.28	64.72
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)	2.67	0.00	0.65	0.00	14.42	17.73	82.27
Office Supplies, Stationery, and Gift Stores (NAICS 4532)	7.58	0.00	4.87	0.00	13.46	25.91	74.09
Used Merchandise Stores (NAICS 4533)	7.28	1.71	0.00	1.71	41.43	52.14	47.86
Other Miscellaneous Store Retailers (NAICS 4539)	10.81	0.15	3.73	1.79	20.45	36.94	63.06
Electronic Shopping and Mail-Order Houses (NAICS 4541)	14.02	0.72	2.80	0.00	22.26	39.79	60.21
Direct Selling Establishments (NAICS 4543)	5.56	0.00	1.85	0.00	5.56	12.96	87.04
General Freight Trucking (NAICS 4841)	2.80	3.21	0.40	0.40	12.49	19.30	80.70
Other Transit and Ground Passenger Transportation (NAICS 4859)	31.68	1.74	6.54	1.74	10.16	51.85	48.15
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)	10.12	3.38	0.00	0.29	23.34	37.14	62.86
Software Publishers (NAICS 5112)	6.87	1.66	5.09	0.00	11.29	24.91	75.09
Other Telecommunications (NAICS 5179)	9.22	0.00	3.86	0.00	5.36	18.44	81.56
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)	10.00	1.67	0.00	0.00	10.00	21.67	78.33
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)	14.57	0.54	4.52	0.00	21.26	40.89	59.11
Architectural, Engineering, and Related Services (NAICS 5413)	14.00	0.91	5.12	0.00	20.05	40.08	59.92

Detailed Industry Group	African American	Hispanic	Asian/ Pacific Islander	Native American	Non-minority Female	M/WBE	Non-M/WBE
Specialized Design Services (NAICS 5414)	18.56	1.12	4.00	0.32	32.87	56.87	43.13
Computer Systems Design and Related Services (NAICS 5415)	15.42	3.01	7.12	0.41	11.45	37.42	62.58
Management, Scientific, and Technical Consulting Services (NAICS 5416)	12.30	0.69	5.81	0.23	13.09	32.12	67.88
Scientific Research and Development Services (NAICS 5417)	15.08	2.01	7.95	0.29	22.52	47.85	52.15
Other Professional, Scientific, and Technical Services (NAICS 5419)	15.46	0.31	4.33	0.02	21.28	41.40	58.60
Office Administrative Services (NAICS 5611)	19.54	0.15	9.21	0.00	11.17	40.07	59.93
Business Support Services (NAICS 5614)	19.27	0.17	0.38	0.10	20.96	40.88	59.12
Services to Buildings and Dwellings (NAICS 5617)	6.07	1.90	1.81	1.73	10.65	22.16	77.84
Other Support Services (NAICS 5619)	18.57	0.10	0.12	0.04	19.25	38.08	61.92
Waste Collection (NAICS 5621)	11.37	0.00	0.00	0.00	6.07	17.44	82.56
Remediation and Other Waste Management Services (NAICS 5629)	3.19	0.00	0.00	0.00	13.69	16.88	83.12
Other Schools and Instruction (NAICS 6116)	16.09	0.93	5.23	1.28	21.38	44.92	55.08
Special Food Services (NAICS 7223)	25.67	0.06	4.71	0.00	21.33	51.77	48.23
Automotive Repair and Maintenance (NAICS 8111)	7.31	2.18	2.09	2.57	9.66	23.81	76.19
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)	3.44	1.24	1.07	1.43	9.76	16.95	83.05
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)	6.38	0.00	1.14	1.14	7.22	15.88	84.12
Other Personal Services (NAICS 8129)	21.60	4.51	4.51	0.00	1.79	32.40	67.60

Sources and Notes: See Table 3.11.

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IV. Market-Based Disparities in Business Formation and Business Owner Earnings

A. Introduction

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 greatly in the last 25 years.[54] As a result, there is now a good deal of agreement in the literature on the microeconomic correlates of self-employment.[55] In the U.S., it appears that self-employment rises with age, is higher among men than women, and higher among non-minorities than minorities. 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 and 2003; Olson, Zuiker and Montalto, 2000; Mora

[54] 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), Coate and Tennyson (1992), and Cagetti and DeNardi (2006), plus a few papers that draw comparisons across countries, *e.g.,* 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.

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

and Dávila, 2006; Robles and Cordero-Guzmán, 2007),[56] immigration policy (Borjas and Bronars, 1989), and retirement policies (Quinn, 1980). Studies by Long (1982), Blau (1987), and Schuetze (1998), have considered the role of taxes.[57] 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.[58]

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.[59] 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 econometric evidence that confirms this barrier. Holding other influences constant, people who

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[56] 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.

[57] 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.

[58] Evans and Leighton (1989) found that nonminority 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.

[59] 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.

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.[60] 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, these are both 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.

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

[60] 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.

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 the 5 percent Public Use Microdata Sample data ("PUMS") 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.[61]

[61] In Wainwright (2000), the author conducted a series of regression analyses, similar to those reported in Chapter IV, that examined racial differences among males in business formation rates and business owner earnings while holding a large set of control factors constant. Separate regressions were conducted for each of the nine Census geographic divisions. In addition to race, the following factors were controlled for: educational attainment, age, marital status, non-mover status, number of workers in the family, number of children, immigrant status, years in the U.S., English language proficiency, work-limiting disability, veteran status, years of military services, interest and dividend income, usual weeks worked per year, and usual hours worked per week, industry, and occupation. Additionally, a set of local labor market variables was included for each Census division, including the unemployment rate, population size, population growth rate, the government employment rate, and per capita income. The results, in general, showed large and statistically significant disparities in both sets of regressions for all minority groups examined. The findings were strongest for African Americans, followed by Native Americans and Hispanics. Large disparities were documented for Asians as well in many instances.

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). 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.[62]

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

[62] 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 V, *infra*.

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 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 City of Baltimore'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 City of Baltimore Market Area (BALTOMA), which is comprised of the Baltimore-Towson Metropolitan Statistical Area. This variable estimates the differential effect of location in the BALTOMA relevant to the rest of the country. This model appears as Specification 1 in Tables 4.1 through 4.6. Next, we estimated Specification 2, which is the same model as Specification 1 but with the addition of indicator variables that interact race and gender with the BALTOMA indicator. These variables estimate the differential effect of location in the BALTOMA *and* membership in the given race or gender group. Specification 3 represents our ultimate specification, which includes all of the variables from the basic model as well as any of the interaction terms from Specification 2 that were statistically significant.[63]

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.[64]

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

[64] 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.

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 2007–2011. 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 file from the ACS contains records for a subsample of the full ACS. The data used here are the multi-year estimates combining the 2007 through 2011 ACS PUMS records. The combined file contains over six million person-level records. Released in early 2013, the 2007-2011 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 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 4.1, 4.2 and 4.3 report results from our regression analyses of annual earnings among wage and salary workers. Table 4.1 focuses on the economy as a whole, Table 4.2 on the construction sector, and Table 4.3 on the goods and services sector. 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 4.1 Specification 1, the estimated percentage difference in average annual wages between African Americans (both genders) and nonminority males in 2007–2011 was -32.0 percent. That is, average annual wages among African Americans were 32.0 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 4.1 through 4.6, a t-statistic of 1.99 or larger indicates statistical significance at a 95 percent confidence level or better.[65] In the example just used, the t-statistic of 247.72 indicates that the result is statistically significant.

Specification 1 in Table 4.1 shows adverse and statistically significant wage disparities for African Americans, Hispanics, Asians/Pacific Islanders, 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 -22 percent for Hispanics to -32 percent for African Americans.

[65] From a two-tailed test.

Specification 1 in Table 4.2 shows similar results when the basic analysis is restricted to the construction sector. In this sector, large, adverse, and statistically significant wage disparities are once again observed for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting in multiple race categories and nonminority women, consistent with the presence of discrimination in these markets. Observed disparities in this sector are large as well, ranging from -19.9 percent for Hispanics to -34.8 percent for African Americans.

Similarly, Specification 1 in Table 4.3 for the goods and services sector also shows large, adverse, and statistically significant wage disparities for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting in multiple race categories and nonminority women, consistent with the presence of discrimination in these markets. Observed disparities are large in this sector also, ranging from -27.6 percent for Hispanics to -37.1 percent for African Americans.

A comparison of Tables 4.1 and 4.2 shows that for Asians and persons reporting multiple races, the disparities in the construction 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 Hispanics and Native Americans are similar in both sectors. A comparison of Tables 4.1 and 4.3 shows that for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting in 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 Baltimore-Specific Interaction Terms

Next, we turn to Specifications 2 and 3 in Tables 4.1 through 4.3. In each of these Tables, Specification 2 is the basic regression model with a set of interaction terms added, designed to test whether minorities and women in the BALTOMA differ significantly from those elsewhere in the U.S. economy. Specification 2 in Table 4.1, for example, shows a -31.9 percent wage difference which estimates the direct effect of being African American in 2007–2011, as well as a statistically significant 2.5 percent wage decrement that captures the indirect effect of residing in the BALTOMA and being African American. That is, wages for African Americans in the BALTOMA, on average, were 2.5 percent lower than for African Americans in the nation as a whole and 34.4 percent lower (-31.9 percent minus 2.5 percent) than for nonminority males in the BALTOMA.

Specification 3 simply repeats Specification 2, dropping any BALTOMA interactions that are not statistically significant. In Table 4.1, for example, interaction terms were included in the final specification for African Americans and Asians/Pacific Islanders. The net result of Specification 3 in Table 4.1 is evidence of large, adverse, and statistically significant wage disparities for all minority groups and for nonminority women consistent with the presence of discrimination in these markets. The same is true for the construction sector (Table 4.2) as well as for the goods and services sector (Table 4.3).

Table 4.1. Annual Wage Earnings Regressions, All Industries, 2007-2011

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.320 (247.72)	-0.319 (245.33)	-0.319 (245.43)
Hispanic	-0.219 (173.44)	-0.219 (173.09)	-0.219 (173.37)
Asian/Pacific Islander	-0.256 (151.43)	-0.255 (150.37)	-0.255 (150.41)
Native American	-0.302 (67.33)	-0.302 (67.21)	-0.302 (67.32)
Two or more races	-0.269 (95.00)	-0.269 (94.55)	-0.269 (94.99)
Nonminority Female	-0.306 (365.09)	-0.306 (363.61)	-0.306 (365.10)
Age	0.181 (792.12)	0.181 (792.12)	0.181 (792.12)
Age^2	-0.002 (683.66)	-0.002 (683.66)	-0.002 (683.66)
BALTOMA	0.246 (42.42)	0.257 (31.04)	0.257 (40.47)
BALTOMA*African American		-0.025 (2.19)	-0.025 (2.38)
BALTOMA*Hispanic		0.015 (0.72)	n/a
BALTOMA*Asian/Pacific Islander		-0.083 (4.30)	-0.083 (4.41)
BALTOMA*Native American		0.025 (.29)	n/a
BALTOMA*Two or more races		-0.006 (0.18)	n/a
BALTOMA*Nonminority female		-0.002 (0.25)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	5399867	5399867	5399867
Adj. R^2	.4268	.4268	.4268

Source: NERA calculations from the 2007-2011 ACS Public Use Microdata Sample.

Notes: (1) See above, section B.3.(a)-(b) for a description of Specifications 1 through 3; (2) Universe is all private sector wage and salary workers between the ages of 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (3) Reported number is the percentage difference in annual wages between a given group and nonminority men; (4) 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; (5) Geography is defined based on place of residence; (6) "BALTOMA" is shorthand for "City of Baltimore Market Area," which includes the Baltimore-Towson Metropolitan Statistical Area; (7) "n/a" in Specification 3 means that the category was not included in the regression because it was not statistically significant in Specification 2, as described above in section B.3.b; (8) The "Yes" values next to the "Education," "Geography" and "Industry" rows indicate that control variables were included in the regression specification for these factors.

Table 4.2. Annual Wage Earnings Regressions, Construction and Related Industries, 2007-2011

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.348 (62.72)	-0.347 (61.53)	-0.347 (61.52)
Hispanic	-0.199 (51.54)	-0.199 (51.42)	-0.199 (51.52)
Asian/Pacific Islander	-0.217 (25.93)	-0.216 (25.66)	-0.217 (25.93)
Native American	-0.312 (23.71)	-0.311 (23.57)	-0.312 (23.71)
Two or more races	-0.223 (20.99)	-0.224 (21.05)	-0.223 (20.99)
Nonminority Female	-0.337 (92.28)	-0.337 (91.75)	-0.337 (92.28)
Age	0.141 (170.41)	0.141 (170.42)	0.141 (170.41)
Age^2	-0.001 (145.92)	-0.001 (145.93)	-0.001 (145.93)
BALTOMA	0.300 (16.10)	0.304 (14.31)	0.314 (16.26)
BALTOMA*African American		-0.099 (2.39)	-0.106 (2.61)
BALTOMA*Hispanic		0.018 (0.35)	n/a
BALTOMA*Asian/Pacific Islander		-0.076 (0.99)	n/a
BALTOMA*Native American		-0.211 (1.07)	n/a
BALTOMA*Two or more races		0.258 (1.74)	n/a
BALTOMA*Nonminority female		0.045 (1.23)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	445303	445303	445303
Adj. R^2	.2366	.2366	.2366

Source and Notes: See Table 4.1.

Table 4.3. Annual Wage Earnings Regressions, Goods and Services Industries, 2007-2011

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.371 (282.97)	-0.371 (280.51)	-0.371 (283.00)
Hispanic	-0.276 (205.98)	-0.276 (205.55)	-0.276 (205.92)
Asian/Pacific Islander	-0.283 (161.01)	-0.283 (159.88)	-0.283 (159.92)
Native American	-0.363 (76.03)	-0.363 (75.97)	-0.363 (76.03)
Two or more races	-0.322 (108.52)	-0.322 (108.03)	-0.322 (108.5)
Nonminority Female	-0.369 (457.02)	-0.369 (455.13)	-0.369 (457.02)
Age	0.214 (870.54)	0.214 (870.54)	0.214 (870.55)
Age^2	-0.002 (747.32)	-0.002 (747.32)	-0.002 (747.32)
BALTOMA	0.210 (33.30)	0.209 (22.40)	0.216 (33.65)
BALTOMA*African American		0.001 (0.08)	n/a
BALTOMA*Hispanic		-0.012 (0.50)	n/a
BALTOMA*Asian/Pacific Islander		-0.092 (4.43)	-0.097 (4.89)
BALTOMA*Native American		0.127 (1.22)	n/a
BALTOMA*Two or more races		0.002 (0.06)	n/a
BALTOMA*Nonminority female		0.015 (1.40)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	4954564	4954564	4954564
Adj. R^2	.3844	.3845	.3845

Source and Notes: See Table 4.1.

c. Conclusions

Tables 4.1 through 4.3 demonstrate that minorities and women earn substantially and significantly less from their labor than do their similarly situated nonminority male counterparts—in the nation as a whole and in the City of Baltimore Market Area in particular. Such disparities are consistent with the presence 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 just "societal discrimination" because they indicate a 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.

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 4.4 focuses on the economy as a whole, Table 4.5 on the construction sector and Table 4.6 on the goods and services sector. 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[66]

Specification 1 in Table 4.4 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting multiple races and nonminority women, consistent with the presence of discrimination in these markets. Business earnings for African Americans are 38.1 percent lower than for comparable nonminority males; for Hispanics, they are 21.7 percent lower; for Asians, they are 11.8 percent lower; for Native Americans, they are 35.8 percent lower; for persons reporting two or more races, they are 33.6 percent lower; and for nonminority women, they are 39.0 percent lower.

Turning to the construction sector, Specification 1 in Table 4.5 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting multiple races and nonminority women, consistent with the presence of discrimination in these markets. Business earnings for African Americans are 36.6 percent lower than for comparable nonminority males; for Hispanics, they are 17.0 percent lower; for Asians/Pacific Islanders, they are 17.8 percent lower;

[66] See above, section B.3.a., for a detailed description of Specification 1.

for Native Americans, they are 26.0 percent lower; for persons reporting two or more races, they are 25.1 percent lower; and for nonminority women, they are 43.9 percent lower.

For the Goods and Services sector, Specification 1 in Table 4.6 shows large, adverse, and statistically significant business owner earnings disparities for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting multiple races and nonminority women consistent with the presence of discrimination in these markets. Business earnings for African Americans are 42.7 percent lower than for comparable nonminority males; for Hispanics, they are 29.9 percent lower; for Asians/Pacific Islanders, they are 14.5 percent lower; for Native Americans, they are 42.1 percent lower; for persons reporting two or more races, they are 39.3 percent lower; and for nonminority women, they are 42.9 percent lower.

b. Specifications 2 and 3 - the Full Model Including Baltimore-Specific Interaction Terms[67]

Next, we turn to Specifications 2 and 3 in Tables 4.4 through 4.6. Specification 2 is the basic regression model enhanced by a set of interaction terms to test whether minorities and women in the BALTOMA differ significantly from those elsewhere in the U.S. economy. Specification 3 drops any BALTOMA interaction terms that are not statistically significant.

For the economy as a whole in 2007-2011, Table 4.4 shows that none of the BALTOMA interaction terms is statistically significant, indicating that disparities are, on average, no better or worse in the BALTOMA than what is observed for the nation as a whole.

For the construction sector, Table 4.5 shows that none of the BALTOMA interaction terms is statistically significant, indicating that disparities are, on average, no better or worse in the BALTOMA than what is observed for the nation as a whole.

For the goods and services sector, Table 4.6 shows that, except for nonminority females, the BALTOMA interaction terms are not statistically significant, indicating that disparities are, on average, no better or worse in the BALTOMA than what is observed for the nation as a whole. However, business earnings, on average, were 13.0 percent greater for nonminority females in the BALTOMA than in the nation as a whole and 29.9 percent lower (-42.9 percent plus 13.0 percent) than for nonminority males in the BALTOMA.

[67] See above, section B.3.b., for a detailed description of Specifications 2 and 3.

Table 4.4. Annual Business Owner Earnings Regressions, All Industries, 2007-2011

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.381 (46.12)	-0.381 (45.71)	-0.381 (46.12)
Hispanic	-0.217 (29.57)	-0.218 (29.58)	-0.217 (29.57)
Asian/Pacific Islander	-0.118 (11.23)	-0.119 (11.30)	-0.118 (11.23)
Native American	-0.358 (15.03)	-0.359 (15.05)	-0.358 (15.03)
Two or more races	-0.336 (22.62)	-0.336 (22.54)	-0.336 (22.62)
Nonminority Female	-0.390 (88.92)	-0.390 (88.76)	-0.390 (88.92)
Age	0.166 (117.67)	0.166 (117.67)	0.166 (117.67)
Age^2	-0.002 (103.50)	-0.002 (103.50)	-0.002 (103.50)
BALTOMA	0.064 (2.03)	0.019 (0.48)	0.064 (2.03)
BALTOMA*African American		0.034 (0.44)	n/a
BALTOMA*Hispanic		0.084 (0.60)	n/a
BALTOMA*Asian/Pacific Islander		0.166 (1.26)	n/a
BALTOMA*Native American		0.346 (0.59)	n/a
BALTOMA*Two or more races		-0.018 (0.08)	n/a
BALTOMA*Nonminority female		0.093 (1.61)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	579330	579330	579330
Adj. R^2	.1495	.1495	.1495

Source: NERA calculations from the 2007-2011 ACS Public Use Microdata Sample.

Notes: (1) See above, section B.4.(a)-(b) for a description of specifications 1 through 3; (2) Universe is all persons in the private sector with positive business earnings between the ages of 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (3) Reported number is the percentage difference in annual business earnings between a given group and nonminority men; (4) 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; (5) Geography is defined based on place of residence; (6) "BALTOMA" is shorthand for the "City of Baltimore Market Area," which includes the Baltimore-Towson Metropolitan Statistical Area; (7) "n/a" in Specification 3 means that the category was not included in the regression because it was not statistically significant in Specification 2, as described above in section B.4.b.

Table 4.5. Business Owner Earnings Regressions, Construction and Related Industries, 2007-2011

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.366 (17.97)	-0.369 (18.01)	-0.366 (17.97)
Hispanic	-0.170 (11.63)	-0.171 (11.67)	-0.170 (11.63)
Asian/Pacific Islander	-0.178 (5.47)	-0.181 (5.52)	-0.178 (5.47)
Native American	-0.260 (5.12)	-0.262 (5.15)	-0.260 (5.12)
Two or more races	-0.251 (7.15)	-0.251 (7.10)	-0.251 (7.15)
Nonminority female	-0.439 (28.67)	-0.437 (28.37)	-0.439 (28.67)
Age	0.131 (40.85)	0.131 (40.85)	0.131 (40.85)
Age^2	-0.001 (37.35)	-0.001 (37.36)	-0.001 (37.35)
BALTOMA	0.146 (2.13)	0.127 (1.69)	0.146 (2.13)
BALTOMA*African American		0.321 (1.46)	n/a
BALTOMA*Hispanic		0.246 (0.99)	n/a
BALTOMA*Asian/Pacific Islander		0.426 (0.82)	n/a
BALTOMA*Native American		2.350 (0.86)	n/a
BALTOMA*Two or more races		-0.080 (0.19)	n/a
BALTOMA*Nonminority Female		-0.337 (1.92)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	97203	97203	97203
Adj. R^2	.0474	.0474	.0474

Source and Notes: See Table 4.4.

Table 4.6. Business Owner Earnings Regressions, Goods and Services Industries, 2007-2011

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.427 (48.20)	-0.427 (47.79)	-0.426 (48.12)
Hispanic	-0.299 (37.00)	-0.299 (37)	-0.299 (37.02)
Asian/Pacific Islander	-0.145 (13.00)	-0.146 (13.10)	-0.145 (13.00)
Native American	-0.421 (15.80)	-0.422 (15.83)	-0.421 (15.80)
Two or more races	-0.393 (24.18)	-0.393 (24.11)	-0.393 (24.18)
Nonminority female	-0.429 (101.07)	-0.429 (100.90)	-0.429 (100.91)
Age	0.185 (114.55)	0.185 (114.55)	0.185 (114.55)
Age^2	-0.002 (99.40)	-0.002 (99.40)	-0.002 (99.40)
BALTOMA	0.039 (1.07)	-0.044 (0.92)	-0.007 (0.18)
BALTOMA*African American		0.085 (0.95)	n/a
BALTOMA*Hispanic		0.024 (0.14)	n/a
BALTOMA*Asian/Pacific Islander		0.252 (1.68)	n/a
BALTOMA*Native American		0.658 (0.90)	n/a
BALTOMA*Two or more races		-0.007 (0.03)	n/a
BALTOMA*Nonminority Female		0.173 (2.55)	0.130 (2.15)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	482127	482127	482127
Adj. R^2	.1090	.1090	.1090

Source and Notes: See Table 4.4.

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, in general, differs little in the City of Baltimore Market Area from that which is observed for the nation as a whole. These disparities are consistent with the presence of discrimination in commercial markets that adversely affects 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, since discrimination depresses business owner earnings for minority and female 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 (individual firm revenues). These observations illustrate why employment size, years in business, and individual firm revenues are especially inappropriate factors to consider when attempting to determine if discrimination has diminished opportunities for M/WBEs.[68]

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 this section, we turn to an analysis of race and gender disparities in business formation.[69] 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 are similarly situated nonminority males. We find that in most cases 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 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. Moreover,

[68] For more on this topic, see "Understanding Capacity," in Chapter III, section B.5, *supra*.

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

discrimination in wages and salaries earned in labor markets inhibits the accumulation of capital necessary for business formation. 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 prerequisites 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.[70] 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.[71] 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 2007-2011 ACS PUMS.

2. Findings: Race and Gender Disparities in Business Formation

As a point of reference for what follows, Tables 4.7 and 4.8 provide a summary of business ownership rates in 2007-2011 by race and gender. A noticeable feature of both tables is how much higher, on average, business ownership rates are for nonminority males than for other groups. Table 4.7, for example, shows a 7.89 percentage point difference between the overall self-employment rate of African Americans and nonminority males in the BALTOMA (13.66 –

[70] See also the materials cited at fn. 54 *supra*.

[71] For a detailed discussion, see G.S. Maddala (1983). Probit analysis is performed here using the "dprobit" command in the statistical program STATA.

5.77 = 7.89). As shown in the rightmost column of Table 4.7, this 7.89 percentage point gap translates into an African American business formation rate in the BALTOMA that is 57.8 percent lower than the nonminority male business formation rate (*i.e.,* 5.77 – 13.66 ÷ 13.66 ≈ -57.8%). For Hispanics, the business formation rate is 36.5 percent lower. For Asians/Pacific Islanders, it is 1.1 percent lower. For Native Americans, it is 51.6 percent lower. For persons reporting multiple races, it is 40.0 percent lower. For minorities as a group, it is 46.6 percent lower. For nonminority women, it is 40.3 percent lower; and for M/WBEs overall, it is 43.7 percent lower.

Table 4.8 provides similar information for the construction sector and the goods and services sector. Large deficits are observed in construction for all groups. With the sole exception of Asians/Pacific Islanders, large deficits are observed in the goods and services sector as well.

There is little doubt that a portion of the group differences documented in Tables 4.7 and 4.8 are associated with differences in the distribution of individual productivity characteristics and preferences between minorities, women and nonminority males. It is well known, for example, that earnings tend to increase with labor market experience (*i.e.,* age). It is also true that the propensity toward self-employment increases with labor market experience.[72] Since most minority populations in the United States have a lower median age than the nonminority population, it is important to test whether the disparities in business ownership evidenced in Tables 4.7 and 4.8 can be explained by differences in the age distribution or in other factors such as education, geographic location or the 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 4.9 focuses on the economy as a whole and Tables 4.10 and 4.11 focus on the construction 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.

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

Table 4.7. Self-Employment Rates in 2007-2011 for Selected Race and Gender Groups: United States and the City of Baltimore Market Area, All Industries

Race/Gender	U.S. (%)	City of Baltimore Market Area (%)	Percent Difference from Nonminority Male in Column (2)
	(1)	(2)	(3)
African American	5.85	5.77	-57.8
Hispanic	8.79	8.68	-36.5
Asian/Pacific Islander	11.02	13.51	-1.1
Native American	9.08	6.61	-51.6
Two or more races	9.50	8.19	-40.0
Minority	8.24	7.30	-46.6
Nonminority female	8.96	8.16	-40.3
M/WBE	8.58	7.69	-43.7
Nonminority male	14.69	13.66	

Source: NERA calculations from the 2007-2011 ACS Public Use Microdata Sample.

Table 4.8. Self-Employment Rates in 2007-2011 for Selected Race and Gender Groups: United States and the City of Baltimore Market Area, Construction Sector and Goods and Services Sector

Race/Gender	U.S. (%)	City of Baltimore Market Area (%)	Percent Difference from Nonminority Male in Column (2)
	(1)	(2)	(3)
Construction Sector			
African American	18.38	15.76	-20.4%
Hispanic	15.91	12.13	-38.7%
Asian/Pacific Islander	19.21	19.29	-2.6%
Native American	18.36	1.74	-91.2%
Two or more races	21.69	19.79	-0.1%
Minority	16.83	14.82	-25.2%
Nonminority female	16.11	9.39	-52.6%
M/WBE	16.68	13.10	-33.8%
Nonminority male	27.46	19.80	
Goods and Services Sector			
African American	5.23	5.15	-57.5%
Hispanic	7.69	7.76	-36.0%
Asian/Pacific Islander	10.68	13.19	8.8%
Native American	7.88	7.55	-37.7%
Two or more races	8.45	7.06	-41.7%
Minority	7.40	6.64	-45.2%
Nonminority female	8.76	8.10	-33.2%
M/WBE	8.07	7.32	-39.6%
Nonminority male	12.36	12.12	

Source: NERA calculations from the 2007-2011 ACS Public Use Microdata Sample.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

a. Specification 1 - the Basic Model[73]

Specification 1 in Table 4.9 shows large, adverse, and statistically significant business formation disparities for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting multiple races and nonminority women consistent with the presence of discrimination in these markets. Specification 1 in Tables 4.10 and 4.11 shows large, negative, and statistically significant business formation disparities for each of these groups in the construction sectors as well as in the goods and services sector.

[73] See above, section C.2.a., for a detailed description of Specification 1.

b. Specifications 2 and 3 - the Full Model Including Baltimore-Specific Interaction Terms[74]

Several of the BALTOMA interaction terms included in Specification 2 were significant. The final results are shown in Specification 3 for Tables 4.9 through 4.11.

To summarize for the economy-wide results (Table 4.9):

- For African Americans, business formation rates are 2.5 percentage points lower than what would be expected in a race- and gender-neutral market area.[75]
- For Hispanics, business formation rates are 1.8 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians/Pacific Islanders, business formation rates are 1.6 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 2.9 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For persons reporting multiple races, business formation rates are 1.6 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.

To summarize for the Construction sector results (Table 4.10):

- For African Americans, business formation rates are 8.8 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Hispanics, business formation rates are 7.4 percentage points lower than what would be expected in a race- and gender-neutral market area.
- For Asians/Pacific Islanders, business formation rates are 5.2 percentage points higher than what would be expected in a race- and gender-neutral market area.
- For Native Americans, business formation rates are 9.1 percentage points lower than what would be expected in a race- and gender-neutral market area.

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[74] In this example, the 2.5 percent is the net result of the direct coefficient for African Americans, with a value of -4.2 percent, and the coefficient for African Americans interacted with the BALTOMA indicator, which is 1.7 percent. See above, section C.2.b., for a detailed description of Specifications 2 and 3.

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

- For persons reporting multiple races, 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 9.7 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 4.11):

- For African Americans, business formation rates are 4.3 percentage points lower than what would be expected in a race- and gender-neutral market area.

- For Hispanics, business formation rates are 0.8 percentage points lower than what would be expected in a race- and gender-neutral market area.

- For Asians/Pacific Islanders, business formation rates are 1.0 percentage points higher than what would be expected in a race- and gender-neutral market area.

- For Native Americans, business formation rates are 3.1 percentage points lower than what would be expected in a race- and gender-neutral market area.

- For persons reporting multiple races, business formation rates are 2.0 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.

Table 4.9. Business Formation Regressions, All Industries, 2007-2011

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.042 (114.85)	-0.042 (114.37)	-0.042 (114.38)
Hispanic	-0.034 (104.85)	-0.034 (104.90)	-0.034 (104.92)
Asian/Pacific Islander	-0.016 (35.04)	-0.016 (35.41)	-0.016 (35.41)
Native American	-0.029 (24.92)	-0.029 (24.90)	-0.029 (24.93)
Two or more races	-0.016 (20.40)	-0.016 (20.37)	-0.016 (20.42)
Nonminority Female	-0.027 (108.69)	-0.027 (108.31)	-0.027 (108.69)
Age	0.010 (163.39)	0.010 (163.38)	0.010 (163.38)
Age^2	-0.000 (110.78)	-0.000 (110.78)	-0.000 (110.78)
BALTOMA	-0.010 (7.62)	-0.014 (8.29)	-0.013 (9.63)
BALTOMA*African American		0.017 (4.64)	0.017 (4.70)
BALTOMA*Hispanic		0.017 (2.67)	0.016 (2.62)
BALTOMA*Asian/Pacific Islander		0.033 (5.74)	0.032 (5.76)
BALTOMA*Native American		0.006 (0.22)	n/a
BALTOMA*Two or more races		0.003 (0.28)	n/a
BALTOMA*Nonminority Female		0.001 (0.47)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	5813772	5813772	5813772
Pseudo R^2	.2146	.2146	.2146

Source: NERA calculations from the 2007-2011 ACS Public Use Microdata Sample.

Notes: (1) See above, section C.2.(a)-(b) for a description of specifications 1 through 3; (2) Universe is all private sector labor force participants between the ages of 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (3) Reported number 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; (4) 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; (5) Geography is defined based on place of residence; (6) "BALTOMA" is shorthand for "City of Baltimore Market Area," which includes the Baltimore-Towson, MD Metropolitan Statistical Area; (7) "n/a" in Specification 3 indicates that the category was not included in the regression because it was not statistically significant in Specification 2, as described above in section C.2.b.

Table 4.10. Business Formation Regressions, Construction and Related Industries, 2007-2011

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.088 (32.66)	-0.089 (32.59)	-0.088 (32.66)
Hispanic	-0.074 (40.37)	-0.074 (40.39)	-0.074 (40.37)
Asian/Pacific Islander	-0.052 (12.59)	-0.052 (12.64)	-0.052 (12.59)
Native American	-0.091 (14.37)	-0.090 (14.32)	-0.091 (14.37)
Two or more races	-0.028 (5.42)	-0.028 (5.44)	-0.028 (5.42)
Nonminority Female	-0.097 (50.55)	-0.096 (50.14)	-0.097 (50.55)
Age	0.022 (60.24)	0.022 (60.24)	0.022 (60.24)
Age^2	-0.000 (39.80)	-0.000 (39.80)	-0.000 (39.8)
BALTOMA	-0.063 (9.18)	-0.067 (8.77)	-0.063 (9.18)
BALTOMA*African American		0.043 (1.91)	n/a
BALTOMA*Hispanic		0.041 (1.52)	n/a
BALTOMA*Asian/Pacific Islander		0.052 (1.18)	n/a
BALTOMA*Native American		-0.081 (0.61)	n/a
BALTOMA*Two or more races		0.026 (0.43)	n/a
BALTOMA*Nonminority female		-0.023 (1.16)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	540977	540977	540977
Pseudo R^2	.0760	.0760	.0760

Source and Notes: See Table 4.9.

Table 4.11. Business Formation Regressions, Goods and Services Industries, 2007-2011

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.053 (125.03)	-0.053 (124.16)	-0.053 (124.19)
Hispanic	-0.033 (80.40)	-0.033 (80.49)	-0.033 (80.51)
Asian/Pacific Islander	-0.023 (44.52)	-0.023 (44.78)	-0.023 (44.79)
Native American	-0.031 (20.87)	-0.031 (20.86)	-0.031 (20.88)
Two or more races	-0.020 (20.07)	-0.020 (19.99)	-0.020 (20.09)
Nonminority Female	-0.028 (102.78)	-0.028 (102.35)	-0.028 (102.77)
Age	0.010 (137.24)	0.010 (137.24)	0.010 (137.24)
Age^2	-0.000 (91.24)	-0.000 (91.24)	-0.000 (91.24)
BALTOMA	0.003 (1.76)	-0.001 (0.39)	-0.001 (0.36)
BALTOMA*African American		0.010 (2.31)	0.010 (2.41)
BALTOMA*Hispanic		0.026 (3.10)	0.025 (3.12)
BALTOMA*Asian/Pacific Islander		0.033 (5.00)	0.033 (5.11)
BALTOMA*Native American		0.009 (0.29)	n/a
BALTOMA*Two or more races		-0.002 (0.17)	n/a
BALTOMA*Nonminority female		0.001 (0.19)	n/a
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	5416849	5416849	5416849
Pseudo R^2	.0649	.0649	.0649

Source and Notes: See Table 4.9.

c. Conclusions

This section has demonstrated that, for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting multiple races, minorities as a group, nonminority women and minorities and women as a group, observed business formation rates in the construction sector of the City of Baltimore Market Area are substantially and statistically significantly lower than those that would be expected to be observed if commercial markets operated in a race- and gender-neutral manner. With the sole exception of Asians/Pacific Islanders, the same is true in the goods and services sector and in the economy as a whole. Minorities and women generally 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. Moreover, 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 that would be observed in a discriminatory market area.

D. Expected Business Formation Rates—Implications for Current M/WBE Availability[76]

In Table 4.12, the Probit regression results for the City of Baltimore market area from Tables 4.9, 4.10 and 4.11 for the overall economy, the construction sector, and the goods and services sector, respectively, are combined with weighted average self-employment rates by race and gender from the 2007-2011 ACS PUMS (Tables 4.7 and 4.8) 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 4.12.

The business formation rate in the BALTOMA for African Americans in the construction sector, for example, is 15.76 percent (see middle panel of Table 4.12, top row). According to the regression specification underlying Table 4.10, however, that rate would be 24.56 percent, or 55.8 percent higher, in a race- and gender-neutral market area. Put differently, the disparity ratio of the actual business formation rate to the expected business formation rate for African Americans in construction in the BALTOMA is 64.17. Disparity indices are adverse and statistically significant in construction for African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, persons reporting multiple races, minorities as a group, nonminority women and minorities and women combined.

In the construction sector, the largest disparities observed are for Native Americans (16.05), followed in descending order by nonminority women (49.19), M/WBEs as a group (60.09), Hispanics (62.11), African Americans (64.17), minorities as a group (66.10), Asians/Pacific Islanders (78.77) and persons reporting multiple races (87.61).

[76] In addition to quantifying how discrimination may have depressed current measured levels of M/WBE availability, this exercise also addresses the requirements of 49 C.F.R. 26.45 ("Step 2") for the United States Department of Transportation Disadvantaged Business Enterprise Program.

In the goods and services sector, the largest disparities observed are for African Americans (54.50), followed in descending order by minorities as a group (68.17), Native Americans (70.89), M/WBEs as a group (70.93), nonminority females (74.31), and persons reporting multiple races (77.92).

In the economy as a whole sector, the largest disparities observed are for minorities as a group (67.59), followed in descending order by M/WBEs as a group (69.34), Native Americans (69.51), African Americans (69.77), nonminority females (75.14), Hispanics (82.82) and persons reporting multiple races (83.66).

Given the large disparities observed in all sectors of the economy for most presumptive groups, goal-setters might consider adjusting baseline estimates of M/WBE availability upward to partly account for the depressing effects of discrimination on current measured levels of availability. The business formation rate disparities documented in Table 4.12 can be combined with the estimates of current M/WBE availability documented in Table 3.11 and elsewhere to provide estimates of expected availability. Such estimates appear in Table 6.5. Expected M/WBE availability exceeds actual current M/WBE availability overall and in each major procurement category.

Table 4.12. Actual and Potential Business Formation Rates in the City of Baltimore Market Area

Race/Gender	Business Formation Rate (%)	Expected Business Formation Rate (%)	Disparity Ratio
All Industries	(1)	(2)	(3)
African American	5.77	8.27	69.77
Hispanic	8.68	10.48	82.82
Asian/Pacific Islander	13.51	11.91	
Native American	6.61	9.51	69.51
Two or more races	8.19	9.79	83.66
Minority	7.30	10.80	67.59
Nonminority female	8.16	10.86	75.14
M/WBE	7.69	11.09	69.34
Construction Sector	(1)	(2)	(3)
African American	15.76	24.56	64.17
Hispanic	12.13	19.53	62.11
Asian/Pacific Islander	19.29	24.49	78.77
Native American	1.74	10.84	16.05
Two or more races	19.79	22.59	87.61
Minority	14.82	22.42	66.10
Nonminority female	9.39	19.09	49.19
M/WBE	13.10	21.80	60.09
Goods and Services Sector	(1)	(2)	(3)
African American	5.15	9.45	54.50
Hispanic	7.76	8.56	90.65
Asian/Pacific Islander	13.19	12.19	
Native American	7.55	10.65	70.89
Two or more races	7.06	9.06	77.92
Minority	6.64	9.74	68.17
Nonminority female	8.10	10.90	74.31
M/WBE	7.32	10.32	70.93

Source: 2007-2011 ACS Public Use Microdata Sample. *See* Tables 4.7 through 4.11.

Notes: (A) Figures are rounded. Rounding was performed subsequent to any mathematical calculations. (B) Figures in column (1) are average self-employment rates weighted using ACS population-based person weights, as also shown in Tables 4.7 and 4.8. (C) 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 4.9, 4.10 or 4.11, respectively. Minority and M/WBE figures were derived from similar regression analyses, not reported separately. (D) Column (3) is the figure in column (1) divided by the figure in column (2), with the result multiplied by 100. (E) An empty cell in the Disparity Ratio column indicates that no adverse disparity was observed for that category.

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 Census* program. Data from the 2007 SBO, the most recent, were released in 2011.

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.[77]

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 Natives. The 2007 SBO also includes comparative information for nonminority male-owned firms.[78]

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 State of Maryland.[79] In the remainder of this section, we present SBO statistics for the United States as a whole and in Maryland 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 4.13 and 4.14 contain data for all industries combined. Table 4.13 is for the U.S. as a whole, Table 4.14 is for the State of Maryland. Panel A in these two tables summarizes the SBO results for each race and/or gender grouping. For example, Panel A of Table 4.13 shows a total of 26.29 million firms in the U.S. in 2007 (column 1) with overall sales and receipts of $10.949

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[77] 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/.

[78] 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 Census*, the unit of analysis in the SBO is the firm, rather than the establishment.

[79] It is, in general, not possible with the SBO dataset to examine geographic divisions below the state level.

trillion (column 2). Of these 26.29 million firms, 5.19 million had one or more employees (column 3) and these 5.19 million firms had overall sales and receipts of $10.015 trillion (column 4). Column (5) shows a total of 56.63 million employees on the payroll of these 5.19 million firms and a total annual payroll expense of $1.941 trillion (column 6).

The remaining rows in Panel A provide comparable statistics for nonminority male-owned, women-owned, and minority-owned firms. For example, Table 4.13 shows that there were 1.9 million African American-owned firms counted in the SBO, and that these 1.9 million firms registered $135.7 billion in sales and receipts. It also shows that 106,566 of these African American-owned firms had one or more employees, and that they employed a total of 909,552 workers with an annual payroll total of $23.33 billion.

Panel A of Table 4.14 provides comparable information for Maryland. The SBO counted 509,273 firms in Maryland, of which 207,553 were nonminority male-owned; 172,083 were female-owned; 102,173 were African American-owned; 25,774 were Hispanic-owned; 35,881 were Asian-owned; 3,301 were Native American-owned; and 294 were Native Hawaiian- or Pacific Islander-owned.

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 4.14 shows that nonminority male-owned firms were 40.75 percent of all firms in Maryland, female-owned firms were 33.79 percent, and African American-owned firms were 20.06 percent. Additionally, 5.06 percent of firms were Hispanic-owned, 7.05 percent were Asian-owned, 0.65 percent were Native American-owned, and 0.06 percent were Native Hawaiian- or Pacific Islander-owned.

Column (2) in Panel B provides the same percentage distribution for overall sales and receipts. Table 4.14, for example, shows that although nonminority male-owned firms were 40.75 percent of all firms, they accounted for 73.18 percent of all sales and receipts. African American-owned firms, in contrast, were 20.06 percent of all firms in Maryland, but they accounted for only 3.44 percent of all sales and receipts. Hispanic-owned firms were 5.06 percent of all firms, but they accounted for only 2.19 percent of all sales and receipts. Asian-owned firms were 7.05 percent of all firms, but they accounted for only 5.75 percent of all sales and receipts. Native American-owned firms were 0.65 percent of all firms, but they accounted for only 0.17 percent of all sales and receipts. Native Hawaiian- or Pacific Islander-owned firms were 0.06 percent of all firms, but they accounted for only 0.04 percent of all sales and receipts. Similarly, women accounted for 33.79 percent of all firms in Maryland, but earned only 11.30 percent of sales and receipts.

Similar results are obtained when the survey results are restricted to firms with one or more paid employees. Column (3) in Table 4.14, for example, shows that although nonminority male-owned firms were 56.70 percent of all employer firms, they accounted for 75.15 percent of all employer firm sales and receipts. African American-owned firms, in contrast, were 5.43 percent of all employer firms, but they accounted for only 2.58 percent of all employer firm sales and receipts. Hispanic-owned firms were 3.32 percent of all employer firms, but they accounted for only 1.91 percent of all employer firm sales and receipts. Asian-owned firms were 9.85 percent of all employer firms, but they accounted for only 5.70 percent of all employer firm sales and receipts. Native American-owned firms were 0.33 percent of all employer firms and accounted

for just 0.13 percent of all employer firm sales and receipts. Native Hawaiian- or Pacific Islander-owned firms were 0.04 percent of all employer firms and accounted for 0.05 percent of all employer firm sales and receipts. Finally, women accounted for 18.84 percent of all employer firms, but earned only 10.23 percent of all employer firm sales and receipts.

Large disparities between the fraction of firms that are minority- or women-owned and their fraction of sales and receipts in Maryland are observed for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders and women, both for employer firms and nonemployer firms. The disparity indices are presented in Panel C of each table. Disparity indices of approximately 80 percent or less indicate disparate impact consistent with business discrimination (0 percent being complete disparity and 100 percent being full parity). In Maryland (Table 4.14), the sales and receipts disparity indices (in columns 2 and 4) fall at or beneath the 80 percent threshold in 10 out of 12 cases. All of these disparity indices are statistically significant within a 95 percent confidence interval.

Table 4.13. Disparity Ratios from the 2007 Survey of Business Owners, United States, All Industries

	Number of Firms	Sales and Receipts ($000s)	Employer Firms	Sales and Receipts ($000s)	Employees	Payroll ($000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	26,294,860	10,949,461,874	5,189,968	10,015,142,962	56,626,554	1,940,572,944
Nonminority Male	10,943,636	7,725,275,376	2,753,871	7,255,760,511	37,138,139	1,386,782,737
Female	7,792,115	1,196,608,004	909,661	1,014,366,348	7,520,121	214,673,400
African American	1,921,864	135,739,834	106,566	97,144,898	909,552	23,334,792
Hispanic	2,260,269	350,661,243	248,852	279,920,707	1,908,161	54,295,508
Asian	1,549,559	506,047,751	397,426	453,574,194	2,807,771	79,230,459
Native Hawaiian/Pac. Islander	37,687	6,319,357	4,151	5,250,301	37,801	1,217,138
Am. Indian & Alaska Native	236,691	34,353,842	23,662	27,494,075	185,037	5,930,247
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	41.62%	70.55%	53.06%	72.45%	65.58%	71.46%
Female	29.63%	10.93%	17.53%	10.13%	13.28%	11.06%
African American	7.31%	1.24%	2.05%	0.97%	1.61%	1.20%
Hispanic	8.60%	3.20%	4.79%	2.79%	3.37%	2.80%
Asian	5.89%	4.62%	7.66%	4.53%	4.96%	4.08%
Native Hawaiian/Pac. Islander	0.14%	0.06%	0.08%	0.05%	0.07%	0.06%
Am. Indian & Alaska Native	0.90%	0.31%	0.46%	0.27%	0.33%	0.31%
Panel C. Disparity Ratios		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		169.52		136.54	123.60	134.68
Female		36.88		57.79	75.77	63.12
African American		16.96		47.24	78.23	58.56
Hispanic		37.26		58.29	70.28	58.35
Asian		78.43		59.14	64.75	53.32
Native Hawaiian/Pac. Islander		40.27		65.54	83.46	78.42
Am. Indian & Alaska Native		34.86		60.21	71.67	67.03

Source: NERA calculations using 2007 SBO. Notes: (A) Figures are rounded. Rounding was performed subsequent to any mathematical calculations. (B) Excludes publicly-owned, foreign-owned, and not-for-profit firms. (C) "n/a" indicates that data were not disclosed due to confidentiality or other publication restrictions.

Table 4.14. Disparity Ratios from the 2007 Survey of Business Owners, State of Maryland, All Industries

	Number of Firms	Sales and Receipts ($000s)	Employer Firms	Sales and Receipts ($000s)	Employees	Payroll ($000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	509,273	196,805,267	96,608	179,585,580	1,059,179	40,916,996
Nonminority Male	207,553	144,019,911	54,779	134,961,409	700,313	29,025,607
Female	172,083	22,231,876	18,202	18,379,402	164,894	5,447,955
African American	102,173	6,767,579	5,246	4,640,166	45,664	1,527,820
Hispanic	25,774	4,310,496	3,206	3,422,148	25,019	986,306
Asian	35,881	11,320,071	9,515	10,241,217	71,408	2,266,355
Native Hawaiian/Pac. Islander	294	88,073	39	86,124	679	35,465
Am. Indian & Alaska Native	3,301	324,997	318	239,231	1,971	79,595
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	40.75%	73.18%	56.70%	75.15%	66.12%	70.94%
Female	33.79%	11.30%	18.84%	10.23%	15.57%	13.31%
African American	20.06%	3.44%	5.43%	2.58%	4.31%	3.73%
Hispanic	5.06%	2.19%	3.32%	1.91%	2.36%	2.41%
Asian	7.05%	5.75%	9.85%	5.70%	6.74%	5.54%
Native Hawaiian/Pac. Islander	0.06%	0.04%	0.04%	0.05%	0.06%	0.09%
Am. Indian & Alaska Native	0.65%	0.17%	0.33%	0.13%	0.19%	0.19%
Panel C. Disparity Ratios		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		179.56		132.54	116.61	125.11
Female		33.43		54.32	82.63	70.67
African American		17.14		47.58	79.39	68.76
Hispanic		43.28		57.42	71.18	72.64
Asian		81.64		57.90	68.45	56.24
Native Hawaiian/Pac. Islander		77.52		118.80	158.80	214.71
Am. Indian & Alaska Native		25.48		40.47	56.53	59.10

Source and Notes: See Table 4.13.

Table 4.15 shows comparable SBO data for the Construction and AE-CRS sector in the U.S. as a whole. Here, adverse disparities are evident for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders, and women.[80] For example, although African Americans account for 4.10 percent of all firms in the Construction and AE-CRS sector, they earn only 1.15 percent of all sales and receipts in that sector. Hispanics account for 7.44 percent of firms but only 3.52 percent of sales and receipts. For Asians, the figures are 4.02 percent and 2.71 percent, respectively. For Native Americans, the figures are 0.87 percent and 0.49 percent, respectively. For Native Hawaiians and Pacific Islanders, the figures are 0.12 percent and 0.10 percent, respectively. Finally, women account for 19.31 percent of all Construction and AE-CRS firms but earned only 9.08 percent of all sales and receipts.

Among firms with paid employees, adverse disparities are observed for African Americans, Hispanics, Asians, Native Americans, and women. Overall, disparities in this category are

[80] The sole exception being Native Hawaiian and Pacific Islander-owned firms with paid employees.

slightly less acute than among firms as a whole. However, they remain far larger than the comparable figure for nonminority male-owned firms. This is evident in that the fraction of employer firms compared to the fraction of all firms is far higher among nonminority males than among other race and gender groups. In Table 4.15, for example, nonminority males represent 54.37 percent of all firms but 62.74 percent of employer firms. For all other groups, the direction of this ratio is reversed. That is, each group's fraction among employer firms is substantially smaller than its fraction among firms as a whole, whereas for nonminority males it is larger.

Table 4.16 shows results for the Construction and AE-CRS sector in Maryland. Among all firms in Construction and AE-CRS, large disparities are observed for African Americans, Hispanics, Native Americans and women. Among firms with paid employees, large disparities are observed for Hispanics, Native Americans and women. As in Table 4.15, nonminority males have a much higher ratio of employer firms to firms as a whole than do minorities or women.

Table 4.15. Disparity Ratios from the 2007 Survey of Business Owners, United States, Construction and AE-CRS

	Number of Firms	Sales and Receipts ($000s)	Employer Firms	Sales and Receipts ($000s)	Employees	Payroll ($000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	7,069,005	2,247,219,546	1,473,633	1,968,365,597	10,803,954	515,161,851
Nonminority Male	3,843,180	1,649,355,770	924,548	1,483,625,570	7,664,496	381,436,430
Female	1,365,249	203,964,647	196,614	165,319,338	1,124,710	49,343,438
African American	289,579	25,787,994	22,521	18,937,276	135,685	5,647,555
Hispanic	526,190	79,164,324	63,055	58,649,224	390,113	15,224,090
Asian	284,427	61,003,128	48,732	51,923,279	303,058	17,195,039
Native Hawaiian/Pac. Islander	8,610	2,161,094	1,311	1,853,781	9,923	509,611
Am. Indian & Alaska Native	61,579	11,032,792	8,047	8,831,344	51,974	2,228,594
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	54.37%	73.40%	62.74%	75.37%	70.94%	74.04%
Female	19.31%	9.08%	13.34%	8.40%	10.41%	9.58%
African American	4.10%	1.15%	1.53%	0.96%	1.26%	1.10%
Hispanic	7.44%	3.52%	4.28%	2.98%	3.61%	2.96%
Asian	4.02%	2.71%	3.31%	2.64%	2.81%	3.34%
Native Hawaiian/Pac. Islander	0.12%	0.10%	0.09%	0.09%	0.09%	0.10%
Am. Indian & Alaska Native	0.87%	0.49%	0.55%	0.45%	0.48%	0.43%
Panel C. Disparity Ratios		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		135.00		120.14	113.07	118.02
Female		47.00		62.95	78.02	71.79
African American		28.01		62.95	82.18	71.73
Hispanic		47.33		69.63	84.39	69.06
Asian		67.47		79.77	84.82	100.93
Native Hawaiian/Pac. Islander		78.96		105.86	103.24	111.19
Am. Indian & Alaska Native		56.36		82.16	88.10	79.22

Source and Notes: See Table 4.13.

Table 4.16. Disparity Ratios from the 2007 Survey of Business Owners, State of Maryland, Construction and AE-CRS

	Number of Firms	Sales and Receipts ($000s)	Employer Firms	Sales and Receipts ($000s)	Employees	Payroll ($000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	145,681	54,764,219	32,091	49,317,726	274,097	14,685,323
Nonminority Male	79,380	40,665,484	21,050	37,240,674	193,984	10,704,848
Female	34,535	6,136,059	5,248	5,185,395	33,742	1,693,086
African American	18,191	2,486,853	1,612	2,033,814	13,791	722,193
Hispanic	9,573	1,969,781	1,335	1,551,985	9,745	495,993
Asian	7,801	2,631,364	1,440	2,380,769	13,360	862,506
Native Hawaiian/Pac. Islander	120	85,920	31	85,170	664	34,899
Am. Indian & Alaska Native	797	178,815	133	144,293	899	50,628
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	54.49%	74.26%	65.59%	75.51%	70.77%	72.89%
Female	23.71%	11.20%	16.35%	10.51%	12.31%	11.53%
African American	12.49%	4.54%	5.02%	4.12%	5.03%	4.92%
Hispanic	6.57%	3.60%	4.16%	3.15%	3.56%	3.38%
Asian	5.35%	4.80%	4.49%	4.83%	4.87%	5.87%
Native Hawaiian/Pac. Islander	0.08%	0.16%	0.10%	0.17%	0.24%	0.24%
Am. Indian & Alaska Native	0.55%	0.33%	0.41%	0.29%	0.33%	0.34%
Panel C. Disparity Ratios		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		136.28		115.12	107.89	111.13
Female		47.26		64.29	75.28	70.50
African American		36.37		82.10	100.16	97.90
Hispanic		54.74		75.65	85.46	81.19
Asian		89.73		107.58	108.62	130.89
Native Hawaiian/Pac. Islander		190.47		178.77	250.78	246.01
Am. Indian & Alaska Native		59.68		70.59	79.14	83.18

Source and Notes: See Table 4.13.

Table 4.17 shows comparable SBO data for the Goods and Services sector in the U.S. as a whole. Here, adverse disparities are evident for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders, and women. African Americans, for example, account for 8.49 percent of all firms in the Goods and Services sector, they earned only 1.26 percent of all sales and receipts in that sector. Hispanics account for 9.02 percent of firms but only 3.12 percent of sales and receipts. For Asians, the figures are 6.58 percent and 5.11 percent, respectively. For Native Americans, the figures are 0.91 percent and 0.27 percent, respectively. For Native Hawaiians and Pacific Islanders, the figures are 0.15 percent and 0.05 percent, respectively. Finally, women account for 33.43 percent of all Goods and Services firms but earned only 11.41 percent of all sales and receipts. Comparable, though slightly smaller, disparities are observed as well among firms with paid employees in the Goods and Services sector.

Finally, Table 4.18 shows comparable results for the Goods and Services sector in Maryland. Among all firms in Goods and Services, adverse disparities are observed for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders and women. Among firms with paid employees, adverse disparities are observed for African Americans, Hispanics, Asians, Native Americans, Native Hawaiians and Pacific Islanders and women. As in Table 4.17, nonminority males have a much higher ratio of employer firms to firms as a whole than do minorities or women. In the Maryland Goods and Services sector, the sales and receipts disparity indices fall at or beneath the 80 percent threshold in 12 out of 12 cases. All of these disparity indices are statistically significant within a 95 percent confidence interval.

Table 4.17. Disparity Ratios from the 2007 Survey of Business Owners, United States, Goods and Services

	Number of Firms	Sales and Receipts ($000s)	Employer Firms	Sales and Receipts ($000s)	Employees	Payroll ($000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	19,225,855	8,702,242,328	3,716,335	8,046,777,365	45,822,600	1,425,411,093
Nonminority Male	7,100,456	6,075,919,606	1,829,323	5,772,134,941	29,473,643	1,005,346,307
Female	6,426,866	992,643,357	713,047	849,047,010	6,395,411	165,329,962
African American	1,632,285	109,951,840	84,045	78,207,622	773,867	17,687,237
Hispanic	1,734,079	271,496,919	185,797	221,271,483	1,518,048	39,071,418
Asian	1,265,132	445,044,623	348,694	401,650,915	2,504,713	62,035,420
Native Hawaiian/Pac. Islander	29,077	4,158,263	2,840	3,396,520	27,878	707,527
Am. Indian & Alaska Native	175,112	23,321,050	15,615	18,662,731	133,063	3,701,653
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	36.93%	69.82%	49.22%	71.73%	64.32%	70.53%
Female	33.43%	11.41%	19.19%	10.55%	13.96%	11.60%
African American	8.49%	1.26%	2.26%	0.97%	1.69%	1.24%
Hispanic	9.02%	3.12%	5.00%	2.75%	3.31%	2.74%
Asian	6.58%	5.11%	9.38%	4.99%	5.47%	4.35%
Native Hawaiian/Pac. Islander	0.15%	0.05%	0.08%	0.04%	0.06%	0.05%
Am. Indian & Alaska Native	0.91%	0.27%	0.42%	0.23%	0.29%	0.26%
Panel C. Disparity Ratios		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		189.05		145.73	130.67	143.28
Female		34.12		54.99	72.74	60.45
African American		14.88		42.98	74.68	54.87
Hispanic		34.59		55.00	66.26	54.83
Asian		77.72		53.20	58.26	46.38
Native Hawaiian/Pac. Islander		31.59		55.23	79.61	64.95
Am. Indian & Alaska Native		29.42		55.20	69.11	61.81

Source and Notes: See Table 4.13.

Table 4.18. Disparity Ratios from the 2007 Survey of Business Owners, State of Maryland, Goods and Services

	Number of Firms	Sales and Receipts ($000s)	Employer Firms	Sales and Receipts ($000s)	Employees	Payroll ($000s)
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Levels						
All Firms	363,592	142,041,048	64,517	130,267,854	785,082	26,231,673
Nonminority Male	128,173	103,354,427	33,729	97,720,735	506,329	18,320,759
Female	137,548	16,095,817	12,954	13,194,007	131,152	3,754,869
African American	83,982	4,280,726	3,634	2,606,352	31,873	805,627
Hispanic	16,201	2,340,715	1,871	1,870,163	15,274	490,313
Asian	28,080	8,688,707	8,075	7,860,448	58,048	1,403,849
Native Hawaiian/Pac. Islander	174	2,153	8	954	15	566
Am. Indian & Alaska Native	2,504	146,182	185	94,938	1,072	28,967
Panel B. Column Percentages						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Nonminority Male	35.25%	72.76%	52.28%	75.02%	64.49%	69.84%
Female	37.83%	11.33%	20.08%	10.13%	16.71%	14.31%
African American	23.10%	3.01%	5.63%	2.00%	4.06%	3.07%
Hispanic	4.46%	1.65%	2.90%	1.44%	1.95%	1.87%
Asian	7.72%	6.12%	12.52%	6.03%	7.39%	5.35%
Native Hawaiian/Pac. Islander	0.05%	0.00%	0.01%	0.00%	0.00%	0.00%
Am. Indian & Alaska Native	0.69%	0.10%	0.29%	0.07%	0.14%	0.11%
Panel C. Disparity Ratios		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Nonminority Male		206.41		143.49	123.36	133.59
Female		29.95		50.44	83.20	71.29
African American		13.05		35.52	72.08	54.53
Hispanic		36.98		49.50	67.09	64.45
Asian		79.21		48.21	59.08	42.76
Native Hawaiian/Pac. Islander		3.17		5.91	15.41	17.40
Am. Indian & Alaska Native		14.94		25.42	47.62	38.51

Source and Notes: See Table 4.13.

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V. Statistical Disparities in Capital Markets

A. Introduction

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.[81]

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.[82]

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 (see Tables 5.15, 5.22, 5.29).

[81] Again, as noted in Chapter IV, these factors also illustrate why, in a disparity study intended to answer the question of whether discrimination is present in business enterprise, 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.

[82] 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 National Opinion Research Center (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 (see Tables 5.8, 5.9, 5.18, 5.19, 5.25, 5.26).

- When minority-owned firms *did* receive a loan, they were obligated to pay higher interest rates on the loans than comparable nonminority-owned firms (see Tables 5.13, 5.14, 5.21, 5.27).

- A larger proportion of minority-owned firms than nonminority-owned firms report that credit market conditions are a serious concern (see Tables 5.3, 5.4, 5.5, 5.6, 5.7, 5.17, 5.24).

- 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 (see Tables 5.5, 5.6).

- There is no evidence that discrimination in the market for credit is significantly different in the East and West South Central census divisions or in the construction and construction-related professional services industries than it is in the nation or the economy as a whole (various tables).

- There is no evidence that the level of discrimination in the market for credit has diminished between 1993 and 2003 (various tables).

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.

We begin with the 1993 dataset and continue chronologically through the 2003 dataset and then to evidence from NERA's own comparable surveys conducted in various geographies between 1999 and 2007. This chronological progression allows the reader to see the consistency of the main findings over time. This approach serves as well to demonstrate the value of over-sampling minority and female small business owners, as was the case in the 1993 and 1998 surveys, but not the 2003 survey. Unfortunately, the much anticipated 2008 survey results never materialized because the Federal Reserve cancelled this important survey effort.[83]

[83] For more on this, see fn. 122 below.

B. 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 subset of the 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 (*c.f.* 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.[84] 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.[85]

In his 2003 report for *Builders Association of Greater Chicago v. the City of Chicago*,[86] 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,

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[84] 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. Additionally, 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.

[85] *See* Chapter IV.

[86] 298 F.Supp.2d 725 (N.D. Ill. 2003).

> 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."[87]

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 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 self-employed African Americans 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" (1999, 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

[87] G. Myrdal (1944, p. 308).

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 a 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.

C. 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:

$$\text{(1)} \qquad \text{Prob}(D_i = 1) = \Phi(\beta_0 + \beta_1 CW_i + \beta_2 X_i + \beta_3 R_i),$$

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.[88] 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. Within the framework of this model, a positive estimate of β_3 is consistent with the presence of discrimination.[89]

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

[88] Additional discussion of Probit regression appears in Chapter IV, Section C.1.

[89] The Equal Credit Opportunity Act prohibits discrimination in access to credit by race and would apply to both Becker-type and statistical discrimination.

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.[90] In this NSSBF file, minority-owned firms were over-sampled, but sampling weights are provided to 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, Native Americans).[91]

Table 5.1 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).[92] Other minority groups are denied at rates higher than nonminorities as well, but the magnitude of the African American-to-nonminority differential is particularly large.

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 5.2 presents evidence for the South Atlantic (SATL) division, which includes the

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[90] 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.

[91] There were also two firms in the "Other race" category in 1993 that reported multiple or mixed race.

[92] 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.

State of Maryland and eight surrounding states.[93] This SATL sample includes the owners of 773 firms, of which 342 owners (44.2%) said that they had applied for a loan over the preceding three-year period.

The overall denial rate of 29.2 percent in the SATL is slightly higher than the national rate of 28.8 percent reported in Table 5.1. The difference in the denial rates between African American-owned firms and nonminority-owned firms is also higher in the SATL (43.5 percentage points) than in the nation as a whole (39.0 percentage points). On balance, however, the weighted sample means are not significantly different in the SATL than in the nation as a whole—either overall or by race, ethnicity or gender.

[93] In addition to Maryland, the SATL includes Delaware, the District of Columbia, Florida, Georgia, North Carolina, South Carolina, Virginia and West Virginia.

Table 5.1. Selected Population-Weighted Sample Means of Loan Applicants from 1993 NSSBF Data

	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
% <= 8th Grade Education	0.8	0.7	0.0	3.4	1.0
% 9th-11th 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
% Loans 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: (1) Sample weights are used to provide statistics that are nationally representative of all small businesses.
(2) Sample restricted to firms that applied for a loan over the preceding three years.

Table 5.2. Selected Sample Means of Loan Applicants—SATL

	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
% <= 8th Grade Education	0.3	0.4	0.0	0.0	0.0
% 9th-11th 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
% Loans 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: See Table 5.1.

Notes: (1) Sample weights are used to provide statistics that are nationally representative of all small businesses. (2) Some variable means are computed from slightly smaller samples because of missing values. (3) "Other Races" are not reported separately due to small sample size.

D. Qualitative Evidence

Before moving on to the results of our multivariate analysis, we first report on what business owners themselves say are 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 commercial 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 5.3 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 nonminorities (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 American with Disabilities Act; (7) the Occupational Safety and Health Act; and (8) The Family and Medical Leave Act. Differences between African American-owned firms and Hispanic-owned firms, on the one hand, and nonminority-owned firms, on the other, are much less pronounced in these eight areas than they are in relation to credit market conditions.[94] The finding that minority-owned firms are largely indistinguishable from nonminority-owned firms in reporting a variety of problems, except for the case of credit, indicates that these firms perceive credit availability to be a particular problem for them.

Results are similar in Table 5.4 for the SATL division—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.

[94] 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.

Table 5.3. Problems Firms Experienced During Preceding 12 Months—USA

	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 5.1.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

Table 5.4. Problems Firms Experienced During Preceding 12 Months—SATL

	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 5.1.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

Tables 5.5 and 5.6 report the views of NSSBF respondents for the U.S. as a whole and the SATL division, respectively, on the most important issues businesses expected to face over the following year. 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.

Table 5.5. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months—USA

	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 5.1.

Table 5.6. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months—SATL

	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 5.1.

Acute credit availability problems for minorities have been reported in surveys other than the NSSBF. In the Census Bureau's 1992 Characteristics of Business Owners (CBO) Survey, 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 negative 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 for Other minorities, and 3.3 percent for women.[95]

A later study published by the U.S. Chamber of Commerce (2005) is also consistent with these findings from the 1993 NSSBF and the 1992 CBO.[96] 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. This survey showed that minority-owned businesses rely heavily on credit cards to fund their businesses; often do not apply for credit, even though they need it, for fear of being denied; and were especially likely to need working capital. In particular, as shown in Table 5.7, minority-owned firms 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 an 11 percentage point difference for men or women.

[95] Bureau of the Census (1997), Table 5a, p. 46, Table 1, p. 21.

[96] 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 SBO.

Table 5.7. Types of Problems Facing Your Business, by Race and Gender

	Non-minority Male	Non-minority Female	Minority Male	Minority Female	African American	Hispanic	Asian/ Pacific Islander
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 of firms	415	356	80	81	55	50	41

Source: U.S. Chamber of Commerce (2005), p. 55.

Notes: (1) Percentages may total to more than 100% because respondents had the option to select multiple choices. (2) "Minority" also includes 14 firms owned by Native Americans.

In summary, African American-owned and Hispanic-owned firms in particular reported 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 tested in the econometric analyses to follow.

E. 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 5.8 and Table 5.9, 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 division.[97] 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

[97] Firms owned 50-50 by minorities and non-minorities are excluded from this and all subsequent analyses, as are nonminority firms owned 50-50 by women and men.

probabilities depending on the type of variables considered. For indicator variables such as race, ethnicity and gender, estimates show differences in loan denial probabilities between the indicated group and the base group.[98] In Column (1) of Table 5.8 (in which the regression model contains only race and gender indicators), the estimated coefficient of 0.443 on the African American indicator indicates that the denial rate for African American-owned businesses is 44.3 percentage points higher than that for nonminority male-owned firms.[99]

The remainder of Table 5.8 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race, ethnicity or gender.[100] 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 28.8 percentage points more likely than nonminority-owned firms to have their loan request denied.

The models reported in Columns (3) through (5) of Table 5.8 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 groups. 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.[101] In total, these three columns add 176 variables to the more parsimonious

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[98] 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 5.8, 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.

[99] This estimate largely replicates the raw difference in denial rates between African American-owned and nonminority-owned businesses reported in Table 5.1. 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 White 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 5.8 and subsequent tables we report only unweighted estimates.

[100] In preliminary analyses, these models were also estimated separately, focusing specifically on the differences in coefficient estimates between nonminorities and African Americans. The F-Test conducted to determine whether parameter estimates were the same for African Americans and nonminorities 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 nonminorities and using the coefficient on the African Americans 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.

[101] 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 institutions 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%).

specification reported in Column (2).[102] 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 different from the denial rates of firms owned by nonminorities; or that denial rates for firms owned by nonminority women were significantly different from those for firms owned by nonminority men.[103]

In Table 5.9, we see results for the SATL division similar to those reported in Table 5.8 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 5.8. The indicator variable for the SATL division is insignificantly different from zero; as are the interaction terms between race/ethnicity/gender and the SATL region.[104]

[102] 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 paper by Cavalluzzo, Cavalluzzo and Wolken (2002) 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 5.8 (see Tables 5.27 and 5.28).

[103] It would be a mistake to interpret a lack of statistical significance (as opposed to substantive significance) in any of the tables in Chapter V, or elsewhere in this Study, 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.

[104] The number of Native Americans in the SATL sample was too small to yield statistical results.

Table 5.8. Determinants of Loan Denial Rates—USA

	(1)	(2)	(3)	(4)	(5)
African American	0.443 (11.21)	0.288 (6.84)	0.237 (5.57)	0.235 (5.22)	0.241 (5.13)
Asian/Pacific Islander	0.225 (4.21)	0.171 (3.18)	0.140 (2.56)	0.121 (2.15)	0.119 (2.07)
Native American	-0.016 (0.11)	-0.141 (1.06)	-0.097 (0.71)	-0.052 (0.35)	-0.083 (0.56)
Hispanic	0.129 (2.62)	0.070 (1.42)	0.067 (1.36)	0.035 (0.70)	0.031 (0.63)
Nonminority female	0.088 (2.65)	0.048 (1.45)	0.047 (1.45)	0.036 (1.06)	0.033 (0.94)
Judgments		0.143 (2.84)	0.129 (2.56)	0.124 (2.40)	0.121 (2.29)
Firm delinquent		0.176 (6.50)	0.178 (6.43)	0.195 (6.77)	0.208 (7.00)
Personally delinquent		0.161 (4.45)	0.128 (3.56)	0.124 (3.38)	0.119 (3.17)
Bankrupt past 7 years		0.208 (3.11)	0.179 (2.68)	0.162 (2.37)	0.167 (2.33)
$1992 profits (*$10^8$)		-0.000 (0.89)	-0.000 (1.64)	-0.000 (1.78)	-0.000 (1.83)
$1992 sales (*$10^8$)		-0.000 (3.08)	-0.000 (3.38)	-0.000 (3.28)	-0.000 (3.38)
$1992 assets (*$10^8$)		0.000 (0.51)	0.000 (0.60)	0.000 (0.40)	0.000 (0.37)
$1992 liabilities (*$10^8$)		0.000 (0.61)	0.000 (1.11)	0.000 (1.04)	0.000 (1.17)
Owner years of experience		-0.003 (2.59)	-0.001 (1.30)	-0.002 (1.55)	-0.002 (1.72)
Owner share of business		0.001 (1.91)	0.000 (0.71)	0.000 (0.26)	0.000 (0.30)
Owner 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
Geographic Division (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 5.1.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. (2) "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. (3) "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 5.9. Determinants of Loan Denial Rates—SATL Division

	(1)	(2)	(3)	(4)	(5)
African American	0.452 (9.85)	0.289 (5.94)	0.239 (4.88)	0.235 (4.61)	0.252 (4.72)
Asian/Pacific Islander	0.223 (3.98)	0.180 (3.19)	0.142 (2.51)	0.123 (2.11)	0.125 (2.11)
Native American	0.007 (0.05)	-0.132 (0.94)	-0.094 (0.67)	-0.047 (0.31)	-0.079 (0.52)
Hispanic	0.104 (1.91)	0.047 (0.88)	0.051 (0.95)	0.021 (0.40)	0.014 (0.25)
Nonminority female	0.089 (2.45)	0.055 (1.51)	0.060 (1.65)	0.044 (1.18)	0.042 (1.10)
African American*SATL	-0.027 (0.35)	-0.009 (0.11)	-0.013 (0.16)	0.002 (0.02)	-0.030 (0.39)
Asian/Pacific Islander*SATL	0.011 (0.06)	-0.069 (0.44)	-0.011 (0.06)	-0.018 (0.10)	-0.052 (0.31)
Native American*SATL					
Hispanic*SATL	0.114 (0.94)	0.107 (0.85)	0.079 (0.61)	0.073 (0.56)	0.095 (0.71)
Nonminority female*SATL	-0.006 (0.07)	-0.035 (0.43)	-0.062 (0.80)	-0.042 (0.51)	-0.050 (0.61)
SATL division	-0.009 (0.270)	0.012 (0.34)	0.015 (0.43)	0.042 (0.98)	0.046 (1.07)
Creditworthiness Controls (4 variables)	No	Yes	Yes	Yes	Yes
Owner 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
Geographic Division (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 5.1.

Note: Creditworthiness controls are those used in Table 5.8 above.

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, 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.[105]

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 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 quite 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 only shortcoming that we have identified in the 1993 NSSBF data is that less detail is available on the finances of the owner of the firm, as opposed to the firm itself.[106] Although our 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 (as opposed to those of the firm). These factors would be necessary to identify whether the business owner has sufficient personal resources to draw upon should the business encounter

[105] An example of a typical application form is presented as Appendix B in Blanchflower, Levine, and Zimmerman (2003).

[106] This 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.

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 in the 1993 NSSBF dataset may introduce a bias into our analysis if African American business owners have fewer resources than nonminority business owners. As we will see below, however, and as noted in the previous footnote, this deficiency is rectified in the 1998 and 2003 SSBF datasets, with little change in the main findings.

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.[107] 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 one 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.[108]

Results from these analyses provide no indication that omitting the owner's personal wealth substantially biases the results presented above in Tables 5.8 and 5.9. Estimates presented in row numbers 1 through 8 of Table 5.10 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.

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[107] As reported earlier, the mean and median size of firms is 5.5 and 31.6 full-time equivalent workers, respectively. Fourteen percent of firms have one or fewer employees and 27 percent have two or fewer employees. In the SATL, the mean and median size of firms is 6.0 and 34.3 full-time equivalent workers, respectively. Twelve percent of firms have one or fewer employees and 26 percent have two or fewer employees.

[108] 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 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 similarly insulates the bank from the need to seek repayment directly from the owner.

Another issue is whether the racial differences in loan denial rates among firms with similar characteristics can be attributable 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 negatively 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.[109]

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 approval 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 5.10, reject the hypothesis that differences in loan denial rates are attributable to different propensities to locate in the center of a city. Estimates 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 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.

[109] A strong test to distinguish between statistical discrimination and "Becker-Type" discrimination (referring to the standard economic model of discrimination first expounded by University of Chicago economist Gary Becker) 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.

Table 5.10. Alternative Models of Loan Denials

Specification	African American	African American* SATL	Asian/ Pacific Islander	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 5.1.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. (2) Each line of this table represents a separate regression with the same control variables as Column 3 of Table 5.8. (3) The dependent variable in all specifications represents an indicator for whether or not a loan application was denied. (4) Control for SATL also included.

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 5.1 and 5.2, 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 5.8 and 5.9 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 5.10, 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/Pacific Islander-owned firms and nonminority female-owned firms with clean credit histories, 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 more likely that the race of the applicant is unknown 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/Pacific Islander and Hispanic applicants, it is possible that surname does provide such a signal, albeit a somewhat noisy 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 nonminorities 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.[110]

In Tables 5.11 and 5.12, 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

[110] It appears that race may also rarely be known to those institutions that issue credit ratings. As we mentioned above, Cavalluzo, Cavalluzo and Wolken (2002) 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 sometimes 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 minority- and women-owned businesses for merging with Dun & Bradstreet's data.

differences across firms.[111] 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- and Pacific Islander-owned firms are less likely to access business credit cards.

Table 5.11. Models of Credit Card Use–USA

Specification	African American	Asian/ Pacific Islander	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 5.1.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. (2) Each line of this table represents a separate regression with the same control variables as Column 3 of Table 5.8 but excluding the loan characteristics. (3) The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. (4) In all specifications, the sample size is all firms. (5) Other races are excluded due to sample size limitations.

Table 5.12. Models of Credit Card Use–SATL

Specification	African American	Asian/ Pacific Islander	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 5.1.

Notes: See Table 5.11. Control for SATL included.

F. 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

[111] 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 division, the figures are 29 percent and 36 percent, respectively.

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:

$$I_i = \beta_0 + \beta_1 CW_i + \beta_2 X_i + \beta_3 R_i + \beta_4 LC_i + \varepsilon_i, \quad (2)$$

where I represents the interest rate charged on the loan, LC represents characteristics of the loan (see the notes to Table 5.8 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 interest rate to be even greater if those firms were included in the sample. We overlook 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 5.13, which includes the complete set of control variables comparable to those in Column 5 of Table 5.8. Estimates indicated that African American-owned firms pay rates of interest that are roughly one percent (100 basis points) 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.[112]

The remainder of the table presents similar specification checks to those reported in Table 5.10. 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

[112] 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.

statistically significantly higher interest rates. Overall, the evidence presented indicates that African Americans, and to a lesser extent Hispanics and Asians/Pacific Islanders, do face disadvantages in the market for small business credit that does not appear to be attributable to differences in geography or creditworthiness.

Table 5.13. Models of Interest Rate Charged—USA

Specification	African American	Asian/ Pacific Islander	Native American	Hispanic	Non-minority Female	Sample Size
1) All loans (controls as in Column 5, Table 5.8)	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 (0.90)	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 5.1.

Notes: (1) Reported estimates are Ordinary Least Squares (OLS) coefficients, t-statistics in parentheses. (2) Each line of this table represents a separate regression with all of the control variables as Column 5 of Table 5.8 (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. (3) The sample consists of firms that had applied for a loan and had their application approved. (4) "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 5.14 shows results for the SATL. Findings are similar to those observed for the nation as a whole.

Table 5.14. Models of Interest Rate Charged—SATL

Specification	African American	African American * SATL	Asian/ Pacific Islander	Native American	Hispanic	Non-minority Female	Sample Size
1) All loans (controls as in Column 5, Table 5.8)	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 5.1.

Notes: See Table 5.13.

G. 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 nonminorities 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 5.15 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 characteristics of firms, and the results indicate that African American- and Hispanic-owned firms are 41 and 24 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 5.15 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, 5, and 16 percentage points still exists for African American-owned, Asian/Pacific Islander-owned 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, African American-owned firms and Hispanic-owned firms were far more likely to report prejudice as the reason (19 percent and 8 percent, respectively, compared to less than 3 percent for nonminority-owned firms).[113] Results obtained in section (b) of Table 5.15 for the SATL division are very similar to those found for the nation as a whole. As section (c) of Table 5.15 shows, African American-owned firms in construction also appear to be fearful of applying because of the possibility of their application being turned down.[114]

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 5.8 and 5.9) 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

[113] 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.

[114] It was not possible to report separate construction results in earlier tables because of small sample sizes.

correct representation of the disadvantage faced by minority-owned firms is $[\eta\theta^m + (1-\eta)\,\psi^m] - \theta^w$, 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.

Table 5.15. Racial Differences in Failing to Apply for Loans Fearing Denial

Specification	African American	Asian/ Pacific Islander	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 5.8, 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 5.8, 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 5.8, 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 5.1.

Notes: (1) Reported estimates are Probit derivatives, t-statistics in parentheses. (2) Sample consists of all firms. (3) Dependent variable equals one if the firm said they did not apply for a loan fearing denial, zero otherwise.

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.[115]

[115] 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.

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 5.10 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 5.16, are consistent with the previous analysis; we find that selection is not much of an issue for African American-owned firms nationally, Asian/Pacific Islander-owned firms nationally, or in the SATL division. 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 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, *e.g.,* Table 5.8, Column 5). Among the pool of firms seeking additional credit, however, Hispanic-owned firms are 17 percentage points more likely to be denied access to credit, and 16 percentage points more likely in the SATL, and these differences are statistically significant.

Table 5.16. Models of Failure to Obtain Credit Among Firms that Desired Additional Credit

Specification	African American	Asian/ Pacific Islander	Native American	Hispanic	Non-minority Female
a) USA					
No Other Control Variables (n=2,647)	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 5.8, Column 3 except for loan characteristics) (n=2,644)	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=2,647)	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 5.8, Column 3 except for loan characteristics) (n=2,644)	0.268 (5.85)	0.175 (3.16)	-0.018 (0.12)	0.159 (3.10)	0.083 (2.15)

Source: See Table 5.1.

Notes: (1) Reported estimates are Probit derivatives, t-statistics in parentheses. (2) The sample consists of all firms that applied for loans along with those who needed credit, but did not apply for fear of refusal. (3) Failure to obtain credit includes those firms that were denied and those that did not apply for fear of refusal. (4) Dependent variable is set to one if the firm failed to obtain credit and to zero if the firm applied for credit and had their loan application approved.

H. Analysis of Credit Market Discrimination in the U.S. 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.[116] This section updates the 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, African American-owned firms in the 1998 survey report that the biggest problem their firm currently faces is "financing and interest rates." (Table 5.17). In the 1993 survey, respondents were asked to report problems in the preceding 12 months (Tables 5.3 and 5.4) and over the next 12 months (Tables 5.5 and 5.6). Interestingly, even though credit availability was by far the most important category for African Americans (21 percent in Table 5.5), interest rates were relatively unimportant (2 percent). The 1998 SSBF, however, did not report separate categories.

[116] 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.

Table 5.17. What is the Most Important Problem Facing Your Business Today?

	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=3,561).

Note: Results are weighted.

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.[117]

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 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/Pacific Islanders, 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 survey 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/Pacific Islanders, 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.

[117] Information on home and non-home equity or on the Dun & Bradstreet credit rating was not available in the 1993 survey.

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 nonminorities, 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 nonminorities stated prejudice was the reason, whereas among minorities the figure was 6.8 percent.

In Tables 5.8 and 5.9, 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 5.18 and 5.19 using data from the 1998 SSBF. Column 1 in Table 5.18 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 5.18, Column 5, Hispanic-owned firms have a 17.1 percentage point higher probability of being denied than nonminority male-owned firms. In Table 5.8, 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 worsened during the late 1990s.

Table 5.18. Determinants of Loan Denial Rates—USA

	(1)	(2)	(3)	(4)	(5)
African American	0.422 (7.94)	0.254 (5.36)	0.217 (5.05)	0.192 (4.52)	0.218 (4.74)
Asian/Pacific Islander	0.148 (2.54)	0.129 (2.52)	0.049 (1.25)	0.023 (0.65)	0.028 (0.77)
Hispanic	0.353 (6.44)	0.269 (5.37)	0.211 (4.69)	0.183 (4.21)	0.171 (4.00)
Nonminority female	0.087 (2.22)	0.049 (1.55)	0.024 (0.96)	0.016 (0.66)	0.011 (0.44)
Judgments		0.272 (4.28)	0.249 (4.32)	0.272 (4.47)	0.262 (4.20)
Firm delinquent		0.081 (2.88)	0.115 (4.20)	0.103 (3.88)	0.111 (4.01)
Personally delinquent		0.092 (2.85)	0.039 (1.59)	0.042 (1.69)	0.045 (1.76)
Bankrupt past 7 years		0.504 (4.48)	0.406 (3.83)	0.392 (3.67)	0.395 (3.64)
\$1998 sales (*10^8)		-0.000 (2.47)	-0.000 (0.26)	0.000 (0.02)	0.000 (0.03)
\$1998 firm equity (*10^8)		0.000 (1.40)	0.000 (0.46)	0.000 (0.20)	0.000 (0.06)
Owner home equity (*10^8)		0.000 (0.52)	0.000 (1.47)	0.000 (0.96)	0.000 (0.90)
Owner net worth (*10^8)		-0.000 (1.25)	-0.000 (1.28)	-0.000 (1.19)	-0.000 (1.24)
Owner years of experience		-0.002 (1.42)	-0.001 (0.49)	-0.000 (0.34)	-0.000 (0.21)
Owner share of business		0.000 (0.75)	-0.000 (0.12)	0.000 (0.03)	-0.000 (0.33)
Dun & Bradstreet credit ratings (4 variables)	No	Yes	Yes	Yes	Yes
Owner 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
Geographic Division (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 5.17.

Notes: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. (2) "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. (3) "Characteristics of the loan" includes the size of the loan applied for.

Table 5.19. Determinants of Loan Denial Rates—SATL

	(1)	(2)	(3)	(4)	(5)
African American	0.471 (7.46)	0.318 (5.38)	0.236 (4.59)	0.217 (4.16)	0.243 (4.35)
Asian/Pacific Islander	0.189 (3.00)	0.162 (2.89)	0.072 (1.65)	0.041 (1.05)	0.048 (1.17)
Hispanic	0.381 (6.27)	0.309 (5.46)	0.251 (4.79)	0.223 (4.32)	0.209 (4.13)
Nonminority Female	0.074 (1.69)	0.049 (1.39)	0.021 (0.75)	0.012 (0.45)	0.004 (0.16)
African American*SATL	-0.092 (1.42)	-0.072 (1.65)	-0.029 (0.63)	-0.028 (0.64)	-0.027 (0.60)
Asian/Pacific Islander* SATL					
Hispanic* SATL	-0.080 (0.96)	-0.070 (1.32)	-0.051 (1.28)	-0.047 (1.20)	-0.046 (1.20)
Nonminority female* SATL	0.050 (0.53)	-0.011 (0.18)	0.001 (0.02)	0.006 (0.11)	0.017 (0.29)
SATL division	0.043 (0.94)	0.041 (1.05)	0.040 (1.19)	0.006 (0.13)	0.011 (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
Geographic Division (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 5.17.

Notes: (1) t-statistics in parentheses. (2) Other creditworthiness controls are the four other variables included in Column 2 of Table 5.18.

Table 5.19 focusing on the SATL division yields similar results—showing significantly larger denial probabilities for African American- and Hispanic-owned firms (24.3 percent and 20.9 percent, respectively) than for nonminority male-owned firms. The SATL indicator was not significant in Table 5.19. None of the interaction terms between SATL and race, ethnicity or gender were significant either, indicating that the 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 Dun & Bradstreet credit rating in five categories (low, moderate, average, significant and high) indicating the likelihood of loan default.[118]

Despite the fact that these new variables do help to predict loan denials,[119] the estimated race differences including these variables are unchanged from those reported above.[120] 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 5.18 and 5.19 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–*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 5.20 replicates Column 1 of Table 5.18 using *denylast* as the dependent variable with the smaller sub-sample. African Americans, Hispanics, Asians/Pacific Islanders, and nonminority females are all confirmed to face higher denial rates than nonminority males using this specification. For

[118] 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.

[119] 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 the same when a control for SATL was also included.

[120] This confirms the findings of Cavalluzzo, Cavalluzzo and Wolken (2002) who performed a similar exercise with the 1993 data.

African Americans and Hispanics, the difference is 46 and 36 percentage points, respectively. For Asians/Pacific Islanders, the difference is 19 percentage points, and for nonminority females, 8 percentage points.

Table 5.20. More Loan Denial Probabilities

	(1)	(2)	(3)	(4)
	Denylast	*Denylast*	*Denylast*	*Denylast*
African American	0.457 (8.00)	0.246 (4.76)	0.499 (7.42)	0.271 (4.32)
Asian/Pacific Islander	0.185 (2.81)	0.027 (0.65)	0.231 (3.25)	0.043 (0.93)
Hispanic	0.360 (6.28)	0.171 (3.67)	0.385 (6.07)	0.206 (3.79)
Nonminority female	0.083 (2.00)	0.005 (0.20)	0.068 (1.48)	0.001 (0.04)
African American*SATL			-0.091 (1.21)	-0.028 (0.53)
Asian/Pacific Islander*SATL				
Hispanic*SATL			-0.078 (0.82)	-0.051 (1.06)
Nonminority female*SATL			0.058 (0.57)	0.011 (0.16)
SATL			0.043 (0.87)	0.025 (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
Geographic Division	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 5.18.

Results consistent with discrimination are confirmed for African American-owned firms and Hispanic-owned firms in Column (2) of Table 5.20 when a host of demographic and financial characteristics and geographic and industry indicators are included. When interaction terms for the SATL division are added to the model as in Columns (3) and (4), results for African Americans and Hispanics remain statistically significant. Moreover, the results for minority-owned firms and nonminority female-owned firms remain statistically significant. The SATL indicator is not significant in any of the specifications, nor are the interaction terms between SATL and race, ethnicity, or gender.

4. Differences in Interest Rates, Credit Card Use, and Failure to Apply for Fear of Denial

Tables 5.21 through 5.23 provide confirmation from the 1998 survey of a number of other results from the 1993 survey reported above.

Table 5.21, which is similar to Tables 5.13 and 5.14, finds that conditional on obtaining a loan, African American-owned firms are charged a higher price for their credit—on average 1.06 percentage points nationally and 1.18 percentage points in the SATL.

Table 5.22, which is similar to Table 5.15, shows that African American-owned firms are much more likely not to apply for a loan for fear that 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 sector. There is some evidence of this phenomenon for Hispanic-owned firms nationally as well.

Finally, Table 5.23, which is comparable to Tables 5.11 and 5.12, 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 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 earlier 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/Pacific Islanders, as well. This is an important market failure, and one which government agencies such as the City of Baltimore cannot ignore if they are to avoid passive participation in a discriminatory market area.

Table 5.21. Models of Interest Rate Charged

Specification	African American	African American* SATL	Asian/ Pacific Islander	Hispanic	Non-minority Female
1a) All Loans (as in Column 5 of Table 5.18) n=765	1.064 (2.66)	–	–	0.559 (1.49)	-0.088 (0.23)
1b) All Loans (as in Column 5 of Table 5.19) n=765	1.177 (2.22)	-0.407 (0.49)	0.251 (0.25)	0.639 (1.50)	-0.152 (0.30)

Source: See Table 5.18.

Notes: (1) Each line of this table represents a separate regression with all of the control variables. (2) The sample consists of firms that had applied for a loan and had their application approved.

Table 5.22. Racial Differences in Failing to Apply for Loans Fearing Denial

Specification	African American	Asian/ Pacific Islander	Hispanic	Non-minority 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 division				
No Other Control Variables (n=565)	0.389 (7.00)	-0.001 (0.01)	0.122 (1.71)	0.080 (1.58)
Full Set of Control Variables (n=560)	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 5.18.

Notes: (1) Reported estimates are Probit derivatives with t-statistics in parentheses. (2) Full set of control variables as in Column 5 of Table 5.18, except for loan amount, year of application, and type of lender.

Table 5.23. Models of Credit Card Use

Specification	African American	Asian/ Pacific Islander	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 5.18.

Notes: (1) Each line of this table represents a separate regression with the same control variables as Column 5 of Table 5.18, except for loan amount, year of application, and type of lender. (2) The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. (3) In all specifications, the sample size includes all firms. (4) Reported estimates are Probit derivatives with t-statistics in parentheses.

I. Analysis of Credit Market Discrimination in the U.S. 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.[121] This is the fourth and final survey of U.S. small businesses conducted by the Board of Governors since 1987.[122] The survey gathered data from 4,072 firms selected to be representative of small businesses operating in the U.S. 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 number of employees varied from zero to 486 with a weighted median of 3.0 and weighted mean of 8.6.

[121] *See* www.federalreserve.gov/pubs/oss/oss3/ssbf03/ssbf03home.html.

[122] The Federal Reserve Board cancelled the SSBF subsequent to the completion of the 2003 wave, ostensibly for financial reasons. *See* Robb (2010).

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.[123]

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.[124] Although the population weights were adjusted to accommodate these changes, even these weighted percentages are significantly smaller for minorities in 2003 than in 1998.[125]

Mach and Wolken (2006) reported using these data 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/Pacific Islanders each held roughly constant at 4 percent; 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. 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 remainder of this section presents our findings from this analysis.[126]

1. Qualitative Evidence

Table 5.24 reports the results of asking business owners for the most important problem currently facing their firm. Consistent with the surveys in earlier years, firms owned by minority and women-owned firms 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.

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[123] *See* fn. 82, above.

[124] The impact on women was not as pronounced. Females were 23.3 percent in 1998 and 20.9 percent in 2003. For nonminority females, the figures are 17.8 percent in 1998 and 18.2 percent in 2003.

[125] Mach and Wolken (2006, Table 2) report that weighted figures for Blacks 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.

[126] 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.

Table 5.24. What is the Most Important Problem Facing Your Business Today?

	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 or profitability	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 insurances	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%
None	5.3%	3.4%	9.4%	4.1%	8.6%	6.0%
Cash flow	6.2%	5.1%	4.6%	7.1%	6.8%	6.3%
Growth	0.9%	2.7%	0.4%	1.1%	0.8%	1.0%
Foreign competition	1.3%	0.0%	1.0%	0.1%	0.7%	1.0%
Competition - other	1.6%	0.8%	1.8%	0.1%	1.1%	1.4%
Availability of materials/resources	0.8%	0.8%	0.6%	1.6%	1.2%	0.9%
Labor problems other than cost or quality	1.2%	2.2%	0.2%	0.0%	1.3%	1.1%
Internal management/administrative problems	4.2%	2.5%	4.3%	1.0%	6.1%	4.4%
Environmental constraints	1.4%	0.7%	1.6%	2.3%	2.0%	1.6%
Advertising and public awareness	2.2%	1.8%	2.4%	1.8%	3.3%	2.4%
Market/economic/industry factors	4.9%	1.9%	4.0%	2.3%	6.2%	4.8%
Health care cost and availability	1.5%	0.0%	0.7%	0.8%	1.4%	1.4%
Energy costs	1.5%	0.0%	0.7%	3.7%	1.2%	1.4%
Costs other than health care and energy	2.2%	1.0%	0.1%	3.6%	1.0%	1.9%
Owner's personal problems	0.3%	0.0%	0.0%	0.0%	0.8%	0.4%
Technology	0.4%	0.0%	0.7%	0.0%	0.5%	0.4%
Dealing with insurance companies	0.3%	0.4%	0.0%	0.0%	0.4%	0.3%
War and September 11th	0.2%	0.0%	1.3%	0.0%	0.5%	0.3%

Source: NERA calculations from the 2003 SSBF (n=4,072).

Note: Results are weighted.

2. Differences in Loan Denial Rates by Race/Ethnicity

Tables 5.25 and 5.26 present estimates of loan denial probabilities for the nation as a whole and for the SATL division using a regression model comparable to that used with the 1993 and 1998 survey waves.[127]

Column (1) in Table 5.25 (comparable to Table 5.8 for 1993 and 5.18 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 into account the 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 for Native American and Other minority groups are not significant, however.

Table 5.26 (comparable to Table 5.9 for 1993 and 5.19 for 1998) focuses on the SATL division and yields similar results—showing significantly larger denial probabilities for African American-owned firms than for nonminority male-owned firms, persisting even after the addition of all of the control variables. The SATL indicator as well as the race and gender interaction terms with the SATL are also insignificant.

[127] 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.

Table 5.25. Determinants of Loan Denial Rates—USA

	(1)	(2)	(3)	(4)	(5)
African American	0.459 (8.38)	0.136 (5.47)	0.105 (4.80)	0.091 (5.04)	0.094 (4.95)
Asian/Pacific Islander	0.055 (1.51)	0.020 (1.59)	0.009 (1.01)	0.002 (0.49)	0.001 (0.18)
Hispanic	0.067 (1.74)	0.008 (0.83)	0.004 (0.58)	0.001 (0.30)	0.001 (0.25)
Native American and Other	0.184 (2.22)	0.061 (1.95)	0.032 (1.47)	0.021 (1.43)	0.021 (1.49)
Nonminority female	0.043 (2.17)	0.003 (0.70)	0.002 (0.49)	0.001 (0.57)	0.002 (0.76)
Judgments against owner		0.007 (0.66)	0.003 (0.35)	0.003 (0.54)	0.006 (0.90)
Judgments against firm		0.005 (1.16)	0.005 (1.42)	0.001 (0.54)	0.001 (0.64)
Firm delinquent		0.032 (3.78)	0.021 (3.23)	0.019 (3.89)	0.021 (4.08)
Personally delinquent		-0.007 (0.69)	-0.006 (1.02)	-0.003 (0.82)	-0.002 (0.58)
Owner Bankrupt past 7 years		0.046 (1.36)	0.041 (1.35)	0.052 (1.81)	0.044 (1.66)
Firm Bankrupt past 7 years		0.000 (0.03)	0.003 (0.37)	0.001 (0.17)	-0.001 (0.38)
\$1998 sales (*10^8)		-0.000 (1.68)	0.000 (0.04)	0.000 (0.29)	0.000 (0.51)
\$1998 firm equity (*10^8)		-0.000 (2.23)	-0.000 (1.03)	-0.000 (1.62)	-0.000 (1.63)
Owner home equity (*10^8)		0.000 (0.28)	0.000 (0.02)	-0.000 (0.45)	-0.000 (0.26)
Owner net worth (*10^8)		-0.000 (2.97)	-0.000 (2.92)	-0.000 (3.06)	-0.000 (3.26)
Owner years of experience		0.000 (0.31)	0.000 (1.00)	0.000 (0.82)	0.000 (0.62)
Owner share of business		0.000 (0.08)	0.000 (0.61)	0.000 (0.38)	0.000 (0.47)
Dun & Bradstreet credit ratings (4 variables)	No	Yes	Yes	Yes	Yes
Owner 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
Geographic Division (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 5.26. Notes: (1) "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. (2) "Characteristics of the loan" includes the size of the loan applied for.

Table 5.26. Determinants of Loan Denial Rates—SATL

	(1)	(2)	(3)	(4)	(5)
African American	0.412 (6.44)	0.111 (4.18)	0.088 (3.74)	0.082 (4.05)	0.083 (4.05)
Asian/Pacific Islander	0.051 (1.31)	0.016 (1.24)	0.007 (0.80)	0.001 (0.26)	-0.000 (0.00)
Hispanic	0.030 (0.70)	-0.002 (0.22)	-0.002 (0.23)	-0.002 (0.59)	-0.002 (0.63)
Native and Other	0.206 (2.34)	0.062 (1.94)	0.035 (1.50)	0.022 (1.43)	0.022 (1.50)
Nonminority female	0.054 (2.39)	0.004 (0.70)	0.002 (0.55)	0.002 (0.63)	0.002 (0.96)
African American*SATL	0.053 (0.78)	0.018 (0.81)	0.011 (0.61)	0.003 (0.34)	0.003 (0.35)
Asian/Pacific Islander*SATL	0.025 (0.27)	0.018 (0.55)	0.010 (0.38)	0.009 (0.49)	0.009 (0.50)
Hispanic-Other*SATL	0.093 (1.04)	0.067 (1.55)	0.032 (1.16)	0.032 (1.39)	0.034 (1.40)
Native-Other*SATL					
Nonminority female*SATL	0.054 (2.39)	0.004 (0.70)	-0.002 (0.19)	-0.001 (0.25)	-0.002 (0.57)
SATL division	0.010 (0.51)	-0.002 (0.35)	-0.001 (0.32)	-0.001 (0.32)	-0.001 (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
Geographic Division (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 5.24.

Notes: (1) t-statistics in parentheses. (2) Creditworthiness controls include presence of legal judgments against the firm during the previous 3 years, more than 60 days delinquent on any personal obligations of the firm's owner during the previous 3 years, more than 60 days delinquent on any business obligations of the firm during the previous 3 years, and declaration of owner of firm bankruptcy during the previous 7 years. (3) 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. (4) For other variables, see notes for Table 5.25.

3. Differences in Interest Rates, Credit Card Use, and Failure to Apply for Fear of Denial

Table 5.27 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 5.13 and 5.14 for 1993 and Table 5.21 for 1998). As was found in earlier surveys, African American business owners are hurt here as well since they have to pay, 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 than their nonminority male counterparts.

Table 5.27 shows that the loan price differential is present for African American and Hispanic business owners in the SATL as well. For African American-owned firms, the differential is 1.1 percentage points. For Hispanics, the differential is 1.04 percentage points.

Table 5.28 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 5.11 and 5.12 for 1993 and Table 5.23 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.

Table 5.27. Models of Interest Rate Charged

Specification	African American	African American * SATL	Asian/ Pacific Islander	Hispanic	Hispanic * SATL	Native and Other	Non-minority Female
1a) All Loans (as in Column 5 of Table 5.25) n=1,537	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 5.26) n=1,537	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 5.24.

Notes: (1) Each line of this table represents a separate regression with all of the control variables as indicated. (2) 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. (3) The sample consists of firms that had applied for a loan and had their application approved.

Table 5.28. Models of Credit Card Use

Specification	African American	Asian/ Pacific Islander	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 5.24.

Notes: (1) Each line of this table represents a separate regression with the same control variables as Column 5 of Table 5.27, except for loan amount, year of application, and type of lender. (2) The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. (3) In all specifications, the sample size is all firms. (4) Reported estimates are Probit derivatives with t-statistics in parentheses.

Finally, consistent with earlier results, Table 5.29 (comparable to Tables 5.15 for 1993 and 5.22 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 the construction sector, the trend is even more pronounced at 30 percentage points. Nationally, and in the SATL, there is evidence of this phenomenon for nonminority female business owners as well.

Table 5.29. Racial Differences in Failing to Apply for Loans Fearing Denial

Specification	African American	Asian/ Pacific Islander	Hispanic	Native American and Other	Non-minority Female
a) USA					
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 division					
No Other Control Variables (n=3,694)	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=3,666)	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 5.24.

Notes: (1) Reported estimates are Probit derivatives with t-statistics in parentheses. (2) Full set of control variables as in Column 5 of Table 5.27, except for loan amount, year of application, and type of lender. (3) In Panel (b), interaction terms between race, gender, and SATL were all insignificant.

J. Further Analysis of Credit Market Discrimination: NERA Surveys 1999-2007

NERA has conducted local credit market surveys at nine other times and places since 1999. These include the Chicago metropolitan area in 1999, the State of Maryland in 2000, 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 (again) in 2005, 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.

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 5.30, and are remarkably similar to results seen in Tables 5.8-5.9, 5.18-5.19, and 5.25-5.26. 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 (9-19 percentage points higher).

Finally, as shown in Table 5.31, 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 5.13-5.14, 5.21 and 5.27. 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.

Table 5.30. 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/Pacific Islander	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 3 years	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: (1) Reported estimates are derivatives from Probit models, t-statistics are in parentheses. (2) Indicator variables are also included for the various jurisdictions.

Table 5.31. Determinants of Interest Rates—Nine Jurisdictions

	(1)	(2)
African American	1.683 (3.44)	1.491 (2.98)
Asian/Pacific Islander	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 3 years		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 5.30.

Notes: (1) Reported estimates are OLS regression models, t-statistics are in parentheses. (2) 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 were included. (3) Seven additional indicators for jurisdiction were also included.

K. Conclusions and Results from More Recent Analyses

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/Pacific Islander-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 of 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. Additionally, 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 U.S. Throughout, we have consistently found that African Americans 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 that 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 do 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 are considerably smaller than those observed in this study regarding business credit.[128]

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

[128] In the Boston Fed study, 10 percent of White 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 White males and between 50.0 and 65.9 percent for African American-owned firms (depending on which NSSBF or SSBF survey is used).

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.

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.[129]

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 consistent that African American-owned firms and other M/WBE firms 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.

As noted above, the Federal Reserve discontinued the SSBF as of 2003 and the most recent NERA survey on the topic was conducted in 2007. Economist Alicia Robb, in her article "Beyond the Late, Lamented Survey of Small Business Finance,"[130] notes:

> "A few years ago, the [SSBF], the main source of data on small business financing, was cancelled by the Federal Reserve Board. The SSBF had provided detailed information on the use of credit and other financial services by small businesses every five years

[129] The gap in denial rates between African Americans and nonminorities with similar characteristics is between 34-46 percentage points in the small business credit market compared with 7 percentage points in the mortgage market.

[130] Robb, A. (2010).

> beginning in 1987. There are no data available after 2003. The Federal Reserve stated the survey was cancelled for financial reasons and the survey had been conducted four times in varying economic conditions. Yet, less than a year after the cancellation, the worst financial crisis hit the United States since the Great Depression. Unfortunately, the nation now has no demand-side data to investigate the impact of this financial crisis on small business financing or firm performance. …. It is ironic that a survey that could shed light on the impact of a financial crisis on the state of small business financing was cancelled due to budgetary concerns when the government has spent hundreds of billions of dollars on other matters arising from the crisis. The survey cost about $6 million dollars over a five-year survey period, more of a rounding error to the Fed than a significant investment. What a pity that we have no data for 2008—a year of great interest for policy purposes."

Given this, what, if anything, can we say about evidence of M/WBE disparities in access to capital and credit since the 2003-2007 Period? Although adverse impact of the loss of the SSBF cannot be overstated, Dr. Robb herself has endeavored to partially fill the void using data from a unique data set known as the Kaufman Firm Survey (KFS), which follows a sample of small businesses from 2004 through 2010, as well as other sources.

Key findings from Dr. Robb's 2012 article entitled "Access to Capital among Young Firms, Minority-owned Firms, Women-owned Firms, and High-tech Firms,"[131] include the following:

- Differences in asset levels are the largest single factor explaining racial disparities in business creation rates. Half of all Hispanic families in 2004 had less than $13,375 in wealth and half of all African American families in 2004 had less than $8,650 in wealth. These figures were 12 percent and 8 percent, respectively, of nonminority wealth levels.

- Research indicates that the level of startup capital is a strong predictor of business success.

- There is evidence that during times of financial distress, bank lending is curtailed, especially to firms that are inherently more risky, such as minority-owned and women-owned firms.

- During 2007-2010, young firms owned by African Americans, Hispanics, and other minorities (except Asians) were statistically significantly less likely than similarly situated nonminority firms to apply for credit when they needed it for fear of denial. Dr. Robb notes: "This is perhaps the clearest recent evidence of continued borrowing constraints for Black and Hispanic business owners in the United States. Women were also more likely than men to have this fear during the economic crisis."

- During 2007-2010, when they did apply for credit, African American, Hispanic, and other young minority firms were statistically significantly more likely to have their loans denied than nonminority owned firms with comparable levels of creditworthiness.

[131] Robb, A. (2012).

- Moreover, the magnitude of minority denials "increased dramatically" during the 2007-2010 period and through the financial crisis.

- Women-owned firms were also more likely to be denied than nonminority male firms with comparable creditworthiness levels in three of the four years studied, though the difference was only statistically significant in 2008.

Dr. Robb concludes:[132]

> "The multivariate findings indicate that … minority owners who did not apply for new loans were significantly more likely than their White counterparts to avoid applying for loans when needed because they were afraid that their loan applications would be declined by lenders. This is even after controlling for credit quality and a host of owner and firm characteristics. Women were also more likely than similar men not to apply for credit when it was needed for fear of having their loan application denied during the years of the economic crisis. The analysis showed that women and minority business owners' fears of being declined for a loan were not necessarily unwarranted. In particular, in terms of loan application outcomes, even after controlling for such factors as industry, credit score, legal form, and human capital, minority owners of young firms were significantly less likely to have their loan applications approved than were similar White business owners. Similarly, in 2008, women owners of new businesses were significantly less likely than men with similar credit profiles and legal forms of organization to be approved for loans. More generally, the results suggest that in the initial year of startup, Black- and Hispanic-owned businesses faced greater credit constraints than did their White and Asian counterparts. Similarly, women-owned businesses faced greater credit constraints than did similar startups owned by men during the years of the financial crisis."

Dr. Robb's findings are consistent with those reported above from the SSBF and from NERA's own surveys. There is no evidence to suggest that credit discrimination has lessened in the years since 2007. Indeed the available evidence suggests that credit discrimination has continued and, if anything, worsened during the recent financial crisis.

[132] *Ibid*.

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VI. M/WBE Utilization and Disparity in City of Baltimore Contracting Activity

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 IV and V documented the extent of disparity facing minority- and women-owned firms in the private sector of the City of Baltimore's market area, where contracting and procurement activity is typically *not* subject to such requirements. In this Chapter, we combined the evidence from Chapter III, which estimates M/WBE availability in the City's Market Area, with the Master Contract/Subcontract Database described in Chapter II in order to examine whether there is statistical evidence of disparities in public sector construction and consulting contracting activities supported by the City of Baltimore.

The statistical evidence reported in Chapter II has already established from which specific industries the City of Baltimore procures construction and consulting services 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 III has established what percentage of all firms in the City of Baltimore's geographic and product markets are M/WBEs.

This chapter will document:

- To what extent have M/WBEs been utilized in the contracting and subcontracting activities of the City of Baltimore during the study period.
- Whether M/WBEs have been utilized to the extent that they are available in the relevant market area.

Below, we report the M/WBE utilization results using two measures—dollars awarded and dollars paid. We report this information for construction, consulting, and for both categories combined. All results are reported by race and gender as well as for all M/WBEs combined, and cover the entire City of Baltimore market area.

B. M/WBE Utilization

For this Study, we examined 7,477 prime contracts or purchase orders and 4,736 associated subcontracts active during 2007-2012. These contracts and purchases had a total award value of $2.489 billion and a total payment value of $1.959 billion.[133]

[133] Payments on contracts that were not substantially complete at the time of the Study data collection were excluded from the paid dollar totals.

NAICS codes, M/WBE status, and detailed race and gender status for the prime contractors and subcontractors included in the Master Contract/Subcontract Database were established through extensive computer-assisted cross-referencing of firms in our database with firms in (a) the City of Baltimore certified M/WBE directory, (b) the master directory of M/WBEs assembled for this study, (c) Dun & Bradstreet, (d) company profiles drawn from Hoover's, American Business Information, Standard & Poor's, and other sources, and (e) the results of our race/gender misclassification/non-classification surveys.

From Tables 6.1 and 6.2 we see that, as a group during the study period, M/WBEs were awarded 34.22 percent and paid 37.75 percent of all contract and subcontract dollars in Construction; awarded 34.61 percent and paid 31.69 percent of all contract and subcontract dollars in AE-CRS; awarded 21.90 percent and paid 21.46 percent of all contract and subcontract dollars in Services; and awarded and paid 8.43 percent of all contract and subcontract dollars in CSE. Altogether, M/WBEs were awarded 24.62 percent and paid 23.81 percent of all contract and subcontract dollars during the study period. Among M/WBEs, firms owned by African Americans were awarded the largest fraction of contracting and subcontracting dollars, followed in descending order by firms owned by Asians/Pacific Islanders, nonminority females, Hispanics and Native Americans. For paid dollars, among M/WBEs, African American-owned firms received the largest share, followed by nonminority females, Hispanics, Asians/Pacific Islanders and Native Americans.

Table 6.1. M/WBE Utilization at the City of Baltimore (Dollars Awarded)

M/WBE Type	Procurement Category				
	Construction (%)	**AE-CRS** (%)	**Services** (%)	**CSE** (%)	**Overall** (%)
African American	14.96	6.98	12.30	4.33	10.35
Hispanic	9.44	0.32	1.30	0.24	3.60
Asian/Pacific Islander	1.97	22.64	3.21	1.17	5.33
Native American	2.30	0.00	0.09	0.00	0.79
Minority Total	28.67	29.94	16.90	5.74	20.07
Nonminority female	5.55	4.67	5.00	2.69	4.55
M/WBE Total	34.22	34.61	21.90	8.43	24.62
Non-M/WBE Total	65.78	65.39	78.10	91.57	75.38
Total (%)	100.00	100.00	100.00	100.00	100.00
Total ($)	831,339,375	390,992,888	641,029,665	626,037,253	2,489,399,181

Source: NERA Master Contract/Subcontract Database, 2007-2012.

Note: Figures are rounded. Rounding was performed subsequent to any mathematical calculations.

Table 6.2. M/WBE Utilization at the City of Baltimore (Dollars Paid)

M/WBE Type	Procurement Category				
	Construction (%)	AE-CRS (%)	Services (%)	CSE (%)	Overall (%)
African American	15.13	6.11	10.75	4.33	9.69
Hispanic	12.16	0.33	0.67	0.24	4.35
Asian/Pacific Islander	2.35	21.71	3.72	1.17	4.30
Native American	2.19	0.00	0.06	0.00	0.75
Minority Total	31.82	28.14	15.21	5.74	19.08
Nonminority female	5.92	3.55	6.26	2.69	4.73
M/WBE Total	37.75	31.69	21.46	8.43	23.81
Non-M/WBE Total	62.25	68.31	78.54	91.57	76.19
Total (%)	100.00	100.00	100.00	100.00	100.00
Total ($)	656,536,439	201,663,015	475,008,803	626,037,253	1,959,245,510

Source and Notes: See Table 6.1.

C. Disparity Analysis

1. Results by Major Procurement Category

To determine whether M/WBEs have been underutilized at the City of Baltimore, we should ideally examine public expenditures that were *not* subject to subcontracting goals. As a result of the M/WBE Program, however, the City of Baltimore has a longstanding policy of setting such goals in many of its contracting activities.

Given this, the City of Baltimore's own data may not show evidence of underutilization, even if such underutilization exists in the private sector of its relevant market area. This is especially true where M/WBE programs are well established. Instead, the City of Baltimore's own data is most informative for examining the effectiveness of its M/WBE policies during the study time period. On the other hand, if actual City of Baltimore M/WBE utilization still turns out to be significantly less than M/WBE availability in certain contracting categories, then the City's data will provide evidence of adverse disparities as well.

In this section, we compare our estimates of M/WBE utilization in the City of Baltimore's contracting and subcontracting activities to our estimates of M/WBE availability in the City's geographic and product market area. Tables 6.3 and 6.4 present the results of this comparison using dollars awarded and dollars paid, respectively, as the metric of utilization.

In each table, the figures in the utilization column include both prime contract and subcontract dollars and were derived as described above in this chapter. The figures in the availability column were derived as described in Chapter III. The disparity ratio, which appears in the final column of Tables 6.3 and 6.4, is derived by dividing utilization by availability and then multiplying the result by 100. A disparity ratio below 100 indicates that M/WBEs did not

participate in City of Baltimore contracting and subcontracting at a level that is consistent with their estimated availability in the relevant market area. A disparity ratio of 80 or lower is considered to be large, or substantively significant. A disparity ratio is said to be statistically significant if it is unlikely to be caused by chance alone. In the tables below, statistical significance is indicated by one or more asterisks to the right of the disparity ratio.

Overall, disparities were observed for firms owned by African Americans, nonminority females and M/WBEs as a group. Disparities for nonminority females were large and statistically significant. Disparities for M/WBEs as a group were statistically significant. In Construction, disparities were observed for firms owned by nonminority females. Disparities for nonminority females were large and statistically significant. In AE-CRS, disparities were observed for firms owned by African Americans, Hispanics, Native Americans and nonminority females. Disparities for African Americans (dollars paid only), Hispanics, Native Americans and nonminority females were large and statistically significant. In Services, disparities were observed for firms owned by African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, minorities as a group, nonminority females and M/WBEs as a group. Disparities for Native Americans, nonminority females and M/WBEs as a group were large and statistically significant. In CSE, which is the only major procurement area where it is generally not possible to set subcontracting goals (since subcontracting opportunities rarely exist on such contracts and purchases), large and statistically significant disparities were observed for every group—African Americans, Hispanics, Asians/Pacific Islanders, Native Americans, nonminority females, minorities as a group and M/WBEs as a group.

Table 6.3. Utilization, Availability, and Disparity Results for City of Baltimore Contracting, Overall and by Contracting Category (Dollars Awarded)

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
OVERALL			
African American	10.35	10.27	
Hispanic	3.60	1.89	
Asian/Pacific Islander	5.33	3.97	
Native American	0.79	0.33	
Minority	20.07	16.46	
Nonminority female	4.55	11.83	38.50 ****
M/WBE total	24.62	28.28	87.06 *
CONSTRUCTION			
African American	14.96	10.64	
Hispanic	9.44	2.11	
Asian/Pacific Islander	1.97	1.86	
Native American	2.30	0.32	
Minority	28.67	14.93	
Nonminority female	5.55	11.33	49.03 ****
M/WBE total	34.22	26.25	

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
AE-CRS			
African American	6.98	8.53	81.82
Hispanic	0.32	1.94	16.43 ****
Asian/Pacific Islander	22.64	6.31	
Native American	0.00	0.20	0.00 ****
Minority	29.94	16.99	
Nonminority female	4.67	10.65	43.87 ****
M/WBE total	34.61	27.64	
SERVICES			
African American	12.30	12.83	95.81
Hispanic	1.30	1.63	79.45
Asian/Pacific Islander	3.21	3.38	95.22
Native American	0.09	0.51	18.52 ****
Minority	16.90	18.35	92.11
Nonminority female	5.00	14.72	34.00 ****
M/WBE total	21.90	33.06	66.25 ****
CSE			
African American	4.33	9.56	45.31 ****
Hispanic	0.24	1.52	15.46 ****
Asian/Pacific Islander	1.17	3.56	32.77 ****
Native American	0.00	0.52	0.00 ****
Minority	5.74	15.16	37.83 ****
Nonminority female	2.69	11.24	23.98 ****
M/WBE total	8.43	26.40	31.93 ****

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 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). (2) An empty cell in the Disparity Ratio column indicates that no adverse disparity was observed for that category.

Table 6.4. Utilization, Availability, and Disparity Results for City of Baltimore Contracting, Overall and by Contracting Category (Dollars Paid)

Contracting Category & M/WBE Type	Utilization	Availability	Disparity Ratio
OVERALL			
African American	9.69	11.10	87.31
Hispanic	4.35	1.76	
Asian/Pacific Islander	4.30	3.63	
Native American	0.75	0.34	
Minority	19.08	16.83	
Nonminority female	4.73	12.85	36.79 ****
M/WBE total	23.81	29.68	80.21 ***
CONSTRUCTION			
African American	15.13	11.26	
Hispanic	12.16	2.06	
Asian/Pacific Islander	2.35	1.81	
Native American	2.19	0.33	
Minority	31.82	15.47	
Nonminority female	5.92	11.88	49.89 ****
M/WBE total	37.75	27.34	
AE-CRS			
African American	6.11	9.77	62.50 ****
Hispanic	0.33	1.64	20.29 ****
Asian/Pacific Islander	21.71	5.90	
Native American	0.00	0.17	0.00 ****
Minority	28.14	17.48	
Nonminority female	3.55	12.59	28.19 ****
M/WBE total	31.69	30.07	
SERVICES			
African American	10.75	13.41	80.17 *
Hispanic	0.67	1.57	42.56 ***
Asian/Pacific Islander	3.72	3.51	
Native American	0.06	0.45	14.17 ****
Minority	15.21	18.94	80.29 ***
Nonminority female	6.26	15.52	40.32 ****
M/WBE total	21.46	34.46	62.29 ****
CSE			
African American	4.33	9.56	45.31 ****
Hispanic	0.24	1.52	15.46 ****
Asian/Pacific Islander	1.17	3.56	32.77 ****
Native American	0.00	0.52	0.00 ****
Minority	5.74	15.16	37.83 ****
Nonminority female	2.69	11.24	23.98 ****
M/WBE total	8.43	26.40	31.93 ****

Source and Notes: See Table 6.3.

2. Detailed Industry Level Results

Utilization, availability, and disparity results comparable to those presented above in Tables 6.3 and 6.4 have also been produced according to detailed Industry Groups. In the interest of space, these tables are presented below in Appendix D.

D. Current Availability versus Expected Availability

Finally, Table 6.5 provides a comparison between current levels of M/WBE availability for the City of Baltimore 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 3.11, by the disparity ratios documented in column (3) of Table 4.12. 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.

With the exception of firms owned by Asians/Pacific Islanders in Services and in CSE, expected M/WBE availability in the City of Baltimore's market area exceeds current M/WBE availability by substantial margins in all cases.

Table 6.5. Current Availability and Expected Availability for City of Baltimore Contracting

Contracting Category & M/WBE Type	Award Dollar Weights		Paid Dollar Weights	
	Current Availability (%)	Expected Availability (%)	Current Availability (%)	Expected Availability (%)
OVERALL				
African American	10.27	14.72	11.26	16.14
Hispanic	1.89	2.28	2.06	2.49
Asian/Pacific Islander	3.97	3.50	1.81	1.60
Native American	0.33	0.47	0.33	0.47
Minority	16.46	24.35	15.47	22.89
Nonminority female	11.83	15.74	11.88	15.81
M/WBE total	28.28	40.78	27.34	39.43
CONSTRUCTION				
African American	10.64	16.58	9.77	15.23
Hispanic	2.11	3.40	1.64	2.64
Asian/Pacific Islander	1.86	2.36	5.90	7.49
Native American	0.32	1.99	0.17	1.06
Minority	14.93	22.59	17.48	26.44
Nonminority female	11.33	23.03	12.59	25.60
M/WBE total	26.25	43.68	30.07	50.04
AE-CRS				
African American	8.53	13.29	13.41	20.90
Hispanic	1.94	3.12	1.57	2.53
Asian/Pacific Islander	6.31	8.01	3.51	4.46
Native American	0.20	1.25	0.45	2.80
Minority	16.99	25.70	18.94	28.65
Nonminority female	10.65	21.65	15.52	31.55
M/WBE total	27.64	46.00	34.46	57.35
SERVICES				
African American	12.83	23.54	9.56	17.54
Hispanic	1.63	1.80	1.52	1.68
Asian/Pacific Islander	3.38	3.12	3.56	3.29
Native American	0.51	0.72	0.52	0.73
Minority	18.35	26.92	15.16	22.24
Nonminority female	14.72	19.81	11.24	15.13
M/WBE total	33.06	46.61	26.40	37.22
CSE				
African American	9.56	17.54	11.26	20.66
Hispanic	1.52	1.68	2.06	2.27
Asian/Pacific Islander	3.56	3.29	1.81	1.67
Native American	0.52	0.73	0.33	0.47
Minority	15.16	22.24	15.47	22.69
Nonminority female	11.24	15.13	11.88	15.99
M/WBE total	26.40	37.22	27.34	38.54

Source: See Tables 3.11 and 4.12.

VII. Anecdotal Evidence of Disparities in the City of Baltimore's Market Area

A. Introduction

We have presented a variety of economic and statistical findings above that are consistent with, and indicative of, the presence of business discrimination against minorities and women in the geographic and product markets that are relevant to the City of Baltimore's Construction, AE-CRS, Services and CSE activities. Chapters IV and V, in particular, have documented large and statistically significant adverse disparities in the City of Baltimore's relevant markets impacting minority and female entrepreneurs. In most cases, 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 anecdotal evidence of disparities in the City of Baltimore's market area. First, we conducted a large scale survey of business establishments in the market area—both M/WBE and non-M/WBE—and asked owners directly about their experiences, if any, with contemporary business-related acts of discrimination. We find that M/WBEs in the City of Baltimore's markets report suffering business-related discrimination in substantial numbers and often with statistically significantly greater frequency than non-M/WBEs (see Tables 7.3 and 7.4). These differences tend to remain statistically significant when firm size and owner characteristics are held constant (see Tables 7.5 and 7.6). 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 often are not hired—or even solicited—by these prime contractors to work on projects without M/WBE goals (see Tables 7.9 and 7.10). The relative lack of M/WBE hiring and, even more significantly, the relative lack of solicitation of M/WBEs in the absence of affirmative efforts by the City of Baltimore and other public entities in the relevant market area, shows that business discrimination continues to fetter M/WBE business opportunities. We conclude that the statistical evidence presented in this Study is consistent with these anecdotal accounts of contemporary business discrimination.

The remainder of this chapter is organized as follows. We first discuss the mail survey results in Section B. In Section B.1, we discuss the survey questionnaire, sample frame, and response rate. Section B.2 presents evidence on willingness of firms to do business with the public sector. Section B.3 presents the key findings from the M/WBE and non-M/WBE respondents concerning disparate treatment. Section B.4 presents the key findings concerning the impact of the regular business environment on M/WBEs' ability to conduct their businesses. Section B.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 B.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 C describes the results of the business experience group interviews. Responses are grouped under the headings of the most common cited barriers and issues facing businesses in the City of Baltimore's contracting market area.

B. Business Experience Surveys

1. Survey Questionnaire, Sample, and Responses

The survey questionnaire 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 City of Baltimore'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 using the custom census methodology outlined in this Chapter. Firms were sampled randomly within strata. M/WBE firms were oversampled to facilitate statistical comparisons with non-M/WBEs.[134] Of 13,035 businesses that received the questionnaire,[135] 1,221 (9.4 percent) provided usable responses.[136] The distribution of total responses according to the race and gender of the business owner, by major contracting category, appears in Table 7.1.

[134] *See* Chapter II for a discussion of how the product and geographic markets were defined. See Chapter III for a discussion of how the Master M/WBE Directory and the Baseline Business Universe were assembled.

[135] These figures exclude surveys that were returned undelivered or were otherwise undeliverable.

[136] The total number of valid responses to any particular survey question, however, was sometimes lower than this due to item non-response.

Table 7.1. Race, Gender and Contracting Category of Mail Survey Respondents

Group	Construction	AE-CRS	Services	CSE	Total
African American	51	22	159	12	244
Hispanic	23	2	22	3	50
Asian/Pacific Islander	5	24	39	12	80
Native American	4	1	7	1	13
Minorities with unknown Race/Ethnicity	0	0	0	0	0
Nonminority Women	73	61	192	46	372
M/WBE Total	156	110	419	74	759
Nonminority Men	173	140	110	39	462
Total	329	250	529	113	1,221

Source: NERA mail survey.

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.

As shown below in Table 7.2, there is an observable link between the firms responding to our mail survey and the public sector of the Baltimore area 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 City of Baltimore 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, 44 percent of non-M/WBEs and 51 percent of M/WBEs have worked or attempted to work for the City of Baltimore or some other public entity in the market area in the previous five years. For M/WBEs in Construction and AE-CRS, the figures are significantly higher than this, at 59 percent and 60 percent, respectively. For non-M/WBEs, these figures are significantly higher for AE-CRS (57%) and CSE (49%).

Table 7.2. 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 5 Years	African American	Hispanic	Asian/ Pacific Islander	Native American	Minority Total	Non-minority Female	M/WBE Total	Non-minority Male
ALL INDUSTRIES								
With City of Baltimore	47.1%	42.9%	26.6%	23.1%	41.5%	26.1%	34.0%	27.5%
	(242)	(49)	(79)	(13)	(383)	(371)	(754)	(459)
With Other Public Entity in Market Area	54.4%	51.0%	45.6%	53.8%	52.1%	43.3%	47.8%	40.9%
	(239)	(49)	(79)	(13)	(380)	(367)	(747)	(457)
With any Public Entity in Market Area	59.0%	57.1%	45.6%	53.8%	55.8%	45.5%	50.7%	44.2%
	(239)	(49)	(79)	(13)	(380)	(369)	(749)	(459)
CONSTRUCTION								
With City of Baltimore	60.8%	54.5%	40.0%	0.0%	54.9%	30.6%	43.5%	23.4%
	(51)	(22)	(5)	(4)	(82)	(72)	(154)	(171)
With Other Public Entity in Market Area	62.7%	54.5%	60.0%	25.0%	58.5%	49.3%	54.2%	34.7%
	(51)	(22)	(5)	(4)	(82)	(73)	(155)	(170)
With any Public Entity in Market Area	70.6%	63.6%	60.0%	25.0%	65.9%	50.7%	58.7%	38.0%
	(51)	(22)	(5)	(4)	(82)	(73)	(155)	(171)
AE-CRS								
With City of Baltimore	57.1%	50.0%	56.5%	100.0%	57.4%	31.1%	42.6%	35.7%
	(21)	(2)	(23)	(1)	(47)	(61)	(108)	(140)
With Other Public Entity in Market Area	70.0%	50.0%	69.6%	100.0%	69.6%	47.5%	57.1%	55.7%
	(20)	(2)	(23)	(1)	(46)	(59)	(105)	(140)
With any Public Entity in Market Area	70.0%	50.0%	69.6%	100.0%	69.6%	52.5%	59.8%	57.1%
	(20)	(2)	(23)	(1)	(46)	(61)	(107)	(140)
SERVICES								
With City of Baltimore	41.1%	36.4%	15.4%	28.6%	35.8%	18.8%	28.0%	21.1%
	(158)	(22)	(39)	(7)	(226)	(192)	(418)	(109)
With Other Public Entity in Market Area	48.4%	50.0%	41.0%	71.4%	48.0%	36.3%	42.7%	31.2%
	(157)	(22)	(39)	(7)	(225)	(190)	(415)	(109)
With any Public Entity in Market Area	52.9%	54.5%	41.0%	71.4%	51.6%	37.9%	45.3%	35.8%
	(157)	(22)	(39)	(7)	(225)	(190)	(415)	(109)
CSE								
With City of Baltimore	50.0%	0.0%	0.0%	0.0%	21.4%	43.5%	35.1%	33.3%
	(12)	(3)	(12)	(1)	(28)	(46)	(74)	(39)
With Other Public Entity in Market Area	72.7%	33.3%	8.3%	0.0%	37.0%	57.8%	50.0%	42.1%
	(11)	(3)	(12)	(1)	(27)	(45)	(72)	(38)
With any Public Entity in Market Area	72.7%	33.3%	8.3%	0.0%	37.0%	60.0%	51.4%	48.7%
	(11)	(3)	(12)	(1)	(27)	(45)	(72)	(39)

Source: NERA mail survey. Note: Total number of valid responses in parentheses.

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 7.3, almost 43 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 minorities than for nonminorities, casting doubt on claims of widespread "reverse discrimination." On average, reports were highest among African Americans, with an overall rate of 55 percent.[137] For nonminority women, the disparate treatment incidence rate was 37 percent. By comparison, the reported rate for nonminority males was less than 29 percent.

The balance of Table 7.3 shows results for each of 14 distinct types of disparate treatment that we asked about in the survey. In 12 of 14 categories the ratio of the reported amount of disparate treatment between M/WBEs and non-M/WBEs is large—more than 1.5 times the reported rate for non-M/WBEs. In 13 of 14 categories this difference is statistically significant as well. In all 14 categories the reported incidence of disparate treatment was higher for M/WBEs than for non-M/WBEs. In most categories it was two to three times more frequent, and in some it was even more frequent than this. In applying for surety bonds, for example, M/WBEs reported disparate treatment almost eight times more frequently than nonminority males. In applying for commercial loans, it was almost four times more frequent.[138] In applying for commercial insurance, functioning without hindrance or harassment on the work site, working or attempting to work on private sector prime contracts and subcontracts, joining or dealing with trade associations, and having to meet quality standards not required of comparable non-M/WBE firms, it was over three times more frequent. In obtaining price quotes from suppliers or subcontractors it was almost three times more frequent. In receiving timely payment for work performed or having to do inappropriate or extra work not required of comparable non-M/WBE firms, it was twice as frequent.

Table 7.3 also provides evidence of the positive impact of public sector M/WBE programs such as the City of Baltimore's. Although still substantial in an absolute sense, the two categories with the smallest relative differences between M/WBEs and non-M/WBEs were working or attempting to work on public sector prime contracts and working or attempting to work on public sector subcontracts. In these two categories the incidence of disparate impact was 1.38 and 1.23 times more frequent, respectively.

[137] Relatively few responses were received from Hispanics, Asians/Pacific Islanders or Native Americans. Given their low level of measured availability in this market area (see Table 3.11, showing approximately less than 4 percent for Asians/Pacific Islanders, less than 2 percent for Hispanics, and less than 0.5 percent for Native Americans) this result is not surprising.

[138] For more evidence on this topic, *see* Chapter V.

Table 7.3. 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/ Pacific Islanders	Native American	Minority Total	Non-minority Female	M/WBE Total	Non-minority Male
Applying for commercial loans	**42.7%**	***15.2%***	5.6%	11.1%	**29.7%**	**13.6%**	**22.4%**	**6.0%**
	(117)	***(33)***	(36)	(9)	**(195)**	**(162)**	**(357)**	**(218)**
Applying for surety bonds	**24.3%**	7.7%	**14.8%**	**33.3%**	**20.7%**	**9.7%**	**16.5%**	**2.2%**
	(107)	(26)	**(27)**	**(9)**	**(169)**	**(103)**	**(272)**	**(183)**
Applying for commercial or professional insurance	**9.2%**	***8.3%***	4.2%	**25.0%**	**8.6%**	4.1%	**6.5%**	**2.0%**
	(153)	***(36)***	(48)	**(8)**	**(245)**	(219)	**(464)**	**(302)**
Hiring workers from union hiring halls	7.5%	5.3%	10.0%	0.0%	7.3%	8.6%	***7.7%***	***2.4%***
	(67)	(19)	(20)	(4)	(110)	(58)	***(168)***	***(126)***
Obtaining price quotes from suppliers or subcontractors	**20.7%**	**17.1%**	8.0%	**33.3%**	**17.9%**	**10.1%**	**14.3%**	**4.8%**
	(135)	**(35)**	(50)	**(9)**	**(229)**	**(199)**	**(428)**	**(273)**
Working or attempting to obtain work on public sector prime contracts	**38.7%**	20.0%	24.4%	***50.0%***	**33.5%**	22.4%	**28.8%**	**20.9%**
	(142)	(35)	(41)	***(6)***	**(224)**	(161)	**(385)**	**(230)**
Working or attempting to obtain work on public sector subcontracts	**36.4%**	14.3%	20.9%	25.0%	***30.0%***	23.5%	27.3%	22.2%
	(151)	(35)	(43)	(8)	***(237)***	(166)	(403)	(234)
Working or attempting to obtain work on private sector prime contracts	**36.7%**	***20.6%***	**25.5%**	**42.9%**	**32.3%**	13.6%	**23.9%**	**8.9%**
	(147)	***(34)***	**(47)**	**(7)**	**(235)**	(191)	**(426)**	**(269)**
Working or attempting to obtain work on private sector subcontracts	**36.8%**	***20.6%***	**22.9%**	**37.5%**	**31.8%**	***14.7%***	**24.3%**	**9.1%**
	(152)	***(34)***	**(48)**	**(8)**	**(242)**	***(190)***	**(432)**	**(253)**
Receiving timely payment for work performed	**40.8%**	21.1%	17.6%	30.0%	**32.7%**	**27.7%**	**30.2%**	**16.0%**
	(152)	(38)	(51)	(10)	**(251)**	**(235)**	**(486)**	**(313)**
Functioning without hindrance or harassment on the work site	**24.0%**	***13.9%***	6.5%	**30.0%**	**18.9%**	**11.6%**	**15.3%**	**5.3%**
	(125)	***(36)***	(46)	**(10)**	**(217)**	**(215)**	**(432)**	**(284)**
Joining or dealing with construction trade associations	**11.8%**	***11.5%***	3.7%	**28.6%**	**11.1%**	7.0%	**9.1%**	**3.6%**
	(93)	***(26)***	(27)	**(7)**	**(153)**	(143)	**(296)**	**(222)**
Having to do inappropriate or extra work not required of comparable non-M/WBEs	**28.8%**	17.1%	16.7%	25.0%	**24.3%**	13.0%	**18.9%**	**8.6%**
	(125)	(35)	(42)	(8)	**(210)**	(193)	**(403)**	**(266)**
Double standards not required of comparable non-M/WBEs	**25.6%**	11.4%	11.9%	12.5%	**20.0%**	***9.7%***	**14.9%**	**5.4%**
	(125)	(35)	(42)	(8)	**(210)**	***(206)***	**(416)**	**(276)**
In any one of the business dealings listed above	**55.3%**	33.3%	33.3%	**58.3%**	**47.9%**	**37.1%**	**42.8%**	**28.7%**
	(197)	(42)	(66)	**(12)**	**(317)**	**(291)**	**(608)**	**(356)**

Source: See Table 7.2.

Notes: 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 7.4 represents the same disparate treatment information as in Table 7.3, but with the frequency percentages replaced by relative rankings. That is, the 14 kinds of disparate treatment are ranked by each group according to the frequency with which disparate treatment was reported, with "1" representing the most frequent and "14" representing the least frequent.[139] The most frequently reported problem overall for M/WBEs—as opposed to the one with the most relative difference from non-M/WBEs—was receiving timely payment for work performed. The next five most frequently reported, in descending order of frequency, were working or attempting to work on public sector prime contracts, working or attempting to work on public sector subcontracts,[140] working or attempting to work on private sector subcontracts, working or attempting to work on private sector prime contracts, and applying for commercial loans.

Some courts and other observers have asserted that findings such as those in Tables 7.3 and 7.4 tell us nothing about discrimination against M/WBEs since, even though they are current and come directly from the businesses reporting disparate treatment, even though they are restricted to the relevant geographic and product markets, even though they are disaggregated by contracting category and by race and gender, they still do not compare firms of similar size, qualifications, or experience. We have argued elsewhere against such flawed logic (and economics) since size, qualifications, and experience are *precisely* the factors that are adversely impacted by discrimination (Wainwright and Holt, 2010, 65-67; Wainwright, 2000, 86-87). Nevertheless, if disparities are still observed even when such "capacity" factors are held constant, the case becomes even more compelling. The results reported in Table 7.5 show that even when levels of size, qualifications, and experience are held constant across firms, measures of disparate treatment of M/WBEs are still large, adverse, and statistically significant.

[139] In the case of ties, not all 14 ranks will be present.

[140] In these two survey questions, "public sector" refers to public sector entities in general and not the City of Baltimore specifically.

Table 7.4. 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/ Pacific Islander	Native American	Minority Total	Non-minority Female	M/WBE Total
Applying for commercial loans	1	5	12	9	6	6	6
Applying for surety bonds	9	11	7	4	8	10	8
Applying for commercial or professional insurance	13	10	13	7	13	13	14
Hiring workers from union hiring halls	14	12	9	10	14	11	13
Obtaining price quotes from suppliers or subs	11	4	10	4	11	9	11
Working or attempting to obtain work on public sector prime contracts	3	3	2	1	1	3	2
Working or attempting to obtain work on public sector subcontracts	6	6	4	7	5	2	3
Working or attempting to obtain work on private sector prime contracts	5	2	1	2	3	5	5
Working or attempting to obtain work on private sector subcontracts	4	2	3	3	4	4	4
Receiving timely payment for work performed	2	1	5	5	2	1	1
Functioning without hindrance or harassment on the work site	10	7	11	5	10	8	9
Joining or dealing with trade associations	12	8	14	6	12	12	12
Having to do extra work not required of others	7	4	6	7	7	7	7
Having to meet quality or performance standards not required of others	8	9	8	8	9	10	10

Source: See Table 7.2.

In Table 7.5, we report the results from a series of Probit regressions using the mail survey data on disparate treatment.[141] 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 7.5 (in which the regression model contains only M/WBE status and contracting category indicators), the estimated coefficient of 0.176 on the M/WBE indicator indicates that the likelihood of experiencing disparate treatment for M/WBE firms is 17.6 percentage points higher than that for non-M/WBE firms.[142] This difference is statistically significant. Column (2) of Table 7.5 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 17.3 percentage points more likely than non-M/WBE firms to experience disparate treatment. This difference is also statistically significant. Firm size and other "capacity"-type characteristics account for only a miniscule portion of the disparate treatment reported by M/WBEs in the City of Baltimore's market area.

The exercise is repeated in columns (3) and (4). The only difference from the earlier regressions is that the M/WBE indicator is now 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 City of Baltimore's market area are 23.4 percentage points more likely to experience disparate treatment than non-M/WBE firms. When controls are added in column (4), this difference actually rises to 24.4 percentage points, indicating that disparate treatment is occurring even when accounting for other "capacity"-type factors. The differences for nonminority female-owned firms are also large and statistically significant, showing a 13.1 percentage point difference with only the industry controls and a slightly smaller 12.3 percentage point difference when the full set of capacity-type controls is added.

The exercise is repeated a final time 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 31.8 percentage points in column (5), rising to 33.9 percentage points after the full set of controls is added. Both differences are statistically significant. For Native American-owned firms, the differential is 33.0 percentage points in column (5), rising to 45.7 percentage points after the full set of controls is added. Both of these differences are statistically significant as well. For Hispanic-owned firms, the differential is 6.1 percentage points in column (5) and 10.9 percentage points in column (6). These differences, however, are not statistically significant. For Asian/Pacific Islander-owned firms, the differential is 10.0 percentage points in column (5) and 7.6 percentage points in column (6). These differences, also, are not statistically significant.

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[141] *See* Chapter IV for a description of Probit regression.

[142] 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 7.3. The raw differential observed there (42.8% – 28.7% = 14.1%) differs somewhat from the 17.6% differential reported here since the regression specification also controls for industry category.

Table 7.5. Prevalence of Disparate Treatment Facing M/WBEs

	(1)	(2)	(3)	(4)	(5)	(6)
M/WBE	0.176 (5.17)	0.173 (4.56)				
Minority			0.234 (5.77)	0.244 (5.34)		
Nonminority Female			0.131 (3.18)	0.123 (2.72)	0.135 (3.27)	0.128 (2.83)
African American					0.318 (6.78)	0.339 (6.34)
Hispanic					0.061 (0.74)	0.109 (1.19)
Asian/Pacific Islander					0.100 (1.43)	0.076 (1.03)
Native American					0.330 (2.31)	0.457 (2.96)
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	964.00	862.00	964.00	862.00	964.00	862.00
Pseudo R^2	0.03	0.05	0.03	0.06	0.05	0.07
Chi^2	37.12	56.68	43.78	64.47	59.59	81.82
Log likelihood	(619.44)	(544.30)	(616.11)	(540.40)	(608.21)	(531.73)

Source: See Table 7.2.

Notes: Reported estimates are derivatives from Probit models, t-statistics are in parentheses. A t-statistic of 1.96 (1.64) or larger indicates that the result is significant within a 95 (90) percent confidence interval.

Table 7.6. Prevalence of Disparate Treatment Facing M/WBEs, by Type of Business Dealing

Business Dealings	African American	Hispanic	Asian/ Pacific Islander	Native American	Minority Total	Non-minority Female	M/WBE Total
Applying for commercial loans	**41.2%** **(6.44)**	***14.7%*** ***(1.69)***	-0.2% (-0.03)	12.7% (0.80)	**25.0%** **(5.06)**	**11.7%** **(2.38)**	**14.9%** **(4.25)**
Applying for surety bonds	**27.9%** **(4.39)**	10.6% (1.19)	**27.6%** **(2.67)**	**58.0%** **(3.15)**	**21.0%** **(4.27)**	**12.7%** **(2.31)**	**12.9%** **(3.82)**
Applying for commercial or professional insurance	**6.4%** **(2.29)**	6.5% (1.38)	4.1% (1.00)	**27.2%** **(2.12)**	**5.4%** **(2.40)**	2.0% (0.97)	***3.0%*** ***(1.94)***
Hiring workers from union hiring halls	***9.1%*** ***(1.71)***	6.2% (0.75)	6.9% (0.97)	0.0% (0.00)	***6.6%*** ***(1.66)***	5.6% (1.12)	4.9% (1.63)
Obtaining price quotes from suppliers or subcontractors	**21.1%** **(4.30)**	**18.8%** **(2.47)**	9.9% (1.53)	**60.7%** **(3.50)**	**16.5%** **(4.34)**	**9.2%** **(2.47)**	**10.1%** **(3.84)**
Working or attempting to obtain work on public sector prime contracts	**19.7%** **(3.20)**	-1.0% (-0.11)	-0.8% (-0.10)	***41.7%*** ***(1.81)***	**11.3%** **(2.23)**	0.7% (0.13)	6.3% (1.45)
Working or attempting to obtain work on public sector subcontracts	**17.3%** **(2.96)**	-4.6% (-0.52)	-4.0% (-0.52)	15.8% (0.83)	***8.6%*** ***(1.77)***	2.4% (0.46)	5.6% (1.34)
Working or attempting to obtain work on private sector prime contracts	**32.7%** **(5.75)**	***17.0%*** ***(1.92)***	**24.4%** **(3.10)**	**52.9%** **(2.72)**	**25.8%** **(5.69)**	6.9% (1.51)	**14.8%** **(4.32)**
Working or attempting to obtain work on private sector subcontracts	**31.3%** **(5.48)**	***16.6%*** ***(1.87)***	**21.6%** **(2.72)**	**48.5%** **(2.64)**	**24.4%** **(5.32)**	***8.9%*** ***(1.87)***	**15.0%** **(4.26)**
Receiving timely payment for work performed	**31.8%** **(5.60)**	12.5% (1.37)	6.9% (0.87)	27.3% (1.60)	**22.0%** **(4.72)**	**18.3%** **(4.00)**	**17.7%** **(4.93)**
Functioning without hindrance or harassment on the work site	**29.1%** **(5.27)**	**14.9%** **(2.04)**	8.0% (1.18)	**50.0%** **(3.35)**	**19.5%** **(4.78)**	**11.7%** **(3.10)**	**11.5%** **(4.34)**
Joining or dealing with construction trade associations	***6.8%*** ***(1.83)***	9.0% (1.50)	0.7% (0.13)	**39.0%** **(2.53)**	**6.6%** **(2.18)**	3.0% (1.03)	***4.1%*** ***(1.87)***
Having to do inappropriate or extra work not required of comparable non-M/WBEs	**29.4%** **(5.19)**	**17.7%** **(2.17)**	**18.6%** **(2.42)**	**41.1%** **(2.35)**	**22.0%** **(5.10)**	**8.6%** **(2.08)**	**12.7%** **(4.16)**
Having to meet quality, inspection, or performance standards not required of comparable non-M/WBEs	**26.1%** **(5.12)**	***14.4%*** ***(1.84)***	10.6% (1.62)	26.4% (1.53)	**17.9%** **(4.70)**	***6.6%*** ***(1.88)***	**9.8%** **(3.79)**
In any one of the business dealings listed above	**33.9%** **(6.34)**	10.9% (1.19)	7.6% (1.03)	**45.7%** **(2.96)**	**24.4%** **(5.34)**	**12.3%** **(2.72)**	**17.3%** **(4.56)**

Source: See Table 7.2.

Notes: Reported estimates are derivatives from Probit models with specification such as in Table 7.5, column (2). The t-statistics are in parentheses. A t-statistic of 1.96 (1.64) or larger indicates 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***.

The regression models reported in Table 7.5 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 7.3. We re-estimated the regression model reported in Column (2) of Table 7.5 separately using as the dependent variable, in turn, each of the 14 types of business dealings and report those results in Table 7.6. As Table 7.6 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 minorities as a group, it is true in all 14 cases as well. For Hispanic-owned firms it is true in 7 of 14 cases. For Asian/Pacific Islander-owned firms it is true in 4 of 14 cases. For Native American-owned firms it is true in 9 of 14 cases. For nonminority female-owned firms it is true in 8 of 14 cases. Finally, for M/WBEs as a group, it is true in 11 of 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 7.7 makes clear, substantial percentages of both M/W/BEs and non-M/W/BEs report that certain factors, such as "Late Notice of Bid/Proposal Deadlines," "Large project sizes," "Bonding requirements," and "Obtaining working capital" make it harder or impossible for their firms to obtain contracts. Among non-M/WBEs, for example, 45 percent reported that late notice of bid/proposal deadlines made it harder or impossible for them to win contracts, 34 percent reported that large project sizes had this effect, 27 percent reported that bonding requirements had this effect, and 23 percent reported that obtaining working capital had this effect. The figures for M/WBEs in these four categories, however, at 58 percent, 51 percent, 48 percent, and 45 percent, respectively, are significantly higher than those for non-M/WBEs. Indeed, as Table 7.7 shows, M/WBEs reported significantly more difficulty than non-M/WBEs on *all* nine factors about which they were polled. In general, the rates at which M/WBEs reported difficulty with these factors were between 1.5 to 2.0 times the rates reported by non-M/WBEs.

Table 7.7. 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/ Pacific Islander	Native American	Minority Total	Non-minority Female	M/WBE Total	Non-M/WBEs
Bonding Requirements	**50.0% (102)**	**58.3% (24)**	38.1% (21)	25.0% (4)	**49.0% (151)**	**47.3% (91)**	**48.3% (242)**	**26.7% (165)**
Insurance Requirements	**18.5% (130)**	***20.0% (30)***	**22.9% (35)**	16.7% (6)	**19.4% (201)**	**16.1% (180)**	**17.8% (381)**	**9.2% (261)**
Previous Experience Requirements	**27.5% (149)**	21.9% (32)	**27.9% (43)**	**62.5% (8)**	**28.0% (232)**	18.2% (214)	**23.3% (446)**	**15.2% (270)**
Cost of Bidding or Proposing	**42.7% (143)**	***43.3% (30)***	***43.6% (39)***	**100.0% (7)**	**44.7% (219)**	**38.2% (191)**	**41.7% (410)**	**27.8% (255)**
Large Project Sizes	**56.4% (140)**	**56.7% (30)**	**52.4% (42)**	***71.4% (7)***	**56.2% (219)**	**44.9% (185)**	**51.0% (404)**	**33.8% (240)**
Price of Supplies or Materials	**33.8% (133)**	**36.7% (30)**	17.1% (35)	**57.1% (7)**	**32.2% (205)**	**28.9% (173)**	**30.7% (378)**	**16.9% (236)**
Obtaining Working Capital	**54.9% (133)**	**53.3% (30)**	***37.8% (37)***	44.4% (9)	**51.2% (209)**	**36.6% (175)**	**44.5% (384)**	**22.7% (220)**
Late Notice of Bid/Proposal Deadlines	**61.7% (133)**	62.1% (29)	46.3% (41)	62.5% (8)	**58.8% (211)**	**58.0% (174)**	**58.4% (385)**	**45.0% (242)**
Prior Dealings with Owner	**23.1% (130)**	13.8% (29)	17.1% (41)	12.5% (8)	**20.2% (208)**	10.6% (198)	**15.5% (406)**	**9.7% (268)**

Source: See Table 7.2.

Notes: Total number of valid responses in parentheses. Figures in **boldface** type are adverse and 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 adverse and significant within a 90% confidence interval.

To control for firm and owner characteristics, we used a regression technique known as ordered Probit.[143] 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—(1) "helps me," (2) "has no effect," (3) "makes it harder," or (4) "makes it impossible"—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 7.8 reports the sign and statistical significance from the ordered Probit analysis. We find that when observable firm characteristics are controlled for, six 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), even when "capacity"-type factors such as employment size, revenue size, years in business, and owner education are held constant. The disparity observed regarding obtaining working capital, in particular, was statistically significant with respect to non-M/WBEs.

Table 7.8. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Regression Results

Business Environment	M/WBEs
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 7.2.

Notes: 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.

[143] For a textbook discussion of ordered Probit, see, for example, Greene (1997).

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 7.9 shows, 77 percent of African American-owned firms, 44 percent of Hispanic-owned firms, 65 percent of Asian/Pacific Islander-owned firms, 100 percent of Native American-owned firms, and 55 percent of nonminority female-owned firms responded that this seldom or never occurs. For minorities as a group the figure was 72 percent and for M/WBEs as a group the figure was 65 percent. Similar results were observed by major contracting 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.[144] 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 solicited for non-goals work.[145]

Table 7.9. Percent of M/WBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with Goals Seldom or Never *Hire* Them on Projects without Such Goals

M/WBE Group	All Industries	Construction	Consulting	Services	CSE
African American	77.2% (145)	72.7% (33)	76.5% (17)	79.8% (89)	66.7% (6)
Hispanic	43.5% (23)	35.7% (14)	0.0% (1)	62.5% (8)	- (0)
Asian/Pacific Islander	64.9% (37)	50.0% (2)	68.8% (16)	62.5% (16)	66.7% (3)
Native American	100.0% (5)	100.0% (2)	- (0)	100.0% (3)	- (0)
Minority Total	71.9% (210)	62.7% (51)	70.6% (34)	76.7% (116)	66.7% (9)
Nonminority Female	55.2% (145)	47.1% (34)	45.9% (37)	58.9% (56)	77.8% (18)
M/WBE Total	65.1% (355)	56.5% (85)	57.7% (71)	70.9% (172)	74.1% (27)

Source and Note: See Table 7.2.

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

[144] *Builders Association of Greater Chicago v. City of Chicago*, 298 F.Supp.2d 725, 737 (N.D. Ill. 2003).

[145] *Id.*

requirements?" Responses to this question are tabulated in Table 7.10, which shows the same pattern as in Table 7.9. In Table 7.10, 76 percent of African American-owned firms, 60 percent of Hispanic-owned firms, 74 percent of Asian/Pacific Islander-owned firms, 100 percent of Native American-owned firms, and 59 percent of nonminority female-owned firms responded that this seldom or never occurs. For minorities as a group the figure was 74 percent and for M/WBEs as a group the figure was 68 percent. Similar results were observed in each major contracting category as well.

Table 7.10. Percent of M/WBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with Goals Seldom or Never *Solicit* Them on Projects without Such Goals

M/WBE Group	All Industries	Construction	Consulting	Services	CSE
African American	75.7% (140)	77.4% (31)	73.3% (15)	76.1% (88)	66.7% (6)
Hispanic	60.0% (25)	50.0% (14)	0.0% (1)	77.8% (9)	100.0% (1)
Asian/Pacific Islander	73.7% (38)	66.7% (3)	80.0% (15)	66.7% (18)	100.0% (2)
Native American	100.0% (5)	100.0% (3)	- (0)	100.0% (2)	- (0)
Minority Total	74.0% (208)	70.6% (51)	74.2% (31)	75.2% (117)	77.8% (9)
Nonminority Female	59.0% (144)	46.9% (32)	51.4% (35)	64.3% (56)	76.2% (21)
M/WBE Total	67.9% (352)	61.4% (83)	62.1% (66)	71.7% (173)	76.7% (30)

Source and Note: See Table 7.2.

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 5,050 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 1,305 firms, for a raw response rate of 25.8 percent. After removing duplicate records, records where the firm was no longer in business, and records where the telephone number was disconnected or otherwise incorrect, the effective response rate increased to 40.1 percent.

For the non-respondent survey, 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 a greater general interest in the questions being asked. Among survey respondents, only 25.7 percent indicated that the question about large project sizes was "not applicable." Among non-respondents, the figure was 43.7 percent. Approximately 41.1 percent of survey respondents indicated that discrimination in applying for commercial loans never occurred, compared to 89.8 percent among non-respondents. Approximately 48.3 percent of survey respondents indicated that discrimination in working or attempting to work on private sector prime contracts never occurred, compared to 89.9 percent among non-respondents. This phenomenon was apparent regardless of whether the firm was minority-owned, women-owned, or nonminority male-owned.

Among those firms to which the question was applicable, 41.8 percent of minority-owned firms that did not respond to the mail survey indicated that large project sizes made it harder or impossible for them to obtain contract awards. Among those that did respond to the survey, the figure was 56.2 percent. Among female-owned firms that did not respond to the mail survey, 36.1 percent indicated that large project sizes made it harder or impossible for them to obtain contract awards. Among those that did respond to the survey, the figure was 47.7 percent. Among nonminority male-owned firms that did not respond to the mail survey, 23.4 percent indicated that large project sizes made it harder or impossible for them to obtain contract awards. Among those that did respond to the survey, the figure was 33.8 percent. Each of these differences is statistically significant.[146]

[146] The percentages reported in this section may differ slightly from comparable figures reported elsewhere in Chapter VII, since minorities of unknown race or ethnicity were excluded from the tallies in the mail survey.

We see from these results that more M/WBEs than non-M/WBEs report that large project sizes make it harder or impossible for them to obtain contracts, regardless of whether they responded to the mail survey or not. We also see that reports that large project sizes make it hard or impossible for firms to obtain contracts are greater among mail survey respondents than among non-respondents, regardless of M/WBE status. However, the ratio of M/WBEs to non-M/WBEs reporting difficulty in this regard is not statistically different between respondents and non-respondents, implying that the estimate of adverse disparity for M/WBE firms with regard to large project sizes that was reported from the mail survey (see Tables 7.7 and 7.8) is representative of the universe of firms as a whole.

Among those firms to which the question was applicable, 11.8 percent of minority-owned firms that 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 that did respond to the survey, the figure was 29.7 percent. For female-owned firms, 5.0 percent of those that 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 that did respond to the survey, the figure was 19.9 percent. Among nonminority male-owned firms that did not respond to the mail survey, 1.1 percent indicated that they had experienced one or more instances of discrimination during the previous five years in applying for commercial loans. Among those that did respond to the survey, the figure was 6.0 percent. Each of these differences is statistically significant.

Once again, we see from these results that more M/WBEs than non-M/WBEs report experiencing discrimination in applying for commercial loans during the previous five years, and also that reports of discrimination are greater among mail survey respondents than among non-respondents, regardless of M/WBE status. In this case however, the ratio of M/WBEs to non-M/WBEs reporting discrimination is statistically larger among non-respondents than respondents, implying that the adverse disparity for M/WBE firms with regard to discrimination in applying for commercial loans shown above (see Tables 7.3, 7.4 and 7.6) is conservatively estimated.

Among those firms to which the question was applicable, 13.5 percent of minority-owned firms that 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 that did respond to the survey, the figure was 32.3 percent. For female-owned firms, 7.0 percent of those that 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 that did respond to the survey, the figure was 18.0 percent. Among nonminority male-owned firms that did not respond to the mail survey, 2.7 percent 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 that did respond to the survey, the figure was 8.9 percent. Each of these differences is statistically significant.

Yet again, these results show that more M/WBEs than non-M/WBEs report experiencing discrimination in in working or attempting to work on private sector prime contracts during the

previous five years, as well as that reports of discrimination are greater among mail survey respondents than among non-respondents, regardless of M/WBE status. As with the previous question, in this case as well the ratio of M/WBEs to non-M/WBEs reporting discrimination is statistically larger among non-respondents than respondents, implying that the estimate of adverse disparity for M/WBE firms with regard to discrimination in working or attempting to work on private sector prime contracts shown above (see Tables 7.3, 7.4 and 7.6) is conservatively estimated.

In conclusion, the results of our non-respondent survey 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 and also that M/WBEs reported greater difficulties than non-M/WBEs whether or not they responded to the mail survey. For all three of the questions we examined, this means the actual disparities facing M/WBEs are equal to or even larger than what we estimated in our mail survey. For all three questions examined, the basic qualitative finding of more problems and greater disparities being observed among M/WBEs than among non-M/WBEs is unchanged.

C. Business Owner Interviews

To explore additional anecdotal evidence of possible discrimination against minorities and women (collectively, M/WBEs) in the City of Baltimore's market area, we conducted 9 group interviews. We met with 145 business owners from a broad cross section of the industries from which the City purchases services and goods. Firms ranged in size from large national businesses to new start-ups. Owners' backgrounds included individuals with decades of experience in their fields and entrepreneurs beginning their careers. We sought to explore their experiences in seeking and performing public and private sector contracts, and with Baltimore's M/WBE Program.

This effort gathered individual perspectives to augment the statistical information from the business experience surveys. In general, interviewees' individual experiences mirrored the responses to the business experience surveys. We also elicited recommendations for improvements to the Baltimore's M/WBE Program, reported below in Chapter IX.

The following are summaries of the issues discussed. Quotations are indented, and are usually representative of the views expressed by several participants. Some have been shortened for readability.

1. Perceptions of Competence and Higher Performance Standards

Although many, during the interviews, recognized that while there had been significant progress integrating minorities and women into Baltimore's public and private sector contracting activities, many barriers remain. Although not quantifiable, one persistent theme in the interview was the continuing influence of subtle negative perceptions and stereotypes. These stereotypes of a lack of competence infect all aspects of the M/WBEs' 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.

> I will design…where I'm the architect and, you know, my design intent could be for code reasons or other reasons. But you know, they look to someone else at the table to verify this even though I have the training, the knowledge of the codes. It's almost like you know, they are second guessing me.

***

One minority contractor stated that in discussing the M/WBE program with a majority prime, it is clear to him that "you are still running against the same prejudices." The prime contractor told him that he did not think the program was relevant because…

> Well I cull about 25 percent of my contract for work that one, I can do myself, and two, I [am] forced to deal with companies that I wouldn't normally deal with.

***

> That's their attitude, [they're] not going to tell me who I am going to use. I am going to use who I want to use. So when they do come to the City because they can't get no work or it's a big contract, and they want to bid on it,…they [are] going to still have in the back of their mind that they don't want to use you.

***

> I work in the construction industry and I think there's a perception among primes and general contractors…that somehow a minority subcontractor is not going to do as good a job as another contractor. I think that perception exists.

One nonminority female contractor was adamant in explaining why she was receiving calls from prime contractors.

> I have been specifically told by primes that the only reason they're calling me is because there is a WBE portion.

***

The non-minority engineering firms that were interviewed questioned the competency of the majority of minority professional service firms.

> It's never going to change until you make them better. They have to compete for work. I mean when an MBE can compete and win work based upon what they do, not what they are, that's when it's going to change.

***

> They are riding the wave of being [minority]. They don't have a reason to change because they're handed work. And it's not, that's not making them competitive.

An MBE owner reported a contrary position that perceptions had significantly changed over time.

> Perception is today a lot different than twenty years ago when I was working for a large business and hiring the small business, minority business. …Today the perception is different. We do 90 percent of our work as a prime and large firms come to us … because we have more experience and background.

2. Workplace Harassment

Although less overt, there was little disagreement that racism and gender discrimination continue to persistent in Baltimore public and private sector contracting.

> You know, discrimination, racism, I call it, it's more covert now. You know. It's there but it's just not blatant.

***

One nonminority female architect stated that she had been a victim of harassment on the job site.

> [S]ome one said something really, it was a contractor, said something really, I think it was more because I was a women and he said something really kind of, you know derogatory.

***

> Prior negative experiences as well. My industry is also dominated by older White men. It always has been. Insurance and financial services has always been [a tight knit].. industry so it's a tough one to break. It's a glass ceiling, if you will…I mean until everybody's one color, racism will exist.

Setting up minority subcontractors for failure was also reported.

> I put a minority firm one time on my team and I was told by the agency that the minority firm was fired before. And I was still persistent to use the same minority firm. I dug into the problem and the minority firm said, the prime firm never communicated with us. Prime firm never gave them the schedule, never told them what is due, never…gave them the scope at the last minute and then they were the bad guy. So I presented their qualifications in the interview and then we were selected and that same minority firm did a knockout job.

This is not to suggest that the experience of minority and women owned businesses is always negative.

> Some of the people that you work with, they treat you equally professional. And you get the equal professional cut of the whole organization. Others they think you're

> looking…They really don't want you. They say here is your little piece, go sit in the corner until we call you…
>
> ***
>
> There was one project that they had already had for a year. They did all of the research and field survey and everything a year prior. Now, I don't know when they got the Notice to Proceed to make it, you know, to go to the design construction documents. But I got it on Friday. Let's go. Meet me at the site. Do that. Went out there and then try to get it done. Now I did my darndest to try to get it done. But Wednesday was the deadline. Friday is when I told them I could have it done…By the volume of work. We still work with that client, you know, and enjoy working with that client. But they knew upfront it was a ridiculous schedule.

3. Payment

There was uniform agreement across ethnic and gender groups that one of the most important issues on City contracts was payment, by both the City and the prime contractor. The non-minority primes expressed frustration in the City's payment process.

> I'm not a minority or a women owned business but I've done business with the City for probably over thirty years in different aspects and every department's different. Some of them [are] smooth as silk and you get paid quickly. Other departments it just takes forever…
>
> Chaos is pretty much accurate. You know I have a twelve month contract. I probably get paid on time four months out of twelve. You know, I waited four months for a payment….You know, something's not working right.

Minority and women owned firms were particularly sensitive to the issue of payment and the negative impact delays in payment have upon their ability to succeed. Almost all of the minority owners stated that in general, they had great difficulties being paid by primes.

> I guess one of the main challenges we have with City contracts is the lack of prompt payment, …, you know, with a small company when you have to wait five, six months for payment. You know that's a tremendous challenge…Well we always … sub on a lot of prime, you know a lot of contracts. We're not usually the prime. The subcontractor.
>
> ***
>
> I have sub-consulted but I [was] not paid for [a] long time. You know, It happened several times and on a couple of them I'm still waiting two years now.
>
> ***

> There with the City of Baltimore I, in one of my other entities, haul liquid asphalt for them, and we actually finished our first year of the contract and I refused to do the second year until they could tell me how I would be paid. Because it took me almost eight months to get paid. And no one can set a meeting up to explain to me how [they] are going to pay me.

***

> [T]here should be payment enforcement for the simple reason that the majority of the times the majority contractors don't want to use MBEs in the first place.

An African American owner in the construction industry explained why the issue of payments was so critical.

> Because one way to hurt you, don't pay you. You know, you don't bid …[a] million dollar worth of work and you're waiting to be paid, and you don't get paid. I mean, how many of these of those jobs can you stand?

4. Exclusion from Industry Networks

The close knit nature of the construction industry intentionally or unintentionally contributes to the exclusion of minority firms' from informal networks.

> Birds of a feather flock together, and it's just hard to break into the cycle. Because you don't go to the same churches, you don't go to the same schools.

***

> If we're the low number regardless of whether you're MBE or not,…[that's] who you use. But if they've got the good old boy system they want to use their particular contractor and they don't want to use us, it doesn't matter whether your numbers are low or not.

***

> It always went back to the good old boys network or who we had used previously. I don't have to scratch my head, think twice about this company. Sally down the hall told me this is the company I need to use.

***

> So it's definitely a discrimination process, whether it is race or because you are just not in the loop.

The significance of the network is also reflected in the fact that the majority of construction contractors interviewed acknowledged that they selected their M/WBE subcontractors on past performance and word of mouth.

5. Applying for Commercial Loans

Many minority owners, especially Blacks, stated that they found it difficult to obtain working capital. While perhaps not the direct result of discrimination by the lender, that minorities have been excluded from the construction and other industries hampers their access to family wealth and networks that support growing businesses.

Minority construction firms commented on the cost or working capital and the difficulty of accessing working capital.

> So again, I go back to the biggest need I see in the minority community is to access capital. Because until we have access to capital, and we're able to grow our businesses and then compete with those, non-minorities, we'll never earn their respect.

***

> Working capital...what is it going to cost you? Because if it costs you that much that [prices] you out of the market. You know, with the way times have been economically lately the banks aren't going to give you the money…[T]hey're not lending to us. So when times tighten up over like what we just went through…[W]e're the first to feel it and the last to come out.

6. Applying for Surety Bonds

Many firms reported difficulty obtaining surety bonds. The underwriting standards were so strict and required that the firm post cash or have sufficient assets to secure the bond that they could not qualify. They saw bonding as a barrier to growing and taking advantage of opportunities.

> I mean like the market went crazy, insurance, bonding, zip, you are cut off, you know unless you had a lot of capital…And that's another thing like to keep the bonding as a general [contractor]…I had to put up more cash.

***

> A lot of subs, a lot of minority subs when they work as subs don't even have bonding capacity because they don't have a bonding company. I can sit here and tell you most of my subs don't have the availability to get bonding. If I need them to get a bond, I [have] to introduce them to my bonding agent.

***

> The Mayor's Office of Information Technology put out a data cabling contract where you had to bid to be on the list and it was going to be for the next three years or two years to renew. It said small businesses can apply but when you go into it asks for like $250,000 bond and with no guarantee of work so as a small business when you go to your bonding agency and say, I need this open ended multiyear bond, if you don't have the assets to back it up, …we can't help you.

7. Obtaining Work on Public Sector Projects

a. Prime Contracts

Most M/WBEs expressed frustration with obtaining public sector prime contracts. 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. Very few had received prime contracts with Baltimore.

> [I]n becoming a prime? I think that one of the things with any minority company is capital. You know, to any minority contractor, you know is capital.

***

> The thing is…is there a strategy with the agencies or with the City or with the State…if they are in fact real serious about moving minorities if you will and women from just being subs to primes…[W]e haven't seen really any agency at the state level or at the city level…develop a strategy to move minority or women owned sub[s] to primes….

***

> [W]hat the architect has stated to me after forty years of practice is the crux of the problem. When they set up all of the other criteria, you pass all the criteria. But when you get to item number, let's call it item number five. Give five examples of projects you have done, you have not done them. And that's the crux of the whole problem. You haven't done them so therefore, you are not going to be ranked on the score of the value of that question. You never make the grade because you never make the points.

***

The problems faced by firms doing business with the City was also a major impediment.

> I don't have a contract with [the City] but I was talking to one of my suppliers that I was interested in doing some work with the City of Baltimore and she basically told me that if you get any work with the City of Baltimore we would not be supplying you any material.

> I was awarded my first contract as a prime May 22nd, I still don't have my people on the street working. I haven't gotten my Notice to Proceed. So I get in touch with my subs, I have two subs working on the project, the first of every month and tell them, the City has not allowed us a start date yet.

***

> I tried to arrange a meeting with the director to discuss, you know, how I could provide services for his institution…They scheduled a meeting [in] a month to meet with them just to talk about how I could work with them. They [scheduled the] meeting a month away. … You know the month came the day of [the meeting], the secretary called me and said, oh they're not available. We need to reschedule…. I said well, I am available tomorrow. Oh well, we're going to schedule [the meeting in] another month. So you know beyond that point I said, you know it wasn't really in my interest to meet….

Many firms were also discouraged from pursuing prime contracts because of concerns about the fairness of the procurement process.

> But on some of these projects, the City will already have designated the generals they're going to use on the projects before. I commend the gentleman who's been doing work for the City as a prime. But on a lot of these projects the primes are already selected before it even hits the street.

***

> And what the gentleman said about public opening. I'm new. When I went to watch the bid process, to watch them open bids, they were already opened in a pile on the desk. And I said, I thought they're supposed to open it while I'm sitting here watching them. It's already been gone through, has papers in it.

There was almost unanimous agreement among all the minority and women owned firms that the M/WBE Program was absolutely essential for creating opportunities. A nonminority female stated,

> [I]t opens up a broader marketplace when you have various certifications…You may not be big enough to go in as a prime on some contracts, but the MBE label is always attractive because then you can associate with prime contractors, those who will actually give you work...

Several African American owners also agreed.

> We've been certified for the last thirteen years and the biggest advantage that I have found is that it gets you to the table. It doesn't always get you the job or the project but it gets you to the table and a lot of times that's the most important part.

***

> I'm running an eight person firm and 85 percent of my work is because I am an MBE certified firm.

***

> I do know that there are a number of jobs out there that I can bid on that the average person can't bid because they don't have the certification.

Although often unreported due to fear of retaliation, there is also the perception across race and gender that the M/WBE program is hurt by front and sham companies.

> I guess, I think we've had some success certainly in bidding and garnering work in the City. One thing that keeps happening though is that, you know, there's some people who are diligently and earnestly trying to involve legitimate companies. But there still exist a fair number of well-known pass throughs that seem to keep getting some of the contracts with more meat on them. And everybody kind of knows what's going on but nobody seems to be doing anything.

M/WBEs reported that it is difficult to move from subcontracting or sub-consultant to more lucrative prime jobs. A Black male-owned firm explained the problem.

> [B]eing an MBE hurts me as opposed to helps me. Because even though its supposed to gain me experience,…in actuality, you know, it really keeps me at a sub-consultant position.

b. Subcontracts

M/WBEs reported that while it is easier to obtain subcontracts than prime contracts on public projects because of the M/WBE goals, it is still difficult to get work, receive fair treatment, and be paid on time. Many believed that [majority-owned] prime firms use them only if forced to do so.

> But we contacted the successful bidder and found we were low, that our number was good. They never would respond to our phone calls, our emails. There was never any contact at all…We found out a month ago that they named two firms, two MBE firms, to do 25 percent of the contract …but they did not do the work that they were named for…[T]here were letters of protest written because of that. Now suddenly the contractor called us....

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> The primes will, you know, for a large project. You know, you'll go down, you'll submit, you'll bid. And the primes will seem to want to work with you right up until the award date and then when you try to call back and say, well where did I finish? Can I get some feedback? They don't want to answer the phone. They don't want to return the emails. So

> it's kind of like you feel as a small business they're using you to submit a number to then beat up on the contractor they already wanted.
>
> ***
>
> I was awarded a contract as a sub through the City and after I was awarded the contract I was contacted by the prime saying the City now is going to require you to do this...I fulfilled that. Never heard a word back. I contacted the prime on it said what's going on? He says, it's the City…It was BS…Was another way of eliminating a minority.
>
> ***
>
> We had a project. We had a project with a very large firm in Maryland. It was for the City of Baltimore. It was a one million dollar contract. The prime was given a …a project that was, exceeded the one million dollar on-call contract. One project. They did the entire job. Did not contact me. So when I'm calling them saying, hey, what's going on with this?...Any projects of your projects assigned? No. So I finally I call the City…and find out what's going on with this? Why are no projects being issued…? Found out that they were awarded a project for 2.5 million dollars. I got zero dollars, zero cents and did zero work.

On the other hand, some of the minority and women-owned businesses had cultivated successful relationships because of the high quality of their work and services.

> On the contrary, if there's a requirement that they have to have a certain percentage of minority business, it's getting you to the table that gets you the job. Because if you have a quality business, you know, get me to the platform where I can display that business and put myself…in front of the people who are going to give me that job. It gets me to the next job. So…through having that experience and going through the process, having that experience I now have a relationship with that firm that I don't even need my MBE requirements….

8. Obtaining Work on Private Sector or Non-Goals Projects

M/WBEs providing construction services uniformly continue to find private sector prime contractor work (other than small residential and commercial projects) very difficult to obtain.

Most M/WBEs, particularly those owned by Blacks and Hispanics, are often limited to public sector projects. Minority firms in particular reported that general contractors who use them successfully and repeatedly on projects with mandated affirmative action goals rarely or never involve them in private work.

> I've been in business for 28 years. We've done work for them for years. The only time we get solicited, the only time that we're contacted, if there's an MBE participation requirement. The only time. I have a letter in my office now from their executive vice president stating the exemplary work of [that] the [Company] does.

***

> I think he was talking about negotiated work. We are never invited to the table on negotiated work…public or private. But if they don't need us, they're not going to call us.

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> And if the program was not here, you know, I would say that every minority would be really, really in trouble.

The paucity of private sector opportunities means that some M/WBEs, despite having the capacity to take on more projects, have to cut staff when public jobs are finished because they receive no private sector work. This negatively affects their capacity to do future projects.

In a few instances, prime contractors who have developed strong working relationships with M/WBEs and their capabilities will sometimes solicit them to work on private projects.

D. Conclusion

Consistent with other evidence reported in this Study, anecdotal interview information strongly suggests that M/WBEs continue to face discriminatory barriers to full and fair participation in the opportunities for Baltimore and private sector contracts. This evidence includes perceptions of M/WBE incompetence; discrimination in access to commercial loans and surety bonds; abuses in the procurement process, and paying higher costs for capital inability to obtain public sector prime contracts; difficulties in receiving fair treatment in obtaining public sector subcontracts; abuses by primes of the payment process and exclusion from significant private sector opportunities to perform as either prime contractors or as subcontractors. While not definitive proof that the City of Baltimore has a compelling interest in implementing race- and gender-conscious remedies for these barriers, the results of the surveys and the personal interviews are the types of evidence that, especially when considered with the numerous pieces of statistical evidence assembled, the courts have found to be highly probative of whether the City of Baltimore would be a passive participant in a discriminatory marketplace without affirmative interventions.

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VIII. The City of Baltimore's M/WBE Program: Overview and Feedback Interviews

This Chapter reviews Baltimore's current contracting policies and procedures for the contracting categories of construction, professional services, goods and non-professional services and its M/WBE Program, followed by a summary of business owner experiences with the Program and policies and procedures.

A. Overview

Baltimore's Affirmative Business Enterprise Program adopts race- and gender-conscious goals to promote equality in and to encourage the participation of M/WBEs in all City contracts for all categories including construction, maintenance and professional services. Baltimore's procurement policies under this Program are governed by Article 5, Subtitle 28 of the Baltimore City Code (Edition 2007), Minority and Women's Business Enterprises (M/WBE ordinance).

Baltimore's M/WBE program was originally established in 1976 and has been administered by the City since that date. The ordinance provides that it is the "policy of the City of Baltimore to promote equal business opportunity in the City's procurement process by encouraging full and equitable participation by minority and women's business enterprises in the provision of goods and services to the City on a contractual basis."[147] The current ordinance, as amended by Ord. 12-007, is based upon findings of the Mayor and the City Council. The legislators relied upon findings made by an independent task force before the enactment of the first iteration of the ordinance; the 2000 Disparity Study[148]; Council hearings; the 2007 Disparity Study[149] and all other relevant facts. The Mayor and Council specifically found that:

- Past discrimination in the City's contracting process by prime contractors against M/WBEs has resulted in significant underutilization of M/WBEs in City contracts. As determined by the 2007 Disparity Study, this disparity has been "persistent, pervasive, and statistically significant";[150]

- This discrimination occurred in the major City contracting markets, "with the effect of significant underutilization" of M/WBEs;[151] and

- The ordinance is necessary to overcome the effects of past discrimination and to prevent ongoing discrimination in the City's contracting process.[152]

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[147] ART. 5, § 28-3(b).

[148] *City of Baltimore Minority Business Enterprise Disparity Study*, MGT of America Inc., 2000.

[149] *Race, Sex, and Business Enterprise, Evidence for City of Baltimore*, NERA Economic Consulting, 2007 ("2007 Disparity Study").

[150] ART. 5, § 28-3(a)(2).

[151] ART. 5, § 28-3(a)(3).

[152] ART. 5, § 28-3(a)(4).

The ordinance is a narrowly tailored remedy for discrimination within the City, and mandates that:

- M/WBE goals that are "flexible and rationally related to the disparity identified in the City's contracting markets;"[153]
- Instituting race and gender neutral remedies in conjunction with the M/WBE Program;[154]
- Annual goals be set for City contracts;[155]
- Setting goals on a contract by contract basis;[156]
- Criminal penalties can be imposed for fraudulent misuse of the program;[157]
- Subtitle 28 automatically sunsets unless extended by City Council;[158]
- Eligibility is limited to the Baltimore City Market Area;[159]
- The minority group categories must be regularly reviewed;[160] and
- Post-bid submission of information about M/WBEs and other subcontractors is required.[161]

All locally funded contracts awarded by the City are included in the scope of the ordinance, including construction, architectural and engineering, service and commodities contracts.[162] The current M/WBE ordinance expires, or sunsets, on June 30, 2013 unless the City Council, after an appropriate study and review, extends the ordinance for five more years.[163] The scope of the

[153] ART. 5, § 28-3(a)(5)(i).

[154] ART. 5, § 28-3(a)(5)(ii).

[155] ART. 5, § 28-16.

[156] ART. 5, § 28-21.

[157] ART. 5, § 28-98.

[158] ART. 5, § 28-6. In December 2013, the City Council extended the sunset date in the current ordinance until April 30, 2014 to allow for completion of the current disparity study.

[159] ART. 5, § 28-3(5)(vi).

[160] ART. 5, § 28-3(5)(vii).

[161] ART. 5, § 28-3(5)(viii).

[162] ART. 5, §28-4(a).

[163] ART. 5, §28-6. In this instance, the Council has extended the operation of the current ordinance pending completion of the current Disparity Study.

City's affirmative action contracting program is enhanced by including third-party contracts with the City of Baltimore.[164]

> Every contract or other agreement between the City of Baltimore and any governmental agency, quasi-governmental agency, corporation, developer, or contractor, under which the agency, corporation, developer, or contractor receives any fiscal assistance from or through the City for the purpose of contracting with businesses to perform real estate development, renovation, maintenance, or other services must require the agency, corporation, developer, or contractor to comply with this subtitle in awarding and administering that contract or agreement.

The Minority and Women's Business Opportunity Office (MWBOO or Office) is created by the ordinance in the Department of Law and is given primary responsibility for administering the City's M/WBE Program.[165] The M/WBE ordinance mandates that the Office will be administered by the Chief of MWBOO, who reports directly to the City Solicitor.[166] The placement of the M/WBE program function in the legal department coupled with the requirement that the Office be overseen by an attorney enhances the Office's credibility and lends the decisions of the Office considerable added weight. This also results in a high degree of coordination between the City's Solicitor's staff and other departments, with a heightened sensitivity to legal issues that may arise in the course of the operation of the Program.

The Office is currently staffed with seven positions, including a Chief, Deputy Chief, Compliance Analyst, Compliance Officer, two investigators, and a secretary.

The M/WBE ordinance outlines in detail the specific duties of the Office's, which include:

- Certification of MBEs and WBEs;
- Maintaining a directory of MBEs and WBEs;
- Providing information and assistance to M/WBEs to increase their ability to compete effectively for City contracts;
- Providing oversight and direction to City departments for assuring compliance with the application of the ordinance to City contracts;
- Investigating violations of the ordinance and recommending remedial action;
- Developing and distributing program documents;

[164] ART. 5, § 28-40.

[165] ART. 5, § 28-11(a).

[166] ART. 5, § 28-11(b).

- Maintaining statistics and reviewing the progress of agencies towards the annual M/WBE goals;
- Recommending alternative policies, administrative actions and strategies to further the ordinance's policies and goals;
- Monitoring contractor compliance with the ordinance and contractual commitments; and
- Certifying compliance with the ordinance during the contract award and contract close-out processes.[167]

The Office also seeks, in addition to the statutorily mandated duties, to increase the capacity and number of successful M/WBE firms in Baltimore City; increase the City's spending of contracting and procurement dollars with M/WBEs; and facilitate greater involvement of M/WBEs in identified growth sectors of the City's economy such as green buildings, technology, and real estate development.[168]

The Mayor's Office of Minority and Women Owned Business Development ("MWOBD") is located in the Office of the Mayor and plays a key complementary role to the MWBOO in the formulation of policy for small, local and M/WBE firms in the City of Baltimore. The MWOBD is staffed with a Director and two other employees that provide support for the M/WBE initiatives of the office. The MWOBD is responsible for recommending policies to enhance the economic inclusion efforts of the City and for promoting a business-friendly environment that attracts and grows small, minority- and women-owned businesses. The MWOBD also acts as an advocate within City government and an ombudsman for contractors, subcontractors and other stakeholders in resolving problems or barriers to compliance with the City's M/WBE Program. Finally, the MWOBD is also active in conducting outreach, providing technical assistance, building capacity, and facilitating networking opportunities that encourage the full mainstream participation of M/WBE businesses in City contracts, and that help such firms to flourish in the broader market area.

Under the ordinance, the Board of Estimates with the advice of MWBOO establishes annual participation goals for M/WBEs on City contracts.[169] The City practice is for MWBOO not to change the goals annually but rather adjust the goals upon the completion of each Disparity study. MWBOO must submit an annual report to the Mayor and the City Council on the City's progress towards meeting the annual goals. This report must include any problems or specific recommendations for improving the Program.[170]

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[167] ART. 5, § 28-12(b).

[168] http://www.baltimorecity.gov/government/minority/index.html.

[169] ART. 5, § 28-16.

[170] ART. 5, § 28-91.

Agencies with contracting responsibilities are also charged with duties under the ordinance to ensure that M/WBEs have the "maximum opportunity to participate on City contracts."[171] The objective is fostered by designating the agency head or designee with primary responsibility for achieving the goals of the Program and reviewing all aspects of the Program's operations on a continuing basis to assure its purpose is being attained.[172] Further, each agency must:

- Ensure that invitations for bids and requests for proposals comply with the ordinance;
- Include the M/WBE policy and related materials in bid documents;
- Advertise bids in minority-owned media no less than 10 days before bid due date;
- Provide written notices of opportunities to minority and women's trade and contractor associations no less than 10 days before bid due date;
- Evaluate all contracting opportunities in an effort to divide the requirements to provide opportunities for participation by M/WBEs;
- Establish procedures to ensure prompt payment of prime contractors and prime contractors' prompt payment of subcontractors;
- Ensure that a notice to proceed is not issued until the agency has received all documents needed to evidence the contractor's fulfillment of its Program commitments; and
- Submit to the Office all requested statistics and documentation.[173]

B. Outreach to Minority- and Women-owned and Other Small Businesses

MWBOO and MWOBD participate in many outreach activities to minority- and women-owned and other small firms. These include:

- Information sessions on upcoming contracting opportunities with the City and other governments;
- Participation on panels and workshops on the M/WBE program;
- Assistance with business development; and
- Networking events to introduce M/WBEs to prime contractors and to each other.

[171] ART. 5, § 28-66.

[172] ART. 5, § 28-68.

[173] ART. 5, § 28–69 to 28–73.

MWBOO also collaborates with the MWOBD on an Annual Procurement Fair that includes outreach, workshops and information on upcoming opportunities.

Of particular note is the Baltimore Local Contractor Development Program. Under the auspices of the Small Business Resource Center, www.sbrcbaltimore.com, this initiative is designed to assist local companies with technical assistance and bonding for the City's construction projects. It resulted from meetings with prime contractors and subcontractors to understand the difficulties small firms have in accessing technical assistance and surety bonds. The program is open to all trades and skill sets related to the construction industry, including, but not limited to, sewer construction, electrical services, concrete and demolition. This model program provides several important services:

- Technical assistance such as one-on-one counseling; Chief Executive Officer development; access to trade resources; mentoring; Lunch-N-Learn sessions where a professional (e.g., accountants, attorneys) provides information on business issues and practices.

- Annual Contractors College, designed for businesses in the construction industry to enhance the contractor's ability to secure bonding, working capital and to more effectively estimate and bid projects.

- Networking opportunities, linking participants to each other, trade organizations, prime contractors, City agencies and other procurement Officers and resource providers (e.g., accountants, lawyers, surety agents, etc.).

- Assistance with private and public procurement opportunities and requirements.

- Access to marketing, bonding, credit, legal, accounting and estimating resources.

- Outreach to M/WBEs small firms, prime contractors, City and State agencies, suppliers, accountants and attorneys.

- Strategic Planning and Feedback.

Also of note, in late 2013, the City of Baltimore was awarded a $900,000 competitive grant from the U.S. Department of Commerce's Minority Business Development Agency (MBDA) to open and operate a new MBDA Business Center in Baltimore. The new center's mission is to boost job creation and the global competitiveness of minority-owned businesses by facilitating increased access to contracts, capital and international market opportunities. The new business center will join a network of over 40 such centers throughout the nation. The grant will be overseen by MWOBD and the new center will be co-located with the Small Business Resource Center.

C. Program Elements

1. Certification of Minority- and Women-owned Businesses

The Office is solely responsible for certifying MBEs and WBEs. Approximately 200 new applications and 265 re-certifications are handled each year. The application form is simple to complete and available online. The average processing time is 40 days for a new certification application and 45 days for a renewal certification. The renewal certification process takes more time to complete because the Office will conduct a comprehensive review of the relevant financial and tax records for the previous two-year certification period. The M/WBE certification is good for a two-year period and must be renewed upon expiration of the original term. The M/WBE firm is considered certified by the Office during the review period of the renewal application.

The Office maintains a directory of certified MBE and WBE firms. A searchable version of the directory can be found online at http://cityservices.baltimorecity.gov/mwboo.

a. Firm Eligibility

i. Eligible Groups

A business enterprise "(1) that is owned, operated and controlled by one or more minority group members or female owners who have at least 51% ownership; (2) in which the minority group members or female owner have operational and managerial control, interest in capital, and earnings commensurate with their percentage of ownership; and (3) that is located in the Baltimore City Market Area" is eligible for certification as an MBE[174]or WBE.[175] ''Minority group member" is defined as "a member of a minority group, such as African American, Hispanic American, Asian American, or Native American, for which a utilization disparity has been established."[176]

ii. Business Location

The Baltimore City Market Area ("BCMA") is defined as Baltimore City, Baltimore County, Anne Arundel County, Howard County, Harford County, Carroll County and Queen Anne's County.[177] As was demonstrated in Chapter II, the revised geographic market area, for all procurement activities, is unchanged—that is, the Baltimore-Towson, Maryland Metropolitan Statistical Area.[178]

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[174] ART. 5, § 28-2(d).

[175] ART. 5, § 28-2(m).

[176] ART. 5, § 28-2(e).

[177] ART. 5, § 28-1(d).

[178] *See* Table 2.4.

iii. Business Size

The ordinance provides that the Board of Estimates, with the advice of MWBOO, may establish maximum size standards for M/WBEs. Standards may be set separately for "separate business categories" and should be reviewed annually. MWBOO has not adjusted the business size standards since 2010. Firms that exceed the standards are not eligible for certification or recertification if previously eligible and 11 firms graduated from the program in 2012.[179]

iv. Business General Criteria

In addition to being an independent, operating business, the applicant must have been in operation and minority- or woman-owned for at least one year and have an operating office in the BCMA.[180] The rationale for the one year in business operation requirement is to have an established track record of providing services, equipment and a documented level of experience. The Office will consider office arrangement, industry practices and other factors to determine whether the applicant meets the office location requirement.[181]

The applicant must be controlled by a minority or female owner or owners. Ownership and control must be real and substantial, and indicated by the customary incidents of ownership, as demonstrated by the substance of ownership and operating arrangements. The owner must have the power to direct or cause the direction of the management and policies of the applicant and to make day-to-day decisions, as well as decisions on management, policy and operations. The business must not be subject to any formal or informal restrictions that limit the customary discretion of the owner. There may not be any restriction that prevents the minority or female owner from making business decisions without the cooperation or vote of any owner who is not minority or female.[182]

v. Certification Investigations and Appeals

MBWOO may investigate an applicant's ownership, management, qualifications and other relevant matters beyond formal documentation during all phases of certification or recertification. Investigations may include, but need not be limited to, personal interviews, reviewing records and conducting on-site visits, audits, etc.[183]

All adverse certification decisions must be in writing and include the reasons for the determination. An applicant receiving an adverse certification determination such as denial of initial certification or recertification or decertification, may seek administrative review of the decision by submitting a written protest to the Chief within seven days. The protest must specify the factual grounds for the protest and be accompanied by any supporting documents. In

[179] ART. 5, § 28-80.

[180] ART. 5, § 28-78.

[181] ART. 5, § 28-78.

[182] ART. 5, § 28-79.

[183] ART. 5, § 28-81.

submitting an appeal from an adverse decision, an applicant may not submit new documents during the administrative review. The Chief must render a written decision, including the reasons for the decision, within 25 days of receipt. The applicant may also request a hearing before a panel of independent hearing officers (the Certification Appeals Board) that is knowledgeable of procurement laws and subtitle 28. This hearing panel is composed of one member appointed by the President of the City Council and the other members being appointed by the City Solicitor.[184]

2. Annual Participation Goals

The Board of Estimates, with the advice of MWBOO, establishes annual goals for MBE and WBE participation in each contracting and procurement area.[185] These goals are then presented to the City Council, which may accept them, set different goals in accordance with the ordinance's criteria or if no action is taken, the goals become effective within 30 days.[186] Annual goals "are not and may not be quotas."[187] The purpose of the annual goal is to aid the City in its annual evaluation of the M/WBE Program's effectiveness.[188] Goals should be directly related to current estimates of M/WBE availability.[189] The current Annual Goal is 27 percent MBE and 10 percent WBE.[190]

3. Setting Contract Participation Goals

MWBOO is responsible for setting contract participation goals on each specific contract in consultation with the contracting agency, the City Purchasing Agent, or both. In setting goals, the Office considers a number of factors including the availability of MBEs and WBEs as reflected in the prior Disparity Study for the various industry sectors; the level of past utilization on past City contracts; contract specifications; the adverse impact on non-M/WBEs; and any other relevant factors. In order to set an M/WBE goal, at least two MBEs or WBEs must be available for a contract goal to be applicable to a contract.[191]

The primary contracting agencies for the City that the Office works with are as follows: Department of Public Works, Housing, Department of General Services, the Bureau of Purchases and the Department of Transportation. On construction contracts of $1,000,000 or more, MWBOO may in consultation with the contracting agency set goals for MBEs divided into sub-goals by race and ethnicity. MWBOO may also set MBE goals by subgroup on architectural and engineering contracts.[192] The contract goal applies to the initial contract amount and all

[184] ART. 5, § 28-83.

[185] ART. 5, § 28-16.

[186] ART. 5, § 28-19.

[187] ART. 5, § 28-17(b).

[188] ART. 5, § 28-17(a).

[189] ART. 5, § 28-17(b).

[190] City of Baltimore - Board of Estimates, Minutes dated February 8, 2012.

[191] ART. 5, § 28-22.

[192] ART. 5, § 28-22(c)(d).

subsequent amendments, change orders or modifications that increase the dollar value of the contract by 10 percent.[193]

The MWBOO Office will only set M/WBE participation goals on contracts that exceed $50,000.00. Before an agency advertises an invitation to bid, it must submit to the Office a Goal Information Sheet. This Sheet lists the scope of the project, the estimated cost of the contract and the estimated percentage of the total contract by each sub-trade or function. It also provides for explanations, if relevant, of work the successful bidder must perform with its own workforce, services or supplies available only from a sole source and services or supplies that should be exempt from contract goals. The Office also completes the MBE Contract Goal-Setting Worksheet that lists the number of certified firms divided by the number of prequalified firms on the City's vendor list for each sub-trade or function, as a percentage of the contract. Based upon this analysis, MWBOO sets goals on the project.

An agency may request a waiver or reduction of the contract goals in a specific amount from MWBOO before the solicitation is published using the Agency Pre-Solicitation MBE/WBE Waiver Request form. MWBOO may also request a waiver; but a waiver is rarely requested by MWBOO. The agency must document why a waiver is requested, attach a copy of the contract budget, and if the contract will not be competitively bid, a list of firms solicited and their certification status. The Office may grant the request if the reasonable and necessary requirements of the contract render subcontracting or other participation of firms other than the bidder infeasible; or at least two qualified certified firms are unavailable in the City of Baltimore Market Area "despite every feasible attempt to locate them."[194] The Office must specify the amount the goal is reduced if MWBOO elects to waive or reduce the goal. The contracting agency may appeal a denial of the request to the Board of Estimates, which decision is final.[195] The contracting agency may waive goals for sole source and emergency contracts.[196]

If a bidder is unable to comply with the contract goal, the bidder may request a waiver at the time of bid opening. The bidder's request for a waiver must include documentation that demonstrates the bidder has made a good faith effort to meet the participation goal. [197]

There are certain affirmative action contracting programs that are outside of the City's M/WBE program administered by MWBOO. For example, the Contract Administration Civil Rights Division for the City of Baltimore Department of Transportation will set DBE goals for any federally assisted transit projects and also monitor DBE compliance for state highway projects with City participation.

[193] ART. 5, § 28-24.

[194] ART. 5, § 28-61(b).

[195] ART. 5, § 28-61.

[196] ART. 5, § 28-64.

[197] ART. 5, §28-62.

4. Contract Award Policies and Procedures

a. Contract Types

With only a few exceptions, all City contracts must incorporate the ordinance by reference and provide that a bidder's, contractor's or subcontractor's failure to comply with the ordinance is a material breach of contract. The City contracts also require that during the contract term, the contractor shall fulfill Program commitments submitted with the bids, as well as make efforts to continue to utilize M/WBEs and maintain records necessary for monitoring compliance.[198]

For contracts between $1,000.00 and $4,999.99, the contracting agency is required to solicit bids from an MWBOO provided list of certified firms. The agency must notify the Office if no certified firms are available before the solicitation of bids, and the Office must take proactive steps to identify qualified firms and give notice to the agency of their availability.[199]

For contracts between $5,000.00 and $49,999.99, the contracting agency must provide MWBOO with all bid conditions and requests for proposals. The Office may recommend M/WBEs to be solicited directly to provide bids.[200]

For contracts of $50,000.00 or more, each bidder must submit a Certified Business Enterprise Participation Affidavit before bid opening in which the bidder commits to utilize certified firms in a percentage that equals or exceeds the contract goal. Failure to include the Certified Business Participation Affidavit in the bid will render the bid non-responsive. The affidavit must include the name of each MBE and WBE to which the bidder intends to award a subcontract; whether the subcontractor is an MBE or WBE; the percentage and dollar value of each subcontract; the scope of work to be performed; and any other information the MWBOO requires to evaluate whether the contract goals were met. Each bidder is responsible for verifying prior to bid opening that the listed MBE or WBE firms are certified. During contract term, a bidder's failure to meet the contractual commitment to the level of MBE or WBE participation may be considered a material breach of the contract. The Contractor is required to submit a list of all subcontractors, minority and nonminority utilized on the contract before final payment including the release of retainage and include the subcontractor's name, service or goods provided, total amount paid, and the race/ethnicity and gender of the owner.[201]

The ordinance also applies to contracts in which the City is the lessee and concession contract awards. Similar to other contracting practices, agencies must solicit bids from certified M/WBEs for these contracts. If the contracting agency determines that no qualified MBE or WBE is available, the Office must be notified before entering into a lease or awarding a concession contract. If the Office has waived notification based on the unavailability of M/WBEs, the agency may enter into a lease or award a concession contract without notice to the Office. The

[198] ART. 5, § 28-54.

[199] ART. 5, § 28-46.

[200] ART. 5, § 28-47.

[201] ART. 5, § 28-48.

Office may take steps to identify qualified firms and notify the agency of their availability. The agency must provide M/WBEs every practical opportunity to submit bids. All requests for concession proposals must require the concessionaire to make good faith efforts to utilize M/WBE subcontractors and suppliers, and submit projected M/WBE utilization and a description of good faith efforts to utilize certified firms.[202]

In addition, all City agencies, commissions and boards must make good faith efforts to utilize MBE and WBE firms in their contracting activities. This includes, but is not limited to, financial services, travel and legal services. All City agencies must submit annual written reports to the Office on their efforts to utilize M/WBEs. The City Finance Department, Comptroller and Retirement Boards are obligated to submit reports annually to the Mayor and City Council on their utilization of financial institutions that are M/WBEs.[203]

b. Counting M/WBE Participation Towards Contract Participation Goals

For a firm's participation to be counted toward the goal, a business prior to bid opening must be certified by the Office.[204]

A bidder may count towards a contract goal the value of a subcontract with an MBE or WBE. The bidder must choose the goal to which the contract value is applied if the firm is certified as an MBE and a WBE and the bidder cannot split the participation of one firm between the two goals. The certified MBE and WBE firms may not be counted, however, if the firms intend to subcontract more than 10% of the services with the bidder.

As stated above, the certified firm must perform at least ninety percent of the work of the subcontract to be counted towards a contract goal, except the requirement does not apply to the purchase of materials, equipment or supplies incidental to the performance of the subcontract.[205]

An M/WBE prime must also meet the participation goal and cannot count its participation toward the subcontracting goal.

If the M/WBE firm is a participant in a joint venture, the distinct and clearly defined portion of the work performed by the certified firm may be counted toward the goal. The certified firm must have an interest in the control, management and operations of the joint venture commensurate with its ownership interest and be responsible for a distinct, clearly defined portion of the work equal to its share in the joint venture.[206]

To be counted towards a contract goal, the MBE or WBE must perform a commercially useful function. The ordinance defines a commercially useful function to mean that the M/WBE firm

[202] ART. 5, § 28-49.

[203] ART. 5, § 28-50.

[204] ART. 5, § 28-76.

[205] ART. 5, § 28-34.

[206] ART. 5, § 28-33.

must perform a real and distinct portion of the work for which the firm has the skill, expertise and actual responsibility to perform, manage and supervise. In making the "commercially useful function" determination, the City will evaluate the amount of work subcontracted, industry practices and other relevant factors to determine whether the certified firm is performing a commercially useful function.[207]

A bidder may count 100 percent of its expenditures towards the goal to a certified firm supplier who is also the manufacturer.[208] Expenditures to a certified wholesaler supplier warehousing the goods supplied or certified manufacturer's representatives, may be counted as 100 percent; however, only 25 percent of the goal may be attained through such non-manufacturing supplier expenditures. In cases where an "extraordinarily large portion" of the contract price is for equipment or supplies, an adjustment may be made by lowering the contract goal or increasing the 25 percent limit or a combination of the two approaches.[209]

A bidder may not count excessive fees but only reasonable fees and commissions paid to insurance companies or travel agents,[210] and only fees charged or earned by a certified financial institution may be counted.[211]

A bidder is precluded from counting expenditures with an affiliated firm. The ordinance defines Affiliation as having a "financial interest in, has an interest in the ownership or control of, or is significantly involved in the operation of the certified business enterprise."[212]

c. Evaluating Bidders' Compliance

The bid conditions and request for proposals require the bidder to include in its bid submission MBE/WBE Bidder Information Forms, which include the MBE/WBE Participation Affidavit; the MBE/WBE Participation Disclosure Form; and Statement of Intent Forms signed by the bidder and the MBE or WBE. Any bid that does not include these forms is non-responsive and will be rejected.

If a bidder is unable to comply with a contract goal, the bidder may submit a waiver request with the bid on the MBE/WBE Participation Waiver Request Form. No waiver is granted unless the request includes documentation that demonstrates a good faith effort to comply with the goal(s). This documentation is to include the reasons why the bidder was unable to meet the goal(s); the efforts made to select portions of the contract to be performed by certified firms; and a statement explaining the basis for the rejection of any bids received from certified firms.

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[207] ART. 5, § 28-32.

[208] ART. 5, § 28-36.

[209] ART. 5, § 28-37.

[210] ART. 5, § 28-38.

[211] ART. 5, § 28-39.

[212] ART. 5, § 28-41.

MWBOO is responsible for evaluating the bidder's good faith efforts and has granted only a few waivers in the past. There is not a formal review process for administrative reconsideration of a good faith effort's determination by MWBOO.

The contracting agency submits to the Office the bidder information forms of the firm it intends to recommend to the Board of Estimates for award. The bid is reviewed to determine if the bidder has made a commitment to utilize MBEs and WBEs at a percentage that equals or exceeds the contract goals stated in the advertisement. A Compliance Review Form is completed and sent to the contracting agency advising whether the bidder is in compliance with the goals. Any bid not meeting the goals for which a waiver was not granted is determined to be non-compliant. If a bid is found non-compliant, the agency is asked to send MWBOO the MBE forms of the next lowest bidder for a compliance evaluation.

5. Contract Performance Policies and Procedures

a. Contract Reporting and Monitoring

At MWBOO's request, a prime contractor must provide copies of all subcontract agreements with firms used to meet the contract goals; payment verifications to M/WBEs; and reports and documentation on the contractor's subcontractor awards to M/WBEs under non-City contracts not subject to the ordinance.[213]

- Contracting agencies are also required to keep complete records of their contracting activity. These include:
- The dollar value of the contract;
- The nature of the goods or services to be provided;
- The name of the contractor;
- Efforts to solicit bids from M/WBEs; and
- All subcontracts awarded by the contractor, including the dollar value, nature of the goods or services provided; the subcontractor's name; and the race-ethnicity of the subcontractor's owner.[214]

During the term of a contract, the Office employs several means to monitor contractor compliance. The Office will generally request progress reports at 25%, 50%, 75% and 100% of the project. MWBOO will request M/WBE participation reports from a prime contractor and will review the M/WBE participation if the dollar value of the contract is changed. After contract award, the Office may also:

[213] ART. 5, § 28-56.

[214] ART. 5, § 28-90.

- Conduct random on-site visits to determine whether contractual commitment are being kept;
- Audit invoices and payments to the M/WBEs, including reviewing cancelled checks;
- Review wage records from the Wage Commission or State Comptroller's Office;
- Schedule personal interviews with prime contractors and subcontractors; and
- Require contractors and agencies to submit any reports and documents necessary to determine compliance.

b. Subcontractor Substitutions

If a contractor is unable to meet the contract goal by utilizing the M/WBE firms specified in the bid, the contractor must submit a written request outlining the reasons for the substitution request. The contractor may also request a waiver if it is unable to find a substitute and is prohibited from utilizing its own forces to perform the work designated for M/WBE subcontractors. MWBOO must approve in writing any substitutions of an MBE or WBE specified at bid opening or utilizing the contractor's own forces to perform the designated work.[215] There is not a formal appeal process if MWBOO denies a substitution request. Any contractor that fails to comply with the provisions may be subject to a laundry list of penalties.[216]

c. Payments

A prime contractor under the ordinance must pay its subcontractors in a timely manner for satisfactory work. "Timely" is defined in the ordinance as transmission to the subcontracting firm no later than seven days after the prime contractor receives payment from the City. Beginning with the second pay request, the prime contractor must provide evidence that all subcontractors were paid out of the prior payment proceeds, unless a written bona fide dispute exists between the prime contractor and the subcontractor.[217]

Before final payment can be made, the prime contractor must submit the Subcontractor Utilization Form, listing all subcontractors, both M/WBE and non-M/WBE, utilized providing the name, total amount paid and the owner's race-ethnicity and gender.[218] The City audits all payments to the prime contractor and all prime contractor payments to its MBE and WBE subcontractors. Cancelled checks, invoices and wage records are examined for compliance before release of any retainage.

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[215] ART. 5, § 28-63.

[216] ART. 5, § 28-96.

[217] ART. 5, § 28-55.

[218] ART. 5, § 28-48(f).

6. Enforcement and Penalties

If the Office believes that a contractor or subcontractor has failed to comply with the ordinance or any contractual provision relating to the ordinance, both the contracting agency and the firm must be notified and the parties must attempt to resolve the matter through conciliation. If the parties are unable to resolve the matter, the Office and the contracting agency must submit to the Board of Estimates written findings and recommendation. The Board may impose administrative penalties.[219] Penalties may include:

- Suspension of the contract;
- Withholding of funds;
- Rescission of the contract based on a material breach;
- Refusal to accept a bid;
- Disqualification from eligibility for contracting with the City, for a period not to exceed two years; and
- Liquidated damages.[220]

If, after investigation, MWBOO finds that a contractor has failed to comply with the ordinance, it must make a written finding that specifies the nature of the non-compliance and attempt to resolve the matter through conciliation. If the non-compliance cannot be resolved, the Office must submit its written findings and recommendations to the Board of Estimates. The Board may take appropriate action to secure compliance. Liquidated damages and debarment have been imposed on at least two contractors that violated the ordinance.

In addition to these administrative processes, the ordinance makes it a misdemeanor to:

- Fraudulently obtain, retain, attempt to obtain or retain, or aid another in fraudulently obtaining, retaining, or attempting to obtain or retain certification as an MBE or WBE;
- In any matter administered under the ordinance, willfully falsify, conceal or cover up by a trick, scheme, or device a material fact or make any false writing or document knowing that it contains any false, fictitious or fraudulent statement or entry;
- Willfully obstruct, impede or attempt to obstruct or impede an authorized official or employee who is investigating the qualifications of an applicant for certification;

[219] ART. 5, § 28-87.

[220] ART. 5, § 28-96.

- Fraudulently obtain, attempt to obtain or aid another in fraudulently obtaining or attempting to obtain public money to which the person is not entitled under the ordinance; or

- Make a false statement to any person or entity that another person or entity is or is not certified under the Program.

Violations are punishable by imprisonment for not more than one year, a fine of not more than $1,000 or both.[221]

D. Bidder Non-Discrimination Policy

To avoid becoming a passive participant in private sector commercial discrimination,[222] the City in 2006 adopted a Commercial Non-Discrimination Policy.[223] The ordinance provides:

> "… a clear policy against discrimination in business on the basis of race, gender, religion, national origin, ethnicity, sexual orientation, gender identity or expression, age, or disability and a clear policy for the City not to engage in business with firms that discriminate in their solicitation, selection, or treatment of vendors, suppliers, subcontractors, or business customers; establish[es] a formal complaint process and investigation process for alleged violations of this policy; and provide[s] dues process for hearing evidence, rendering findings, and imposing sanctions for violations of the commercial non-discrimination policy."[224]

The ordinance is to be liberally construed and applies to all contracts, construction, financial or professional, to which the City is a party and all firms doing business with the City. To come within the scope of the policy, the discrimination must have been committed by a firm in the Baltimore City Market Area (BCMA) and a complaint filed within the four year limitation period. The discrimination is deemed to have occurred in the BCMA either because a party operated a business or resided in the BCMA, or the discriminatory act was committed in the BCMA.[225] The policy also covers all third party contracts with governmental, quasi-governmental or private parties.[226]

The Office's investigative unit investigates the discrimination complaints.[227] The Chief is tasked with the responsibility to conduct an initial, non-binding review and investigation. Based upon the investigation, the Chief makes an initial non-binding finding that each allegation is sustained,

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[221] ART. 5, § 28-98.

[222] See *Croson*, 488 U.S. at 491-92.

[223] ART. 5, §29.

[224] City of Baltimore Ordinance 06-186, Council Bill 05-249.

[225] ART. 5, § 29-3.

[226] ART. 5, § 29-3(b).

[227] ART. 5, § 29-8.

not sustained, unfounded, false or frivolous, settled or withdrawn. The next step in the process is for the Chief to recommend to the City Solicitor the appropriate action to be taken on the complaints. The Chief's potential options for recommendation include additional investigation, sanctions, remedies or other appropriate action.[228] The appropriate legal standard applied by the City Solicitor is a preponderance of the evidence. In making the initial finding, the Chief may consider evidence regarding whether there was an intent to discriminate; a discriminatory pattern and practice by the respondent; actions by the respondent to remedy the alleged discrimination; any prior remedies effectiveness; the respondent's business dealings with other firms in the same protected class as the complainant; and any other relevant evidence. The time frame for the Chief's initial finding(s) and recommendation(s) is 120 calendar days from the receipt of the complaint, unless extended for good cause or by agreement of the parties.[229]

If one or more of the allegations is sustained by the Chief, the respondent shall be entitled to request an administrative hearing within 15 calendar days. If review is sought, the City Solicitor must appoint a hearing officer within 10 days, and the hearing must be held within 90 calendar days. If the respondent fails to request a hearing, pending review and approval by the Board of Estimates, the Chief's non-binding findings and recommendations become the final administrative decision of the City. The City Solicitor may establish, as necessary, additional regulations to further specify the procedures and standards for the hearings. The hearing officer must prepare a written decision affirming or rejecting the Chief's initial findings and recommendations within 120 days of the closing of the record.[230] The hearing examiner's decision may be appealed to the Board of Estimates by the complainant or respondent within 10 calendar days from service of the notice of the decision. The Board must render a final administrative decision within 90 calendar days.[231] Judicial review may be sought by an aggrieved party of the Board of Estimate's decision in accordance with the Maryland Rules of Procedure.[232]

The hearing officer or the Board of Estimates may order various remedies if a complaint is sustained, including mediation; debarment for a maximum of 5 years; suspension or termination of any current City contracts; referral for criminal prosecution; or other lawful remedies.[233] Prior to a final administrative decision of a violation of this ordinance, the filing, and prosecution of a complaint under subtitle 29 including the investigation, hearing and appeal does not impact the award, performance or payment on a contract.[234]

To implement this policy, every City contract must contain a mandatory non-discrimination clause, and every bidder must disclose any instances within the past 5 years where there has been a final adjudicated determination in a Maryland State procedure that the bidder has discriminated

[228] ART. 5, § 29-9(b).

[229] ART. 5, § 29-9.

[230] ART. 5, § 29-10.

[231] ART. 5, § 29-13.

[232] ART. 5, § 29-14.

[233] ART, 5, § 29-11.

[234] ART, 5, § 29-19.

against a business, and any resulting remedies.[235] Every contractor agrees to provide to the City, upon the filing of a complaint, information on all subcontractors and suppliers used in the BCMA for the past four years, and to fully cooperate in any investigation.[236]

E. Business Owner Feedback Interviews

To gather anecdotal evidence of the effectiveness of current City of Baltimore policies and procedures for leveling the playing field and opening up opportunities for M/WBEs on City contracts, we interviewed 145 firm owners or representatives. The following are summaries of the issues discussed. Quotations are indented and are representative of the views expressed by multiple participants. Some quotations have been shortened for readability.

1. Significance of the City of Baltimore's M/WBE Program

M/WBEs reported that being certified provided opportunities that otherwise would not have presented themselves. The Program was seen as critical to allowing M/WBE businesses access to the business opportunities with the City.

> We've been certified for the last thirteen years and the biggest advantage that I have found is that it gets you to the table. It doesn't always get you the job or the project but it gets you to the table and a lot of times that's the most important part.

The non-M/WBE prime construction contractors did not believe that the M/WBE program benefited them, but did recognize that M/WBE businesses would be hurt without the program.

> We don't feel that it benefits us. Okay. Does it benefit trying to grow minority businesses and improve, you know, the minority community, yea it probably does…I mean if you don't have it I do think it would really hurt minority businesses.

2. Supportive Services

M/WBEs were highly complimentary of the business support services they have received from the MWBOO and the Small Business Resource Center.

> I've been called by the Office of Minority and Women owned Businesses and asked, was I aware of an opportunity.

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> I think another positive is the Small Business Center. They helped me quite a bit with learning the paperwork and the, what path to follow.

[235] ART. 5, § 29-16.

[236] ART. 5, § 29-17.

The non-M/WBE firms expressed their strong support for creating relationships with the local schools to develop firms and grow capacity.

> Well I think this is a very long-term goal but I think the City, perhaps, through a different, entirely different department, should have an incubator to grow these firms. You know, we have Morgan State here, it's a, you know, a big university right in our midst.

The M/WBE firms, however, wanted the City to provide more access to the project managers.

> But those issues are access to those project managers to be able to formulate those kind of relationships, to cultivate the trust necessary to get those projects.

3. Certification Standards and Processes

Generally, there were many positive comments among M/WBE firms with the City's certification standards and application process. The Certified firms did consider it an unnecessary hurdle that the City does not accept certifications from other jurisdictions in Maryland.

> We're a Hispanic owned …located in Baltimore City. It was very straight forward. You went online, filled out the paperwork, submitted what you need to submit. We even renewed already just this past year and it wasn't difficult. I had a great experience.

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> I'm certified with the City of Baltimore. The registration process was pretty simple. But as far as getting work with the City, that's [the] hard part.

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> I was just certified in May in Baltimore City and they came out, probably about maybe ten or fifteen minutes just to make sure the firm is set up as a legitimate office. I can say once I submitted the application, the process was probably about five or six months.

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> You have to be a resident. The thing is that you know, if I am an architect in the State of Maryland, my license is good in every jurisdiction in the State of Maryland. If there's an engineer in the State of Maryland, it's good everywhere. Why does it have to be separate certifications in every different jurisdiction?

A nonminority male construction firm owner thought that the one year in business certification requirement was itself a major barrier.

> So for a startup company there's no way that they are going to survive a year with potentially getting into the pool of being able to participate with a larger contract, or larger contractor. It's just not going to happen…I mean if you can do the work, hit the ground running, they're certified. I just don't see how any, really any company can wait a year and stay in business and then go for this, for the minority certification.

4. Access to Information About Upcoming Opportunities

A major concern expressed by a number of firms, minority and nonminority, was the need for a central portal for City contracts and expenditures.

> This lady in front of me has pointed out the fact that it's very hard to get information from the City of Baltimore. Their comment to me was that, we make phone calls but do not get return calls.

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> But I also went to Baltimore City, your main office which is on North Avenue, presented my proposal to them and that went nowhere. And then I also went to Baltimore City to present my conflict resolution sensitivity training there and after I met with the individual it still, it went nowhere. So we need to have some type of system that set's up that starts with A and perhaps ends with, you know, whatever so that is the end process.

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> I want to say, we need to have a one stop office.

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> It's very difficult to get in contact with the people in the procurement with the City because I've tried. I've tried. I asked, you know, all the questions everyone else here has asked. Where do you put your procurement[s]? Where do you put all your listings? Where do you, you know, put your advertisements? Notices? Pretty much I have not gotten a direct answer.

5. Pre-award Processes

a. Meeting M/WBE Goals

Some M/WBEs thought the City's program overall was good and reflected a concerted effort by the City to provide M/WBEs with opportunities on City contracts.

> As far as the Baltimore City program, I think Baltimore City has a good program.

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> You know, the City's much more stringent. We want it.

Outside of low bid awards, M/WBEs stated that the City needs to reevaluate the evaluation criteria for professional services.

> The small firms have access to a lot of things but the older methods of evaluation is old, archaic and I don't think anyone anywhere in any bureaucracy has a department that will sit down and study how they evaluate firms to do work and say boy we are old and archaic. We need a new way of doing this.

The consensus among the non-M/WBE firms is that the contract goals exceeded the available pool of M/WBE firms.

> I'll start with a generic statement of the goals, the MBE, WBE goals are very high in the City of Baltimore.

Some non-M/WBE firms stated that the unfortunate consequences of the City's high MBE goals has led to firms overextending themselves.

> And even if they have high quality staff, they're just overwhelmed by the amount of work that comes through subcontracting goals. And it becomes a recipe for failure for them, which is unfortunate, because they just can't deliver. And then it creates, I think, backlash in the program of where you find a sub-consultant you like but then they're too busy to help you out and you have to step in and help them get the work done.

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> So we have a project we recently completed, …a qualified firm, …but they became overwhelmed and the mechanical engineer had to step up and take over the work and lost a few hundred thousand dollars in the process of that. And when you go back to the client they're like, well that's just the cost of doing business.

A nonminority male engineer also objected to calling the goals aspirational.

> [T]hey say they're goals. They are not goals. They're, you meet them. You have to meet them. And they, I thought …brought up a good point but if you don't. Well you have to call all these others and get these others in there. That's just not the real world. That doesn't happen that way. … If you get a mechanical job, we do a lot of mechanical prime work. And you give up 35 percent. Where do you make that up when you have a mechanical job? You know, you have some structural; you have a little bit of architecture. It's very, very difficult to do it.

Some nonminority firms stated that the City should set goals more closely tailored to the actual capacity and the available M/WBE firms for projects.

> Why can't it be related to capacity? I mean how can you ask for more than there are? And I know that there are not enough African American owned firms in the City of Baltimore to do this work, either on architecture or engineering. So how do we move that dial? …

> You can't say well, we have six percent capacity but we're going to require 40 percent or whatever.

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> Asian subcontractors are very, very difficult. They do not exist.

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> I can't think of an African American owned mechanical/electrical firm in Baltimore. I don't think there is one.

A number of nonminority contractors also expressed frustration that the City did not understand the business realities of the industry.

> A few years ago, we were working on a project in Baltimore City. We had met our MBE, WBE goals with our team. And we're working through that job. We're in the middle of designing, well within the design. We got another RFP for another project with the City and we submit with the same team and it turned out that one of our consultants had lost their MBE status in the process….You need to find another in order to meet these goals. And then proceeded to say, and oh by the way you have this same engineer on your other project. You need to replace that engineer because you are no longer meeting that goal. So there's a complete disconnect between the purchasing MBE liaison and the fact that we're deep in the middle of a complex project and I can't just yank one engineer out of it in the middle of design and put one that is [an] MBE that we've never worked with to pick that up.

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> They want you to have multiple subcontractors. And what they really don't understand is, from a bookkeeping standpoint it's just too much to keep track of and they want copies of checks sometimes, they want to approve the payment. It's almost like they want to try to incorporate as many as you possibly can and you're trying to narrow it down because practically speaking for you to track it and take care of it, that's what you, you're trying to get it all under a couple of baskets.

It was especially hard to meet sub goals on City projects.

> And it's hard to get your sub goals. I mean there's just not enough people in all the different trades that we, you know, do in order to get participation.

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> With a normal type discipline, a project is just easier to meet the goals.

Regardless of the concerns about the goals, the consensus among the non-M/WBE firms is that a concerted effort must be made to meet the City's M/WBE goals.

> I don't think I've bid a project yet, maybe once in a blue moon one comes along that you can actually get a combination of those numbers and meet the goal. But probably 99 times out of a hundred you're costing the job money because you're having to meet the goals somehow.

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> Let me tell you, every company in this room and I know them by reputation as well, they're going to meet the goals.

While goals waivers are permitted under the Program, several prime firms found them difficult or impossible to obtain.

> We get the impression the City's not interested in a waiver for an MBE.

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> And that's pretty much. It's not, it's not. It's a requirement. It's not a goal.

Engineers were concerned that the City was so committed to reaching a goal that they did not have the flexibility to seek waivers.

> Because it is very hard. And I know that we can talk about it in the industry that talking about MBE is the third rail. It's like you can't talk about it. And you talked about asking for a waiver. It's like I would never dream of asking for the waiver because I know someone else has met it so immediately they're going to look at me and say, well you're just not trying.

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> It makes you scramble and do things that you normally would not do to get the client the product they want. And that's where the system failed.

M/WBE firms had an opposite view of the non-M/WBE firms' efforts to meet the goals and the granting of waivers.

> One of the horror stories I hear on a repeated basis as other business owners come to me and I get these reports back, is that the City is accepting the word…of these companies that they can't find these competent minority companies.

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> That waiver process is pretty capricious.

Some prime contractors were very concerned about the burdensome M/WBE paperwork requirements when submitting a bid.

> One of the shames of the bid day seems to be there's a disconnect between the paperwork that's required to be submitted with the bid and what it takes to put a bid in on bid day. And unfortunately often times there's more effort put into getting the paperwork right than actually knowing the project and getting the best price for your project. And that, you know, there's so many hurdles and so many requirements and restrictions and MWBOO can tell you they've got, I'm sure, rooms full of bids that they're throwing out because of a paperwork issue one way or the other.

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> Well the other thing on bid day is you have to put in the dollar amount and the percentage. If you just put the dollar amount of that sub instead of the percentage it'd be a lot easier. You can't do the percentages until you have done your bid. And that percentage changes throughout…You might be at the 10 million dollars and you get a low electrical number. Well you're now at a million eight or something. Then that percentage changes for all those minority subs and you got to get not only the dollar amount but the percentage.

A nonminority male-owned engineering firm acknowledged that his perspective of M/WBE firms had changed.

> Last week we were interviewing a firm and we really had our focus was they were an MBE firm, and halfway through they said, you know, we want to let you know that we're not an MBE firm. We're an engineering firm that happens to be MBE. And we all sat back and took a little bit of a new look at it because you are so used to that, this is what we have to do and we go through the motions, can you get this done, can you do this, can you do this. You almost look past what they can do for what they are.

Several certified firms stated that they disagreed with the requirement that they should be required to meet contract goals.

> I've been on a contract where I had to pay out 15 percent to an MBE and a WBE. Being I am an MBE/WBE myself it didn't make sense but they didn't look at it that way. I still have to pay out or give that percentage away.

b. Contract Solicitations

There was significant support among the M/WBE architectural and engineering firms to revise the selection criteria in order to improve opportunities for small firms to win City contracts.

> I know we have talked about [it] but I don't feel there's emphasis on it, is how do we change those criteria for evaluations so that firms that can do work but don't have the experience especially working in the City, can compete and win those?

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> And I have heard some of the stories about firms saying that they do not have enough experience. We've…typically [had that problem] too. You know, we try to pull some of our private sector jobs but even we were on the short list interview with Public Works in Baltimore City and they said, … well, what's your experience in Baltimore City? … So, a water line's a water line.

Several M/WBEs suggested that the City should move away from multiyear term contracts.

> They have CitiBuy so you could move some of this stuff into task orders.

Smaller contracts were also suggested to increase opportunities for M/WBEs to perform as prime contractors. Large contracts and the requisite bonding or insurance requirements, place contracts out of the reach of the majority of M/WBEs and other small firms.

> There should be, like the gentlemen said, there should be more opportunities on the prime level.

***

> I'd like to see the City focus on, you know, getting out their small jobs. I mean there's a difference between a small company, MBE company that does a couple of hundred thousand a year, versus the one that does eight or nine million. You always hear about the big projects that are going on but if they really put some effort into saying, you know, …these are the small projects we're pulling out.

There was significant support for stream lining the contracting process and taking advantage of technology.

A nonminority female observed:

> When I'm submitting. I'm submitting five copies, hard copy paper. And my question was, why aren't we doing this electronically. And they basically laughed and said, have you been to the City's website? So nothing is done through the computer system. Everything's hard copy. And I have to make five copies of 130 submittals of the materials I'm using. So that they can distribute to the engineer, to the project manager. When I could just email one set of submittals.

The use of "task order" or "on call" contracts was criticized on two bases. First, M/WBEs selected as prime contractors, subcontractors or consultants often did not receive any actual orders. M/WBEs selected to participate on task order teams had no ability to predict if, and when, they would be utilized. Second, it is difficult for prime contractors to meet M/WBE subcontracting goals on an on-call basis in the absence of actual scopes of work.

> But the notion of the on-call and how this may be structured, when they populate the pool with firms to pick from as they move forward…To have to identify a team now and the percentages not knowing which project you may get over the next few years, would be difficult.

There was also general support for some type of local preference and small business program among the majority of firms across all business categories.

> I wish for RFPs or on call that they could have projects that are …[for] a certain size small businesses or for businesses up to 25 people or up to 10 people…
>
> ***
>
> So I think what we are really get to [is] there should be a small business reserve set aside for small businesses that we compete with the other small businesses.
>
> ***
>
> But I am wondering if there's a way where we could do something where there was say, a small business reserve where we could move up to larger projects, and maybe that limit be increased instead of…$100,000 or $250,000. Maybe it be a…million and a half…

6. Contract Performance

a. Monitoring

Some M/WBEs suggested that greater monitoring of contract performance was needed, especially in the later stages of the contract.

> There is no enforcement basically.
>
> ***
>
> I do have some concerns with the City of Baltimore being a prime and a subcontractor and my concerns have to do with subcontractor goals. One of my concerns is with Baltimore City. There [has] not been any contract monitor with the subcontractors. I've been on several contracts as a subcontractor with other companies and no one has ever presented or questioned me how much I was getting paid from the prime.
>
> ***
>
> I was just shocked at what's going on here in Baltimore City in regards to compliance.…And I think the big take back is they're not doing a darn good job of it.
>
> ***

> But anyway, I think that what I see here in City departments is the procurement process needs to be straightened out. Need a review, some more policies just put in place, and there should be enforcement of that of course.

Several nonminority firm disagreed with the criticism that the City's program monitoring efforts were lax.

> The City does a great job with monitoring.

***

> I basically have to hire one person just to cover the monitoring requirements. Because they ask you for so much of the same…stuff, week after week or not week after week but month after month, rather if it was a six month or maybe a year monitoring process it would free up…some of our management.

***

> I think with the monitoring of the goals. We actually changed the way that we, our internal process had to change. We had to make sure that, we invoiced. Because what they do is they call your subs and ask your subs how much money you have paid them. And then the numbers need to match. If I say we gave you a half a million dollars, when they call you, you have to say I got a half million dollars…So we changed our internal process. To make it a little easier we monitor [the goals] by the month so that the percentages are kept.

Several MBEs recognized the limitations imposed upon the City by the lack of adequate staffing resources.

> You were talking about a compliance officer. In most cases, they do have compliance officers. However, they're overwhelmed, in defense of the City.

b. Payment

In general, both M/WBEs and non-M/WBEs reported that they were paid slowly when they performed as prime contractors.

> There are a lot of firms who'd rather not work with the City because of the payment problem.

***

> I went to a meeting for a jock contract for the housing department…They said out of the gate, 90 out of the gate like don't even think about getting it before 90 days.

***

> Baltimore City owed us over a million dollars for thirteen months. And you know I had everything extended. My house, everything I owned extended. And it took them thirteen months to pay us.

***

> But the primes also are having problems collecting their money from the City as well. So that it trickles down. It's a domino effect. If they don't get paid, we don't get paid.

Several contractors recommended that the City should assign contract monitors to each contract to monitor the contractors payments and performance on their contracts with the City.

> What I think Baltimore City should do is put a contract monitor in place so that subs can report to the monitor. Because we really don't know how much money the prime is getting.

***

> One of the other things with the City that I would like to see if they could actually implement is someone to oversee disbursements, payments. Because as a sub-consultant to a larger firm doing some City contract and we had an open ended contract. We were doing projects, you know, back to back to back. And all payments were going to the prime…Well nobody was watching what the prime was doing so I'm calling the prime saying, hey, are we paid? Prime is saying, the City hasn't paid me…And then come to find out, the prime was paid.

Several contractors reported that they had not had any problems with timely payments on their contracts with the City.

> I was going to say the same thing. I mean, for specific jobs I've done for the City, I've been paid, you know, on a schedule, on par with the industry.

c. Front Companies

There was uniform perception with minority and nonminority firms who stated that shams and front companies are a problem in the M/WBE program.

> Where I am clearly losing out to a lot of work because there's a large 800 pound gorilla company that set up their granddaughter in the same business as a minority business. And she's taken away tons of jobs from me and she's got her grandfather who runs the biggest company in this region in the space using his resources, his network, to win jobs. Every job she wins is a job that I potentially could have won.

***

> And the apparent low bidder, in my opinion, submitted an absolutely fraudulent MBE plan. Two contractors, neither of which can do anything on the project and somehow the City is reviewing that paperwork and telling me, oh, it looks good. I mean this is as blatant as it gets. You know I'm sitting there thinking it's a slam dunk.

***

> As laypeople, how can you justify a contractor that's in the same building with a prime, the same girl answers the phone for both companies, two different numbers but the same receptionist is answering the telephone. This particular contractor is doing millions, millions of dollars in contracts.

***

> But it goes the other way too because there are minority contractors that are strictly pass through contractors.

Both M/WBE and non-M/WBE firms also expressed an absolute fear or reluctance to raise the sham or front issue with the City.

> Absolutely not. Why should I do that in a city this small. You see the same people, you know. You have to assume that anything you say is going to become public knowledge. And that everybody knows anyway. So what's the sense in pointing fingers when you may actually even be bidding to someone close to engaging in some of the chicanery.

IX. Recommendations for Revised Contracting Policies and Procedures

As required by strict scrutiny, the City of Baltimore Disparity Study documents evidence regarding the utilization of minority-owned and women-owned firms on City prime contracts and associated subcontracts. It also documents evidence related to the success of minorities and women in obtaining business elsewhere in the Baltimore area economy, particularly in the private sector. The Disparity Study has accumulated both statistical and anecdotal evidence in this regard.

This evidence provides the City of Baltimore with information relevant for its consideration of whether to implement renewed M/WBE policies that comply with the requirements of the courts and to assess the extent to which its past efforts have assisted M/WBEs to participate in the City's contracting and procurement opportunities. It also provides the City with information that can assist it to narrowly tailor its M/WBE policies to be consistent with the findings in the Disparity Study.

A. Race- and Gender-Neutral Recommendations

The courts require "serious, good faith consideration of workable race-neutral alternatives" for a narrowly tailored M/WBE program.[237] While the City is not obliged to "exhaust every conceivable race-neutral alternative,"[238] such efforts are an important element of a narrowly tailored program, so that the burden on non-M/WBEs is no more than what is necessary to achieve the City's remedial purposes. Increased participation by M/WBEs through race-neutral measures can also reduce the need to set race-conscious contract goals in the future.

We therefore suggest the following continuations and/or enhancements to the City's current efforts, based on the Disparity Study's results, including the feedback we received during our interviews with minority, women and nonminority business owners as well as with City staff. Several recommendations are also reiterated from our 2007 Disparity Study for the City due to their continuing relevance.[239] Though more limited in overall scope, many of our recommendations below also reiterate those made by the Mayor's Advisory Council on Minority and Women-Owned Business Enterprises in its 2013 report entitled "A New Day A Better Way: Rebuilding A Stronger Baltimore Through Economic Inclusion."

1. Increase Efforts to Ensure Prompt Payment on City of Baltimore Contracts

Although the City Code currently mandates prompt payment by the City to contractors (within 30 calendar days from the receipt date of a proper invoice or construction estimate),[240] there was

[237] *H.B. Rowe, Inc. v. Tippet*, 615 F.3d 233, 252 (4th Cir. 2010), citing *Grutter v. Bollinger*, 539 U.S. 306, 339 (2003).

[238] *Id*.

[239] NERA Economic Consulting (2007, pp. 315-325).

[240] ART. 5, § 37-2.

close to uniform agreement across ethnic and gender groups that slow payment remains one of the most important issues on City contracts. More effective enforcement of the existing ordinance would be helpful in this regard.

Slow payment by the City, in turn, slows down payments by prime contractors to their subcontractors. Almost all of the minority owners we spoke to indicated great difficulties being paid by primes, especially in the later stages of the contract. The M/WBE firms we interviewed recommended that the City assign monitors to all City contracts to ensure that contractors are making payments to their M/WBE subcontractors and meeting their other obligations under their contracts.

Adoption of contract tracking technology whereby prime contractors and subcontractors could see where an invoice is in the process would also be helpful. Technology of this kind would also allow subcontractors to determine whether or not a prime contractor has been paid by the City.

2. Ensure Bidder Non-Discrimination

Some M/WBEs expressed concerns that prime contractors were not soliciting their subcontractor quotes in good faith on City projects, and many indicated that they were seldom or never solicited to bid on non-goals projects, whether public or private. Some non-M/WBE prime contractors also indicated that M/WBEs quotes were higher than those of non-MWBEs, forcing them to choose between meeting the M/WBE goal or submitting the lowest possible bid. To investigate this, Baltimore should require all bidders to submit all of the subcontractor quotes received on larger City projects. The prices and scopes could then be compared to detect whether bidders are in fact soliciting and hiring subcontractors in a non-discriminatory manner, and whether M/WBEs are unreasonably inflating quotes.

3. Review Surety Bonding, Insurance and Experience Requirements

The City should review surety bonding and insurance requirements to ensure that amounts are no greater than necessary to protect Baltimore's economic interests. A related change would include removing the cost of the surety bond from the calculation of the lowest bidder on solicitations where bonding is required.

A guaranteed surety bonding program for small firms might also be considered. One model for such a program is the City and County of San Francisco's Surety Bond and Financing Assistance Program. This Program makes bonding, financing and technical assistance available to eligible, certified contractors. The Program targets small contractors, including M/WBEs, and includes a guarantee pool that provides collateral for loans and bonds up to $750,000 on local construction projects. A separate component targets contractors specifically for particularly large upcoming projects.[241]

To the extent allowable under State law, the City might also consider introducing an owner controlled insurance program for larger projects. Under such a program, the City purchases an

[241] *See* www.imwis/com/services/bonding/assistance/index.asp.

insurance policy for the project that provides coverage for all businesses working on that project. There was general agreement among M/WBEs that such changes would reduce barriers to growth.

A substantial number of M/WBE architectural and engineering firms also believed that the City sets unnecessarily strict past City experience thresholds, that shut them out of projects that they are qualified to perform. These standards were viewed as anti-competitive and in existence for the benefit of incumbent firms already doing City work. Baltimore should review its qualification requirements to ensure that M/WBEs are not unfairly disadvantaged in competing for City work. Equivalent experience, gained for example by working for other public agencies, should be allowed in order to increase access for M/WBEs and to guard against unfair incumbent advantages.

4. Increase Contract Unbundling

There was general agreement that smaller sized contracts and fewer multi-year term contracts would increase opportunities for M/WBEs to perform as prime contractors. Large contracts and their requisite bonding and/or insurance requirements, often place prime contract opportunities out of reach for M/WBEs. Where it is economically feasible, City departments should strive to unbundle contracts so as to facilitate bidding by M/WBEs. One strategy would be to require each City department to provide an annual unbundling forecast, documenting efforts to segment contracts and providing justification for the lack of segmentation where it is not economically appropriate. In conjunction with reduced bonding and insurance requirements, smaller contracts are an important race-neutral component to a defensible M/WBE program and should assist M/WBE firms to move from bidding solely on subcontracts to bidding on prime contracts.

5. Provide Greater Access to Information For Upcoming Contract Opportunities

While business owners were appreciative of the periodic information sessions that the City provides, there was uniform agreement across ethnic and gender groups of the need for a central online source to provide continuously updated information on future City contracting and purchasing opportunities.

6. Facilitate Increased Access to Capital

Many M/WBE firms, especially African American-owned firms, stressed their difficulties in obtaining working capital and other kinds of commercial credit. The Mayor's Advisory Council received similar reports and we concur with both of their recommendations in this area. First, that the City facilitate discussions with large and small financial institutions in Baltimore centered around increasing access to capital for M/WBEs and other small firms. Second, that the City establish a linked deposit initiative that leverages the City's own deposits and other investments with financial institutions in Baltimore to promote increased access to capital for M/WBEs and other small firms. Under such an initiative, M/WBEs could use City contracts and subcontracts as collateral for loans from the City's depository institutions at lower interest rates and reduced credit standards.

7. Adopt a Mentor-Protégé Program

A number of non-M/WBE prime contractors expressed frustration regarding insufficient availability and capacity in the pool of local M/WBEs to meet the City's goals. The City should consider adopting a Mentor-Protégé Program to facilitate the expansion of M/WBE capacity. This approach was welcomed by M/WBEs as well. A Mentor-Protégé Program seeks to further the development of smaller M/WBEs by providing assistance in performing larger projects, diversify into non-traditional areas of work and competing in the market outside of the M/WBE Program.

A City of Baltimore Mentor-Protégé Program could be modeled after the guidelines in the regulations governing the Federal DBE Program.[242] Elements of such a program include formal program guidelines; a City-approved written development plan that sets forth each party's objectives and roles, the duration of the arrangement and the services and resources to be provided by the Mentor; and a fee schedule to cover the direct and indirect costs for services provided by the Mentor for specific training and assistance to the Protégé.

Mentors could receive credit towards meeting M/WBE goals, and protégés would have greater access to contracts and increased opportunities to compete for larger projects and to grow into prime contractors. Additional incentives, such as reimbursement for participation costs, would also increase the attractiveness of a Program to potential Mentors.

8. Continue to Provide Supportive Services for Construction Firms and Expand Supportive Services for Non-Construction Firms

The M/WBEs we interviewed were complimentary of the business support services they have received from the City directly and through the Small Business Resource Center. The Baltimore Local Contractor Development Program, which focuses on construction and construction-related businesses, is particularly important among these services. There was broad consensus that offering similar types of contractor development services to firms outside of construction would also be very beneficial.

M/WBE firms also expressed support for increased opportunities for access to City project managers, in order to establish relationships and build trust.

Non-M/WBE firms also expressed support programs pursued in collaboration with local colleges and universities, such as Morgan State, to develop firms and grow capacity. Possible initiatives could include a business incubator program and a construction internship program

9. Implement a Small Local Business Reserve Program

Baltimore should consider adopting a Small Local Business Enterprise (SLBE) Program. There was general support expressed for some type of small business and local business preference across all ethnic and gender categories. Given the judicial prohibition on race-based contract set-

[242] See 49 C.F.R. Part 26, Appendix D.

asides, such programs can be critical tools to provide opportunities for M/WBEs and other small firms to compete for prime contracts. Providing preferences to small firms on a race- and gender-neutral basis will reduce Baltimore's reliance on race- and gender-conscious subcontracting goals to meet the overall annual goals, as most M/WBEs are likely to qualify as SLBEs.

The City could model this effort on the State of Maryland's Small Business Reserve Program.[243] Preferences for SLBEs would include

- Setting aside contracts only for bidding by SBEs, with a focus on procurements under a set dollar threshold;
- Bid points for commodities contracts;
- Bid and evaluation credits;
- Additional support with payment issues;
- Increased mobilization payments to prime contractors; and
- A linked deposit initiative, whereby small prime contractors awarded contracts through the SLBE Program could use City contracts as collateral for loans from the City's depository institutions at lower interest rates and reduced credit standards.

Additional elements to address would be the length of time a firm is eligible for the Program; what size standards to use to define a small business (we recommend using U.S. Small Business Administration (SBA) standards,[244] or some fraction/multiple thereof); any limits on the number of contracts an SLBE could receive under the program; procedures for SLBE certification; and program monitoring and success measures.

Further, it is important that race and gender data be collected on firms participating in any SLBE initiatives. This will facilitate the next disparity study of the M/WBE Program, which should include review of the effectiveness of any SLBE initiatives in remedying disparities on a race- and gender-neutral basis, and the effect, if any, of such initiatives on participation in the M/WBE Program.

10. Improve Contract and Subcontract Data Collection and Retention

City procedures for contract and subcontract data collection and retention related to the M/WBE Program could be improved substantially. The most complete source of such information available for the present study was provided by MWBOO and was based on their records of each Board of Estimates meeting. Comparably complete records were not available from the Finance Department, nor from their outside consultant McGladrey, nor via CityDynamics.

[243] Code of Maryland Regulations (COMAR) 21.11.01.06.

[244] *See* 13 C.F.R. Part 121.

For purposes of contract compliance and also for the facilitation of future disparity studies, the following contract and subcontract data should be collected and maintained in electronic format and on a contemporaneous basis. There are a variety of software and technology solutions available to facilitate this effort.

a. Prime contracts or purchases

For each prime contract or purchase initiated by the City, the following data items should be readily available:

- A unique identification code or number for the contract/purchase;
- A unique identification code or number for the contractor/vendor;
- The business name of prime contractor/vendor;
- The date of the contract/purchase award;
- The original dollar amount of the contract/purchase award;
- The total contract/purchase amount to date, inclusive of all change orders, extensions, etc.;
- The M/WBE goal percentage for the original contract/purchase (if applicable);
- The M/WBE goal percentage for all change orders, extensions, etc. (if applicable);
- The City department to which the goods and/or services were provided;
- Whether federal transportation funds are involved (meaning that federal DBE Program requirements apply);
- A short description of the scope/purpose of contract;
- The M/WBE/non-M/WBE status of prime contractor (including race and gender);
- The contractor/vendor address and telephone number;
- The contractor/vendor contact person and title;
- The date of contract/purchase completion or substantial completion;[245] and

[245] For vertical construction projects, substantial completion could be marked as the point when occupancy permits or their equivalent are issued. For horizontal construction projects, substantial completion could be marked as the point where the project is open to traffic, or the equivalent. Since this point is not generally known in the

- The final total dollar amount paid (or the total dollar amount paid to date) to the prime contractor/vendor (inclusive of all change orders).

b. Records for subcontractors, subconsultants and suppliers

For each subcontractor, subconsultant or supplier that provides goods and/or performs services on a City prime contract or purchase, *regardless of the race, gender or M/WBE certification status* of the subcontractor, subconsultant or supplier, the following data items should be readily available:

- A unique identification code or number for the associated prime contract or purchase;
- The business name of subcontractor, subconsultant or supplier;
- The date of the subcontract award;
- The original dollar amount of the subcontract;
- A short description of the scope/purpose of the subcontract;
- The race of the subcontractor's ownership (*i.e.*, African American, Hispanic, Asian, or Native American)
- The gender of the subcontractor's ownership (*i.e.*, male, female or equally male-female);
- The subcontractor address and telephone number;
- The subcontractor contact person and title; and
- The final total dollar amount paid (or the total dollar amount paid to date) to the subcontractor (inclusive of all change orders).

c. Records for third-party agreements

Records comparable to those outlined above for prime contracts and subcontracts should also be collected and maintained for any third-party contracts that received City assistance, regardless of whether or not such contracts have M/WBE goals placed on them. This will facilitate the monitoring of such contracts' compliance with the requirements of the M/WBE Program as well as the analysis of M/WBE participation on third-party contracts in future disparity studies.

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historical data, for the Disparity Study we used a benchmark of 75 percent or more of the total award amount being paid to mark substantial completion.

B. Race- and Gender-Conscious Recommendations

1. Adopt a Renewed M/WBE Ordinance and Accompanying Program Regulations

The Disparity Study's results support the determination that the City of Baltimore has a strong basis in evidence to continue to implement its M/WBE Program for its locally-funded contracting activities. The Study provides statistical and anecdotal evidence of discriminatory practices and attitudes that impede opportunities for minorities and women for full and fair participation in the City's contracting activities as well as economy-wide.

The Study found statistical disparities in M/WBEs' access to private sector contracting opportunities overall, and to those factors necessary for business success, such as access to commercial credit and capital, leading to the inference that discrimination is a significant cause of those disparities. Moreover, the anecdotal evidence we gathered supports the conclusion that discrimination remains a major barrier to the full and fair participation of minority- and women-owned firms on City contracts.

In sum, there is in our opinion ample evidence that affirmative intervention is needed to dismantle the vestiges of a private sector system of racial and gender exclusion and ensure that M/WBEs have equal contracting opportunities on City contracts and subcontracts. It is clear that continuing the use of M/WBE goals would not be motivated by the illegitimate racial stereotypes or blatant racial politics that strict constitutional scrutiny seeks to smoke out. There was virtually unanimous agreement among the M/WBEs we interviewed that contracting affirmative action remains necessary to ensure equal opportunities for City contracts and associated subcontracts and to mitigate a continuing lack of equal opportunity in the private sector. Absent continued remedial action, the City of Baltimore will likely be a passive participant in a discriminatory market area.

In adopting a revised M/WBE ordinance, The City of Baltimore should revive the general outlines of the current Program and consider the following suggestions.

2. Revise Certification Eligibility Standards

M/WBE Program eligibility should reflect the judicial consensus that narrow tailoring requires that only small firms owned by socially and economically disadvantaged persons should be permitted to participate. Blanket categories, without reference to disadvantage of the individual, may run afoul of strict scrutiny. Therefore, the City should revise its eligibility criteria to fit within the accepted judicial framework of narrow tailoring analysis.

a. Adopt a social disadvantage test

Based upon the Disparity Study's results, African Americans, Hispanics, Asians, Native Americans and nonminority women should be considered presumptively socially disadvantaged. To ensure that individual eligibility on the basis of group membership is narrowly tailored to those who have suffered the effects of bias and discriminatory barriers, it is important that this be

only a rebuttable presumption, such that eligibility can be challenged by third parties, or reviewed by the City at any time. In addition, other persons (*e.g.*, disabled nonminority males) must be able to seek certification by showing they have individually suffered bias such that their opportunities to form firms and to achieve entrepreneurial success in Baltimore's market area have been substantially diminished.[246]

b. Adopt an economic disadvantage test

Similarly, case law counsels that firm owners must be economically disadvantaged in addition to the disadvantage created by membership in a presumptive group or demonstrated individual showing. Economic disadvantage can be defined as a limit on the personal net worth of the firm's owner or owners. Such a test has been an important element in convincing courts that the U.S. Department of Transportation's DBE program is constitutional, and the lack of such a test has been a factor that led some courts to find M/WBE programs to be insufficiently narrowly tailored. We suggest that Baltimore follow the lead of the U.S. Department of Transportation and adopt the DBE Program's current personal net worth limit of $1,320,000, exclusive of the owner's primary residence and equity in the business seeking certification. Alternately, the City could follow the State of Maryland MBE Program's current personal net worth limit of $1,500,000, which is indexed annually to account for the affects for inflation.[247]

c. Review firm size standards

As is the current standard, only small firms should be permitted to participate in the M/WBE Program. We recommend that the City revisit its current size standards with the understanding that the definition of "small" should be transparent, fair and consistently applied. We recommend applying U.S. Small Business Administration (SBA) standards[248] or some fraction/multiple thereof. Deviations from the current SBA standards should be accompanied by a reasoned and reasonable written rationale based on current conditions by industry in the Baltimore market area.

d. Review the certification waiting period

A significant number of the M/WBEs we interviewed, particularly those in the professional services category, and some nonminority primes as well, expressed concern that the current one-year waiting period for a new business to become certified as an M/WBE was unfairly long. This was felt to penalize experienced professionals who may have left nonminority male-owned firms to start their own enterprises. In these cases, the City may wish to consider not how long a firm has existed but rather the ability of the applicant to perform the scopes of work for which it is seeking certification.

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[246] *See, e.g.,* 49 CFR §§26.67, 26.87.

[247] 2004 Md. Laws Chapter 179; Md. Code Ann. State Fin. & Proc., § 14-301 (j)(3).

[248] *See* 13 C.F.R. Part 121.

e. Permit individual consideration of business location

As demonstrated in Chapter II of the Disparity Study, the City of Baltimore's relevant geographic market area is the Baltimore-Towson, MD MSA. Although this market area reflects the location firms that have received the large majority of dollars expended by the City, it does imply that firms located outside the MSA should not be eligible for participation in the Program. There is no evidence to suggest that an M/WBE seeking to do business with the City of Baltimore is somehow less likely to be socially and economically disadvantaged because it is located outside the MSA. Therefore, the City should consider allowing firms outside the Baltimore-Towson, MD MSA to make an individual showing of efforts to do business in the Baltimore market area (*e.g.*, through number of contracts received, bids submitted and/or marketing efforts).

f. Increase certification outreach

A number of nonminority prime contractors expressed concern in our interviews about their inability to find M/WBEs with which to subcontract in order to meet City goals. The City of Baltimore should make ongoing efforts to identify eligible minority- and women-owned firms and other socially and economically disadvantaged firms to become certified M/WBEs. Although not specifically created for the purpose of outreach, the Master M/WBE Directory assembled for this Disparity Study could serve as one starting point of outreach for this purpose. Such outreach efforts help to increase the pool of firms from which prime contractors may solicit to make good faith efforts to meet goals.

g. Consider reciprocal certification opportunities

Although most M/WBE firms we interviewed did not consider it to be an unnecessary hurdle that the City does not currently accept certifications from other jurisdictions, we would still encourage the City to explore the possibility of establishing reciprocal certification opportunities with, for example, the State of Maryland. Such reciprocity can benefit M/WBEs by reducing paperwork burdens and associated costs of certifications and at the same time can serve to increase the available pool of certified and eligible M/WBEs for City contracts and subcontracts. However, care must be exercised to make sure that any jurisdictions considered for reciprocity have M/WBE laws that are consistent with the City's and vice-versa.

There was a uniform perception among the firms that we interviewed, whether minority-owned, women-owned or nonminority male-owned, that shams and front companies are a continuing concern to the City's M/WBE Program.[249] Additionally, some of our interviewees expressed the view that the City's certification procedures are relatively more effective at identifying front companies and pass-throughs than are those of some other regional jurisdictions. Considerations for reciprocal certification should keep this possibility in mind and ensure that any reciprocal agreements that are considered would not unintentionally weaken the City's own standards.

[249] Many of the firms we interviewed—both M/WBE and non-M/WBE expressed strong reluctance and fear of raising the issue of sham or front companies with the City.

3. Contract Award Policies and Procedures

a. Standardize good faith efforts waiver requirements and related policies

The courts have held that strict scrutiny requires that waivers of goals be available to a bidder who has made good faith efforts. Standards for demonstrating good faith efforts should be more detailed and transparent, so that bidders and City contracting and purchasing staff have a clear understanding of when good faith efforts have or have not been met. We recommend that the City adopt good faith efforts provisions substantially similar to those contained in the Federal DBE Program regulations.[250]

More transparency should also be provided with respect to the forms and procedures a bidder must use in order to appeal a denial of a pre- or post-award waiver request. While processes are described for department-level requests, the ordinance does not detail bidders' rights and responsibilities in this regard. Since strict scrutiny requires that M/WBE programs be administered in a flexible manner and that goals never operate as quotas, this is an important clarification to make.

b. Standardize M/WBE program implementation across City departments

The City should review the implementation of the M/WBE program across the City's contracting departments to ensure that the Program is uniformly applied. Several M.WBEs and non-M/WBEs expressed concerns that the application of the M/WBE Program varied significantly across City departments. The MWBOO relies upon departments with contracting responsibilities to ensure that M/WBEs have the maximum opportunity to participate on City contracts. The department heads are designated with the responsibility of achieving the goals of the Program and MWBOO should develop a standard set of regulations or guidelines to ensure a uniform and consistent implementation of the M/WBE Program.

c. Scrutinize commercially useful function and increase contract monitoring

All proposed M/WBE participation should be carefully evaluated to determine whether the firm is serving a commercially useful function. Even a firm that is legitimately owned by minorities or women can be used as a pass-through or front on a specific contract.[251] Commercially useful function means responsibility for the execution of a distinct element of the work of the contract and carrying out the M/WBE's responsibilities by actually performing, managing, and supervising the work involved.

As noted earlier, there was significant agreement among M/WBE firms and non-M/WBE firms that fronts and sham companies are a problem in the M/WBE program, and there was also uniform reluctance to come forward and report the alleged violations for fear of retaliation. The City should increase its monitoring of City contracts, particularly large construction projects, to ensure that the objectives of the program are not undermined. To address the retaliation

[250] 49 C.F.R. §26.53.

[251] *See also* fn. 249 and the accompanying text.

concerns, the City should consider creating a fraud hot-line to encourage the reporting of such concerns while maintaining the anonymity of the callers.

4. M/WBE Goal-Setting

a. Adopt annual aspirational M/WBE goals

The Disparity Study's estimates of M/WBE availability in Baltimore's relevant market area are provided in Chapter III. These estimates can provide the starting point for consideration of annual aspirational targets for City contracting with M/WBEs. Of course, as Chapter IV documents, current levels of M/WBE availability are likely depressed by the continuing effects of discrimination. For this reason, an argument exists for setting goals that exceed current levels of availability. That is, goals that reflect a discrimination-free market as opposed to those that reflect outcomes from a market tainted by discrimination.[252] Using the disparities in the business formation rates of M/WBEs compared to non-M/WBEs can provide a quantitative basis for such a determination.

Baltimore annually reviews its progress towards meeting its overall M/WBE goals. That review should include consideration of whether race- and gender-conscious remedies continue to be necessary to meet the previously established goals and whether subcontracting goals no longer need to be set for certain types of contracts. However, there is no legal requirement to set new goals every year; indeed, there will not be new comprehensive availability data until the next disparity study. Thus, the annual goals adopted based upon the current evidence should continue until full and accurate data are produced in a future study.

b. Count M/WBE prime participation towards meeting M/WBE goals

Most M/WBEs we interviewed expressed frustration in obtaining public sector prime contracts. This sentiment crossed industries, size of firms and length of time in business. The City of Baltimore currently implements its M/WBE Program solely through the use of subcontracting goals. M/WBE prime contractors cannot currently count their participation towards meeting a contract goal. We recommend that the City consider following the federal approach, which permits a firm to count its self-performance, minus any work subcontracted to non-certified firms.[253] This approach, which would also require that M/WBE primes make good faith efforts to meet the M/WBE subcontracting goal, serves three important objectives. First, it creates opportunities for M/WBEs to act as prime contractors, which helps to grow their capacity. The greatest disparities are in access to prime contracts. Counting prime contractor participation therefore at least does not exacerbate the effects of discrimination. Second, counting prime contractor participation should increase the pool of competitive firms for City contracts, thereby benefiting Baltimore taxpayers. Finally, counting prime contractor participation reduces the reliance on subcontracting goals. This, in turn, reduces the burden on nonminority male-owned

[252] S*ee*, *e.g.*, 49 C.F.R. §26.45(b) (The goal should "reflect [the agency's] determination of the level of DBE participation you would expect absent the effects of discrimination").

[253] *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").

firms that compete in those areas where there are relatively higher levels of M/WBE availability, and therefore contributes to a more narrowly tailored M/WBE Program.

c. Count lower tier M/WBE participation towards meeting M/WBE goals

On large projects, there are often opportunities for M/WBEs to participate at multiple levels, which should of course be encouraged. Counting verifiable lower tier M/WBE utilization will increase opportunities for M/WBEs and provide flexibility for prime contractors to meet goals.

Of course, until the data collection and retention issues outlined above have been adequately addressed, as well as some of the general technology issues involved with improved contract monitoring, the ability to count such lower tier M/WBE participation is likely to remain elusive.

d. Continue to set contract-specific goals

The City of Baltimore has properly adopted a narrow approach to contract goal setting. For contracts $25,000 and larger, MWBOO sets goals based on its assessment of the availability of M/WBEs in various industry categories; the level of past utilization on past City contracts; the contract specifications; the potential impact on non-M/WBEs; and other relevant factors. At least two MBEs or WBEs must be available for a contract goal to be applicable to a contract.[254]

The Disparity Study's detailed NAICS-level availability estimates provide an objective starting point for contract goal-setting. Contract goals should reflect the availability of M/WBEs to perform the anticipated subcontracting scopes of the project. Thus, contract-specific goals may be higher or lower than the annual aspirational goals. If there are no subcontracting opportunities, no goal should be set. Similarly, the annual aspirational goals should not necessarily be considered as a ceiling on contract-specific goals. Data tracking and contract-monitoring software technology, or related software tools, can assist with the burdens of contract goal-setting.

It is often difficult to set goals on "task order" or "on call" contracts because the scope of the work is not fully developed in advance. The M/WBEs listed in such contracts have no guarantee of any amount of actual work which makes it difficult to plan their schedules. Moreover, prime contractors acting in good faith on such contracts reported that they frequently 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 possible change for consideration would be to increase the amount of subcontractor participation that is "undesignated" at the time of the bid, so that the prime contractor may apportion M/WBE participation as the project develops.

We also recommend that the minimum number of available M/WBEs be at least three, rather than two firms as is currently the case. This change will help ensure that there is adequate availability within those industry categories and assist to reduce the burden on non-certified firms, which is an important element of a narrowly tailored M/WBE program. Additionally,

[254] ART. 5, § 28-22.

MWBOO should take steps, perhaps in conjunction with the SBRC, to develop initiatives to enhance the availability of M/WBEs in those industry categories where the minimum number of available M/WBEs is low.

Further, a number of our interview participants suggested that MWBOO should play a greater role earlier in the contracting process. In particular in reviewing and drafting the initial specifications for award. This change would provide earlier and more standardized opportunities to reduce contracting barriers for such firms.

5. MWBOO Authority and Operational Resources

A legally defensible and administratively successful M/WBE Program cannot be implemented without additional resources. In our view, MWBOO requires more staff to certify and re-certify applicants, set goals, review bids, monitor contractor performance, investigate allegations of fraud and abuse and provide supportive services. Further, it is important that other City departments responsible for meeting the M/WBE Program objectives is increased and re-emphasized. M/WBE participation in City of Baltimore contracting will be less successful if it is seen as "the M/WBE Program," rather than as a City-wide initiative for which all department heads will be held responsible. Job descriptions should reflect this priority, with meeting M/WBE Program objectives one evaluation criterion for raises and promotions.

As the current ordinance reflects, MWBOO should continue to have sole responsibility for the operation and administration of the City's M/WBE Program.[255] Additionally, we recommend that the City consider consolidating contract goal-setting and other compliance responsibilities related to all federal DBE program activities (these occur primarily with respect to roads and transit) under the rubric of MWBOO as well. MWBOO should be delegated the authority to promulgate regulations to implement recommendations approved by the Mayor and the City Council.

The MWOBD plays a vital role in policy development and community outreach and involvement that will hopefully continue to grow and expand. However, M/WBE program administration and operational responsibilities should remain institutionalized within MWBOO. The advocacy role of MWOBD should remain clearly delineated and differentiated from the administrative role of MWBOO.

6. Continue the M/WBE Program Sunset Review Process

The City of Baltimore should continue to require that the evidentiary basis for the Program be reviewed every five years, and that it should be continued only if there is strong evidence that discrimination continues to disadvantage M/WBEs in the relevant market area. The Program's goals and operations should be included as part of the review in order to ensure that they remain narrowly tailored to current evidence. The practice of setting a sunset date for the ordinance, when the Program will end unless reauthorized, should continue.

[255] ART. 5, §§ 28-11, 28-12.

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Appendix A. Glossary

ACS. *The American Community Survey*. 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.

African American: African American or "Black" refers to an individual having origins in any of the Black racial groups of Africa.

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.

Asian or Asian/Pacific Islander: Refers to an individual having origins in the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islanders (except Native Hawaiians).

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. *See also* "Utilization," "Disparity Ratio."

Baseline Business Universe: The underlying population of business establishments that is used in an availability analysis. It is used as the denominator in an M/WBE availability measure.

Black: Or "African American" refers to an individual having origins in any of the Black racial groups of Africa.

Capacity: This term has no single definition. *See* Chapter III for discussion of this concept and its role in disparity studies.

Constitutional significance or **substantive significance:** An indication of 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.

Decennial: Refers to the census conducted every decade by the U.S. Census Bureau. The last decennial census was conducted in 2010.

Demand-side: Refers to activity on the demand-side of an economic market. For example, when public 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 (or Disparity Index): 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."

Distribution. A set of numbers and their frequency of occurrence collected from measurements over a statistical population.

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."

Hispanic: Refers to an individual of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race.

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 percent or more owned and controlled by racial or ethnic minorities (*i.e.,* African Americans, Hispanics, Asians/Pacific Islanders 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 nonminority female-owned is actually nonminority male-owned. *See also* "Nonclassification."

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.

NAICS: North American Industry Classification System. The standard system for classifying industry-based data in the U.S. Superseded 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 also* "Misclassification."

NSSBF or SSBF. The *Survey of Small Business Finances*, formerly the *National Survey of Small Business Finances*, was produced jointly by the Federal Reserve Board and the U.S. Small Business Administration to provide a periodic statistical picture of small business finances. The SSBF was discontinued after 2003.

Native American: Refers to an individual having origins in any of the original peoples of North America, including Native Hawaiians.

Nonminority: Firms that are not M/WBEs, *i.e.,* not owned by African Americans, Hispanics, Asians/Pacific Islanders, Native Americans or nonminority females.

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 percent 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."

SATL: Refers to the South Atlantic census division in the NSSBF and SSBF data sets. The SATL includes the states of Maryland, Delaware, Florida, Georgia, North Carolina, South Carolina, Virginia, West Virginia and the District of Columbia.

SBO: The Census Bureau's *Survey of Business Owners* statistical data series is devoted to capturing statistical information on the nation's minority-owned and women-owned business enterprises. Part of the five-year *Economic Census* series.

SIC: Standard Industrial Classification system. Prior to 1997, the standard system for classifying industry-based data in the U.S. Superseded 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."

SSBF. *See* NSSBF.

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 M/WBE status.

Substantive significance or **constitutional significance:** An indication of 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. *See also* "Availability," "Disparity Ratio."

WBE: Women-Owned Business Enterprise: A business establishment that is 51 percent 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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Appendix B. Legal Standards for Government Race- and Gender-Conscious Contracting Programs

A. Overview of Strict Scrutiny

The applicable framework that establishes the legal standards governing race and gender conscious contracting programs is articulated in two seminal Supreme Court cases. In *City of Richmond v. J.A. Croson Company*[1] and *Adarand Constructors, Inc. v. Peña*,[2] the Supreme Court articulated that strict scrutiny would be the standard by which federal courts would review federal, state and local programs. Rather than permit generalized allegations of discrimination against minorities, the Supreme Court held that governments may adopt race-conscious programs only as a narrowly tailored remedy for a compelling interest of identified discrimination.[3]

7. Strict Scrutiny and *City of Richmond v. J.A. Croson Company* ("*Croson*")

The landmark case establishing that state and local government programs using race as a consideration must pass strict scrutiny is *Croson*. The strict scrutiny standard is comprised of two parts: (i) public entities must show a compelling state interest in establishing race or ethnicity specific programs, and (ii) such programs must be narrowly tailored to achieve that state interest. The strict scrutiny test calls for a "searching judicial inquiry into the justification," to determine whether the classifications are truly remedial or rather "motivated by illegitimate notions of racial inferiority or simple racial politics."[4]

In *Croson*, the Supreme Court struck down the City of Richmond's Minority Business Enterprise Plan, which required prime contractors that were awarded city construction contracts to subcontract at least 30 percent of the project to minority-owned business enterprises (MBEs). The Supreme Court affirmed the Court of Appeals' ruling that the plan was unconstitutional, finding that the City of Richmond had not presented sufficient evidence to support its compelling interest in remedying discrimination.

With respect to the first prong of the strict scrutiny standard, the Court emphasized that in order to establish a compelling interest, there must be "a strong basis in evidence" for the use of race conscious measures.[5] The Court also stated that "findings of societal discrimination will not suffice" to meet the requirements of the Equal Protection Clause of the Fourteenth Amendment.[6] In *Croson*, the Supreme Court opined that "there was no direct evidence of race discrimination on the part of the City" or "any evidence that the City's prime contractors had discriminated

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

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

3 This legal analysis is not an exhaustive discussion of all the case law or issues related to Croson and its progeny but rather highlights, with particular emphasis on the guidance from the Fourth Circuit, the major trends and status of the case law discussing the use of race and gender conscious measures in government contracting.

4 *Croson*, 488 U.S. at 493.

5 *Id.* at 500 (citing *Wygant*, 476 U.S. at 277 (1986)).

6 *Id*. at 494.

against minority-owned subcontractors."[7] The Supreme Court rejected all five of the predicate facts which the District Court relied on to uphold the City of Richmond's 30 percent quota.

Specifically, the Supreme Court reasoned that the predicate facts—the City's declaration that the ordinance was remedial, generalized assertions of past discrimination in the construction industry, the paucity of minority contractors in state and local trade associations and Congress' findings of the effects of past discrimination—did not singly or together provide a strong basis in evidence to justify race conscious measures. Finally, the City of Richmond's statistical evidence showed a statistical disparity between the *general population* in Richmond (which was 50 percent African-American) and the awards of prime contracts to African-American firms (0.67 percent of the awards). The Supreme Court held that this was an irrelevant statistical comparison and insufficient to raise an inference of discrimination.[8]

However, to avoid its holding from being construed to categorically eliminate all race-conscious efforts, the Court expressly stated that:

> "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 nonminority 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…. 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."[9]

In suggesting what kind of evidence would support a proper statistical comparison, Justice O'Connor stated that a more relevant statistical test would compare 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. This, to the Court, would support an inference of discrimination and thus satisfy the compelling interest requirement of the strict scrutiny test.[10]

With respect to the second prong, the *Croson* court ruled that the MBE program was not narrowly tailored to remedy discrimination, as the 30 percent quota could not be "tied to any injury suffered by anyone."[11] For example, the Court pointed to the fact that the program was extended to a long list of minorities, other than African Americans, such as Hispanics, Asians,

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[7] *Id*. at 480.

[8] *Id.* at 499–500.

[9] *Id*. at 509.

[10] *Id.* at 503.

[11] *Id.* at 508.

American Indians, and Eskimos and Aleuts, for which the City had not established any inference of discrimination.[12] Finally, the Court pointed to Richmond's failure to consider race-neutral means to increase MBE participation.[13] In analyzing if the remedy implemented by the local or state government actor is narrowly tailored, the *Croson* Court identified several factors:

- Consideration of alternative, race-neutral means to increase M/WBE participation;[14]
- The flexibility of the program requirements, including the availability of waiver provisions;[15]
- The duration of the proposed relief;[16]
- The relationship of numerical participation goals to the availability of M/WBEs in the relevant market;[17]
- The impact of the relief on third parties;[18] and
- The overinclusiveness or underinclusiveness of the racial classifications.[19]

All of the above factors should be considered when developing a race-based program to ensure that the program is sufficiently narrowly tailored under the strict scrutiny standard. Guidance from the courts relating to the above are further discussed in later sections of this Appendix.

8. Intermediate Scrutiny

Since *Croson*, the U.S. Supreme Court has remained silent with respect to the appropriate standard of review for WBE programs. *Croson* was limited to the review of a race-conscious government contracting program. In other contexts, however, the Supreme Court has traditionally ruled that gender classifications are not subject to the rigorous strict scrutiny standard applied to racial classifications. Instead, gender classifications are subject to a lesser "intermediate" level of review.

Although the Supreme Court has not addressed the standard of review for gender based programs, a significant number of circuit courts of appeals have reviewed WBE programs using

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[12] *Id.*

[13] *Id.* at 506–507 (criticizing the City's motive in establishing a 30 percent quota as a remedy for past discrimination and concluded that the goal of the program was racial balancing).

[14] *Croson*, 488 U.S. at 507 (citing *United States v. Paradise*, 480 U.S. 149, 171 (1987)). *See also Adarand III*, 515 U.S. at 237-238.

[15] *Paradise*, 480 U.S. at 171. *See also Adarand VII,* 228 F.3d at 1177.

[16] *Croson*, 488 U.S. at 498, 509. *See also Paradise*, 480 U.S. at 171.

[17] *Paradise*, 480 U.S. at 171.

[18] *Id*.

[19] *Croson*, 488 U.S. at 506.

intermediate scrutiny, rather than the more exacting strict scrutiny standard of review.[20] The Fourth Circuit applies "intermediate scrutiny" and in *Rowe* reasoned that "precedent dictates…that courts apply 'intermediate scrutiny' to statutes that classify on the basis of gender."[21] In order to meet the burden of proof for an intermediate scrutiny standard of review, the state must show that the "classification serves important governmental objectives and that the discriminatory means employed are substantially related to the achievement of those objectives."[22] Unlike the strong basis in evidence requirements for racial classifications, gender classifications require "something less" than a strong basis in evidence.[23]

In defining what constitutes something less than a strong basis in evidence, the Fourth Circuit agreed that the state defending the statute must present probative evidence that the rationale for enacting a gender preference rests on evidence, *i.e.*, informed analysis and not stereotypical generalization.[24] Intermediate review requires the governmental entity to demonstrate an "important governmental objective" and a method for achieving this objective that bears a fair and substantial relation to the goal.[25] The Court has also expressed the test as requiring an "exceedingly persuasive justification" for classifications based on gender.[26]

The City of Baltimore, therefore, may meet the intermediate scrutiny standard for any gender conscious preferences in its contracting activities.

9. Strict Scrutiny and *Adarand Constructors, Inc. v. Peña*

While *Croson*'s holding applies to challenges to state and local government programs which classify based on race, *Adarand Constructors, Inc. v. Peña* extended *Croson*'s reach by holding that the strict scrutiny standard applies to federal programs using race-based classifications as well. Similar to the state and local government context, the federal government must also show a compelling interest for the use of race-conscious measures and the remedies used must be narrowly tailored to the compelling interest.

In *Adarand III*, a nonminority subcontractor that did not receive an award for the guardrail portion of a federal highway project brought an action against the Secretary of Transportation at

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[20] See, e.g., *H.B. Rowe, Inc. v. Tippet*, 615 F.3d 233, 243 (4th Cir. 2010); *Associated Util. Contractors of Md., Inc. v. Mayor & City Council of Balt*., 83 F. Supp. 2d 613, 620 (D. Md. 2000); *W.H. Scott Construction Co., Inc. v. City of Jackson*, 199 F.3d. 206, 215 n.9. (5th Cir. 1999); *Eng'g Contractors Ass'n of S. Fla., Inc., v Metropolitan Dade Cnty*., 122 F.3d 895 (11th Cir. 1997); *Contractors Ass'n of E. Penn. v. City of Phila*., 91 F.3d 586 (3d Cir. 1996); *Coral Constr. Co. v. King Cnty*., 941 F.2d 910 (9th Cir. 1991). But see *Brunet v. City of Columbus*, 1 F.3d - 390, 404 (6th Cir. 1993) (gender based affirmative action plans subject to strict scrutiny).

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

[22] *Id*. at 242.

[23] *Id*.

[24] *Id.*

[25] *Id.*; *see also Craig v. Boren*, 429 U.S. 190, 198-99 (1976).

[26] *Id.*; *Miss. Univ. for Women v. Hogan*, 458 U.S. 718 (1982); see also *Mich. Road Builders Ass'n., Inc. v. Milliken*, 834 F.2d 583 (6th Cir. 1987). But see*, Brunet v. City of Columbus,* 1 F.3d 390, 404 (6th Cir. 1993) (gender based affirmative action plans subject to strict scrutiny).

the time, Federico Peña, alleging that the SBA 8(a) and 8(d) program preference for minorities violated the equal protection clause of the Fifth Amendment's due process Clause.[27] The prime contractor involved in this case had a clause in its contract with the government that it would receive a monetary incentive for hiring firms controlled by "socially and economically disadvantaged individuals" for its subcontracting work.[28] While the District Court ruled in favor of the federal government, and the Tenth Circuit Court of Appeals affirmed, the Supreme Court remanded the case to determine whether the challenged program met the strict scrutiny standard.

The Supreme Court noted that while *Croson* set strict scrutiny as the standard by which all race-based action by state and local governments would be analyzed, no such clear guidance was available in terms of what standard of review was required when such action was taken by the federal government. The Supreme Court ultimately concluded that strict scrutiny should also be applied to federal programs using race-conscious measures.[29]

In *Adarand Constructors, Inc. v. Slater*,[30] a case that followed the original remand of the *Adarand* case, the Tenth Circuit Court of Appeals noted that the compelling interest prong of strict scrutiny has already been established by Congress. Acknowledging Congress's power to address racial discrimination in the states, the Court of Appeals held that "we readily conclude that the federal government has a compelling interest in not perpetuating the effects of racial discrimination in its own distribution of federal funds and in remediation of the effects of past discrimination in the government contracting markets created by its disbursements."[31] The Tenth Circuit Court of Appeals drew this conclusion from a portion of Justice O'Connor's opinion in *Croson*, where she stated that "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."[32]

10. Strict Scrutiny in the Fourth Circuit

The principal case in the Fourth Circuit applying the *Croson* decision is *H.B. Rowe Company v. Tippett.*[33] Rowe challenged the constitutionality of the North Carolina General Assembly's Statute 136-28.4 ("the Statute"), promulgated in 1983.[34] The Statute set forth a general policy for the North Carolina Department of Transportation ("NCDOT") and other state agencies to promote the use of small, minority, physically handicapped and women contractors in non-federally funded State construction projects.[35] Seven years later, in 1990, the Statute was

[27] *Adarand III*, 515 U.S. at 209.

[28] *Id.*

[29] *Id.*

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

[31] *Id.* at 1165.

[32] *Croson*, 488 U.S. at 492.

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

[34] *Id.* at 236.

[35] *Id.*

amended to include specific participation goals on State funded transportation construction contracts for minority- and women-owned businesses.[36]

As a result of the amendment, NCDOT created a Minority Business Enterprise and Women Business Enterprise Program ("M/WBE Program") for non-federally funded transportation construction contracts. The *Rowe* Court noted that the program "largely mirrored" the federal DBE Program in place pursuant to the federal regulations. In 1991, the constitutionality of the Statute was challenged by a nonminority male prime contractor in federal district court. The District Court ruled in favor of the plaintiff, stating that in order to implement race-conscious measures to remedy discrimination, "a governmental entity must identify with 'some specificity' the racial discrimination it seeks to remedy and present a 'strong basis in evidence for its conclusion that remedial action is necessary.'"[37] As a result of the District Court decision, NCDOT suspended its M/WBE program in 1991.[38]

In 1993, NCDOT commissioned a disparity study of state-funded transportation construction contracts. The study determined that minority and women subcontractors were underutilized in State contracts and, as a result, the M/WBE Program was re-implemented. In 1998, the North Carolina General Assembly commissioned an update to the 1993 study. The 1998 update study concluded that minority- and women-owned businesses continued to be underutilized in State-funded transportation construction contracts.[39]

In 2002, Rowe's bid, despite being the lowest, was rejected by NCDOT in favor of a firm with a slightly greater bid and substantially greater proposed M/WBE participation. NCDOT's participation goals for the contract were 10 percent for MBEs and 5 percent for WBEs. NCDOT found that Rowe failed to meet the good faith effort requirements because the company did not solicit enough minority subcontractors to obtain a fair number of quotes, did not describe the available subcontracting opportunities, and proposed no strategy to meet the goal.[40] Rowe's proposed WBE participation was 6.6 percent and their proposed MBE participation was zero.

In response, Rowe filed suit challenging the constitutionality of the Statute on its face and as applied. Subsequently, NCDOT commissioned a new disparity study that was completed in 2004. In 2006, relying on that 2004 study, the North Carolina General Assembly amended the Statute. The principal modifications were:

- Remedial action should only be taken when there is a strong basis in evidence of ongoing effects of past or present discrimination that prevents or limits disadvantaged minority-

[36] *Id.*

[37] *Id.* at 237.

[38] *Id.*

[39] *Id.*

[40] *Id.* at 238.

and women-owned businesses from participating as subcontractors in State-funded transportation projects.[41]

- Participation goals should be aspirational rather than mandatory and shall not be applied rigidly on specific contracts or projects.[42]
- Goals should be set on a contract or project specific basis according to available estimates as established by the disparity study.[43]
- The definition of minority/women was limited to those groups that suffered discrimination.[44]
- A disparity study should be performed every five years to respond to changing conditions.[45]
- A sunset provision was included, under which the statute would expire after a set period of time.[46]

In 2008, the District Court upheld the constitutionality of the statute and Rowe appealed to the Fourth Circuit Court of Appeals. First, the Court of Appeals considered whether the statutory scheme as it relates to minorities survives the strict scrutiny standard. The Circuit Court noted that strict scrutiny standard is not automatically "fatal in fact" and the State's discrimination evidence must be evaluated on a "case by case" basis.[47] The Circuit Court reviewed the statistical evidence detailed in the 2004 disparity study to determine if the statutory scheme was based on strong statistical evidence to implement race-conscious participation goals. The statistical evidence was also examined to determine if the Statute's definition of minorities was overinclusive by including groups for which the 2004 disparity study did not establish sufficient evidence of discrimination.

The *Rowe* Court opined that the touchstone for establishing whether a minority group has suffered discrimination was whether or not they were statistically significantly underutilized on NCDOT contracts compared to their availability.[48] The 2004 study found that the underutilization of African American-owned firms and Native American-owned firms on NCDOT contracts was statistically significant.[49] The disparity index was statistically significant at a 95 percent confidence level for African Americans and an 85 percent confidence level for

[41] *Id.*

[42] *Id.* at 238-239.

[43] *Id.* at 239.

[44] *Id.*

[45] *Id.*

[46] *Id.*

[47] *Id.* at 241.

[48] *Id.* at 243.

[49] *Id.* at 244.

Native Americans. Although underutilized on NCDOT contracts, the study results for Hispanic- and Asian/Pacific Islander-owned firms were not statistically significant.[50] The results for nonminority women-owned firms reflected utilization on NCDOT contracts that exceeded availability and that difference was statistically significant.[51]

The *Rowe* Court applied an intermediate scrutiny standard to nonminority women-owned firms. While acknowledging that some of the evidence produced by the state was probative of discrimination, the Circuit Court concluded that the private sector evidence and the anecdotal evidence supporting discrimination against nonminority women was not sufficient to overcome the evidence of statistically significant utilization on NCDOT contracts in excess of availability. Accordingly, the Circuit Court ruled that evidence in the 2004 disparity study did not provide the "exceedingly persuasive justification" necessary to include gender-based remedies.[52]

Therefore, the Circuit Court ruled that the Statute was narrowly tailored to achieve the State's compelling interest because the State provided a strong basis in evidence for African American-owned and Native American-owned firms but did not do so for Hispanic-owned, Asian/Pacific Islander-owned or nonminority female-owned firms.[53]

In the lower courts, the Associated Utility Contractors ("AUC"), following the Supreme Court's decision in *Croson*, challenged an affirmative action contracting Ordinance adopted and implemented by the City of Baltimore. The United States District Court in *Associated Utility Contractors of Maryland, Inc. v. Mayor and City of Baltimore,*[54] ruled that the City's race and gender contracting Ordinance did not have a "strong basis in evidence" and therefore was unconstitutional.[55]

The 1986 Ordinance required that for all City contracts, 20 percent of the value of the contracts be awarded to MBEs and 3 percent be awarded to WBEs. The District Court enjoined enforcement of the Ordinance and reasoned that a "state entity must ensure that before it embarks upon an affirmative action program, it has convincing evidence that remedial action is warranted."[56] The District Court reasoned "[i]n this case, that task is extraordinarily simple."[57] The City of Baltimore must have before it evidence of present or prior discrimination before an affirmative action program using race and gender based contracting is adopted. The facts before the District Court were undisputed that the City Council had no evidence in 1999 at the time the

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[50] *Id.*

[51] *Id.*

[52] *Id.* at 254–256.

[53] *Id.* at 254.

[54] *Associated Util. Contractors of Md., Inc. v. Mayor & City Council of Balt*., 83 F. Supp. 2d 613 (D. Md. 2000).

[55] The Associated Utility Contractors of Maryland, Inc. filed a separate suit in 2001 challenging the City's revised affirmative action Ordinance and an executive order. *See Associated Util. Contractors of Md., Inc. v. Mayor & City of Balt.,* 218 F.Supp.2d 749 (D. Md. 2002) (denying Defendants' Motion to Dismiss contesting Plaintiff, AUC's standing to challenge the ordinance).

[56] *Id.* at 621.

[57] *Id*.

Ordinance was adopted showing the need for race- or gender-conscious measures before promulgating the MBE and WBE construction subcontracting goals.[58]

11. Strict Scrutiny as Applied to the Disadvantaged Business Enterprise Program

In response to *Adarand III,* the U.S. Department of Transportation ("USDOT") revised its DBE regulations in 1999 in order to comply with the narrow tailoring requirement of strict scrutiny.[59] These revisions included the implementation of a personal net worth standard for DBE program eligibility and the requirement for setting race-neutral goals in conjunction with race-conscious goals. The USDOT initially created the set of DBE regulations in 1982, which outlined the affirmative action requirements for DBEs. First promulgated in conjunction with the Surface Transportation Assistance Act (the "Act"), the regulations (found at 49 C.F.R. Part 26) helped facilitate the Act's requirement of an aspirational goal of 10 percent of funds to be expended with small businesses owned and controlled by economically and socially disadvantaged individuals. This 10 percent DBE provision has been continued in various Acts that followed, such as the Transportation Equity Act for the 21st Century (1998) and the Intermodal Surface Transportation Efficiency Act of 1991.

Since the 1999 revision to the DBE regulations in response to *Adarand*, challenges to the revised regulations have arisen in several circuits—specifically in the Seventh, Eighth, and Ninth Circuits. In *Northern Contracting, Inc. v. State of Illinois Department of Transportation*,[60] the Seventh Circuit was asked to determine whether the Illinois Department of Transportation ("IDOT") violated the U.S. Constitution in administering a DBE Program designed to increase the participation of socially and economically disadvantaged individuals in Illinois highway construction subcontracts. IDOT, being a USDOT funding recipient, was required to comply with federal law pertaining to its DBE program. Northern Contracting, Inc. ("NCI"), a nonminority male-owned construction company, filed suit against IDOT, alleging that IDOT's program for compliance with the Transportation Equity Act ("TEA") was in violation of the Equal Protection Clause. The *Northern Contracting* Court concluded, even though not at issue, that the federal government had a compelling interest in remedying discrimination in highway construction.[61] The Seventh Circuit Court noted that NCI forfeited any challenge to the compelling interest prong of strict scrutiny, and instead NCI chose to focus on the narrow tailoring prong of the strict scrutiny test.

NCI argued that IDOT had to show its DBE program was narrowly tailored to remedy specific past discrimination by the State. The Seventh Circuit did not agree, however, and stated that the program was narrowly tailored to the compelling interest identified in remediating racial and gender discrimination in the federal highway construction market. Although NCI relied on a

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[58] *Id*.

[59] "Participation by Disadvantaged Business Enterprises in Department of Transportation Programs," 64 Fed. Reg. 5096 (Feb. 2, 1999) (codified at 49 C.F.R. parts 23, 26).

[60] *Northern Contracting, Inc. v. Ill. Dep't of Transp*., 473 F.3d 715 (7th Cir. 2007).

[61] *Id.* at 720.

previous case *Builders Association of Greater Chicago v. County of Cook*[62] for its argument that IDOT had to demonstrate that its program was narrowly tailored to remedy specific past discrimination perpetrated by the State, the Circuit Court held that NCI's reliance on *Builders Association of Greater Chicago* was misplaced, as IDOT was acting as an "instrument" of federal policy and NCI could not collaterally attack the federal regulations through its challenge to IDOT's program.[63] Thus, although NCI wanted to use the *Builders Association* case in support of their claim that the IDOT's DBE program was unconstitutional, the plaintiff erred in attempting to translate the *Builders Association* holding onto a federally-mandated program.[64]

Another Circuit that has since vetted the revised DBE regulations is the Eighth Circuit in *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation,* a decision that the Eighth Circuit held that Congress had a "compelling interest" in enacting the DBE legislation, as it had a sufficient evidentiary basis to conclude that persistent racism and discrimination in highway subcontracting warranted a race-conscious procurement program.[65] Looking first to the DBE regulations, the Eighth Circuit held that there were five factors which demonstrated that the DBE program was narrowly tailored: (i) there was flexibility within the regulations, (ii) the goals were tied to each local market, (iii) there was an emphasis on using race-neutral measures, (iv) all small businesses that could show they were socially and economically disadvantaged could participate, and (v) the personal net worth standard of $750,000 for disadvantaged business owners limited the presumption of the minority business qualification.[66] The Eighth Circuit then turned its analysis to whether the DBE program was narrowly tailored as applied in Nebraska and Minnesota, with respect to their local labor markets. When the Circuit Court considered the program's application, it concluded that the program was narrowly tailored on its face because the revised DBE program affords grantee States substantial discretion in setting the DBE goals.[67] Thus, the Eighth Circuit rejected plaintiff's claim that the revised DOT regulations did not meet strict scrutiny standards.

In contrast to the Eighth Circuit's and Seventh Circuit's affirmation that the DBE program was constitutional, the Ninth Circuit in *Western States Paving Co., Inc. v. Washington State Department of Transportation*[68] illustrated a case in which the revised DBE regulations were deemed to violate the Equal Protection Clause. In *Western States Paving*, the plaintiff requested declaratory judgment that the TEA DBE preference program was unconstitutional.[69] The State of Washington's Department of Transportation DBE program was subjected to the strict scrutiny standard in a two prong analysis, with the first part of the analysis considering whether the DBE

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[62] *Id.* at 722 (citing *Builders Ass'n of Greater Chi. v. Cnty. of Cook*, 265 F.3d 642 (7th Cir. 2001)).

[63] *Id.* at 722.

[64] *Id.*

[65] *Sherbrooke Turf v. Minn. Dep't of Transp.*, 345 F.3d 964 (8th Cir. 2003), *cert. denied*, 541 U.S. 1041 (2004).

[66] *Id.* at 972. The Personal Net Worth threshold was raised from $750,000 to $1.32 million in 2011, to account for the effects of inflation since 1989. *See* 76 Fed. Reg. 5083 (January 28, 2011).

[67] *Id*. at 973.

[68] *W. States Paving Co., Inc., v. Wash. Dep't of Transp*., 407 F.3d 983 (9th Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).

[69] *Id*. at 987.

legislation was facially constitutional, and the second of the Court's analysis examining whether the State of Washington's application of the DBE regulations was valid.

With respect to facial constitutionality aspect of analysis, the Court framed the issue to be whether the State of Washington carried its burden of demonstrating that the federal statute and regulations satisfied the strict scrutiny's exacting requirements. The Ninth Circuit, looking at the evidence weighed by Congress, stated that the federal government had a compelling interest for concluding that "discrimination within the transportation contracting industry hinders minorities ability to compete for federally funded contracts."[70] The Ninth Circuit then conducted its analysis with respect to whether the TEA Program was narrowly tailored. The Court held that the 10 percent DBE goal in the statute was narrowly tailored to the DBE regulations, as the goal was merely aspirational and the regulation provided for each state to establish its own utilization goal based upon the proportion of DBEs in its transportation contracting industry.[71] Because the DBE goals were customized by each state, the Circuit Court held that the DBE regulations were narrowly tailored to redress the effects of race and sex-based discrimination within this industry.

With respect to the validity of the application of the DBE regulations, the *Western States'* Court looked to the utilization goal set by the State of Washington to determine whether this stated goal was unconstitutional. Although the State of Washington offered a statistic comparing the percentage of DBEs in the state (11.7%) to the percentage of funds awarded to them on race-neutral contracts (9%), the Ninth Circuit Court struck down this evidence as invalid, holding that the statistic was oversimplified and that it did not capture factors such as the capacity of the DBEs to undertake the contracted work.[72] Unlike the Seventh Circuit in *Northern Contracting*, the Ninth Circuit in *Western States Paving* held that Congressional evidence standing alone was not enough to support the strong basis in evidence requirement. Rather, the recipients of the federal funds must show a finding of discrimination separate and apart from the federal government's showing.[73] Thus, as the State of Washington failed to provide evidence of discrimination within its own contracting market, the Court held that the State failed to meet its burden of showing that its program was narrowly tailored to further Congress's compelling interest.[74]

B. Compelling Interest

1. Burden of Proof

The party challenging the use of race-conscious measures bears the ultimate burden of proof throughout the course of the litigation—despite the government's obligation to produce a strong

[70] *Id*. at 992–993.

[71] *Id.* at 994–995.

[72] *Id.* at 1000.

[73] *Id.* at 1002-1003.

[74] *Id.* In light of *Western States Paving*, the USDOT published a memorandum titled "FY 2006 DBE Goal Setting Approval Process and DBE Program Plans" (December 21, 2005) to provide guidance to Recipients.

factual predicate to support its program.[75] The plaintiff must persuade the court that a program is constitutionally flawed by challenging the government's factual predicate for the program or by demonstrating that the program lacks a proper factual predicate.

Justice O'Connor explained the nature of the plaintiff's burden of proof in her concurring opinion in *Wygant v. Jackson Board of Education*.[76] She stated that, following the production of the factual predicate supporting the program:

> "[I]t is incumbent upon the non-minority [plaintiffs] to prove their case; they continue to bear the ultimate burden of persuading the court that the [government's] evidence did not support an inference of prior discrimination and thus a remedial purpose, or that the plan instituted on the basis of this evidence was not sufficiently 'narrowly tailored.'"[77]

In discussing the burden of proof in *Rowe*, the court wrote that "when a Plaintiff alleges, as *Rowe* does, that the statute violates the Equal Protection Clause, not only as applied but also on its face, the Plaintiff bears a heavy burden."[78] In a facial challenge, the Plaintiff's burden is even heavier, as the Plaintiff must show that the statute cannot operate constitutionally under any circumstances. *Rowe* is clear that a Plaintiff has to put forth credible and particularized evidence to rebut the state's showing of a strong basis in evidence.[79] The standard for appellate review in making the determination if the Plaintiff has met this burden is a question for law, subject to *de novo* review.[80] Applying this standard, the Fourth Circuit rejected the Plaintiff's challenge to the constitutionality of the statutory scheme because it failed to persuade the court that the factual predicate for the program was flawed.[81]

2. Strong Basis in Evidence

It is undisputed that remedying racial discrimination is a compelling interest for the City of Baltimore.[82] The procedural protocol established in city contracting by *Croson* imposes an initial burden of proof upon the governmental entity to demonstrate that there is a compelling

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[75] *Concrete Works of Colo., Inc. v. City & Cnty. of Denver*, 321 F.3d 950, 959 (10th Cir. 2003), *cert denied*, 540 U.S. 1027 (2003); *Coral Constr*, 941 F.2d at 921.

[76] *Wygant v. Jackson Board of Education*, 476 U.S. 267, 293 (1986).

[77] *Id.* at 293.

[78] *Rowe*, 615 F.3d at 243.

[79] *Id.* at 241.

[80] *Id.* at 240; ("[W]e will review the legal conclusions de novo and the factual findings for clear error."); *see Concrete Works of Colo., Inc. v. City & Cnty. of Denver,* 321 F.3d 950, 958 (10th Cir. 2003); *Rothe Dev. Corp. v. U.S. Dep't of Defense*, 262 F.3d 1306, 1323 (Fed. Cir. 2001); *Majeske v. City of Chicago*, 218 F.3d 816, 820 (7th Cir. 2000); *Contractors Ass'n of E. Pa., Inc. v. City of Philadelphia*, 91 F.3d 586, 596 (3d Cir. 1996) (Contractors Ass'n II). *But see Eng'g Contractors Ass'n of S. Fla. Inc. v. Metropolitan Dade County*, 122 F.3d 895, 903-04 (11th Cir. 1997) (reviewing the determination for clear error).

[81] *Rowe*, 615 F.3d at 246.

[82] *Croson*, 488 U.S. at 503.

governmental interest and the challenged MBE program is supported by a "strong basis in evidence," *i.e.*, documented evidence of past discrimination.

In *Rowe*, the Fourth Circuit opined that a state does not have to conclusively prove past or present racial discrimination to establish a strong basis in evidence.[83] The state may meet its burden by relying on a statistically significant disparity between the availability of qualified, willing, and able minority subcontractors and their utilization by the governmental entity or its prime contractors.[84] The *Rowe* Court also required that the state corroborate the statistical evidence by "significant anecdotal evidence of racial discrimination."[85] Notwithstanding this requirement, as discussed above, the plaintiff bears the ultimate burden of proof to persuade the court that the MBE program is unconstitutional.

The case law indicates that a disparity study may rely upon the following types of evidence to support the strong basis of evidence requirement: statistical evidence, anecdotal evidence, and passive participation. Each of these types of evidence will be briefly discussed in turn, along with additional guidance that courts have given with respect to each type of evidence.[86]

3. Statistical Evidence

The primary evidentiary requirement to show a compelling interest and allow an inference of discrimination is through statistics illustrating a disparity between the utilization of majority firms by the governmental entity compared to the utilization of minority firms. The disparity analysis results in a disparity index, or disparity ratio that is then tested for its validity using a standard deviation analysis. However, in order for such statistics to be relevant, the state or local government must consider various factors, as discussed below.

Availability. In terms of defining "availability," M/WBEs are deemed to be "available" if they are ready, willing, and able to perform. The critical issue in determining the available pool of M/WBEs is to adopt an approach that is neither overinclusive or underinclusive of the universe of available firms. In *Associated General Contractors of America v. City of Columbus*,[87] the court rejected the use of census data as a measure of available firms and concluded that the approach "overstated the percentage of available firms."[88] An alternative approach to calculate the available pool is to use a bidders list, *i.e.*, to count *only* those firms that have bid on the entity's projects. The bidders list approach, although simple, may be criticized as underinclusive

[83] *Rowe*, 615 F.3d at 241.

[84] *Id.*

[85] *Id.*

[86] *See also* NCHRP Report 644, *Guidelines For Conducting A Disparity And Availability Study For The Federal DBE Program* (2010) [hereinafter "NCHRP Report"]. The Report presents guidelines to conduct a legally defensible Disparity or Availability study for the DBE program.

[87] *Associated General Contractors of America v. City of Columbus*, 936 F.Supp. 1363 (S.D. Ohio 1996).

[88] *Id*. at 1390.

because it fails to count qualified firms in the marketplace that have failed to bid on projects because of discrimination.[89]

Finally, several courts have approved using a custom census of M/WBEs and DBEs as a proper method in calculating availability. In *Northern Contracting*, the plaintiff attempted to argue that IDOT miscalculated the number of DBEs by using a custom census instead of a count of the number of DBEs registered and prequalified by IDOT. However, the Seventh Circuit upheld the broader net of DBEs that were captured by the custom census, concluding that it reflected an attempt by IDOT to arrive at more accurate numbers than would be possible through a use of the list.[90]

Capacity. The "able to perform" requirement of *Croson* was examined in *Concrete Works* by the Tenth Circuit Court of Appeals. The *Concrete Works* Court recognized that plaintiff identified a legitimate factual dispute regarding whether the City of Denver's percentage of M/WBE firms overstated their ability to perform. In discussing this argument, the Circuit Court recognized that M/WBE firms are generally smaller and less experienced than majority firms. This, however, was not the end of the inquiry because the Court of Appeals also recognized that "M/WBE construction firms are generally smaller and less experienced because of discrimination."[91]

The trial court in *Northern Contracting* also recognized the soundness of this approach to capacity. The District Court explained that "[a]lthough laws mandating award of prime contracts to the lowest bidder remove concerns regarding direct discrimination…the indirect effects of discrimination may linger."[92] The *Northern Contracting* Court opined that DBEs' ability to compete for prime contracts "may be indirectly affected by discrimination in the subcontracting market or in the bonding and finance markets."[93]

Other courts have also recognized the elastic nature of the construction industry in which the firm's capacity expands and contracts based upon market demand. In *Concrete Works*, the City of Denver offered evidence at trial indicating that three employees is the median number of employees for all construction firms in the Denver Metropolitan Statistical Area and trial testimony that the number of permanent employees is not indicative of capacity because firms can hire temporary employees and rent equipment.[94] Similarly, the trial court in *North Shore Concrete and Assoc., Inc. v. City of New York,* rejected the Plaintiff's argument that the study over stated the number of available M/WBE firms because it did not take into consideration certain criteria such as the size of the firm. The *North Shore* Court concluded that firm size was not a proper indicator of capacity in determining the pool of available firms and that a small

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[89] *Id.* at 1389.

[90] 473 F.3d at 723.

[91] 321 F.3d at 981.

[92] *Northern Contracting, Inc v. State of Ill.*, No. 00-C-4515, 2005 WL 2230195 at *20 (N.D. Ill. Sept. 8, 2005); *see also Builder's Ass'n of Greater Chicago*, 298 F.Supp. at 730-31 (discussing the hurdles faced by small firms in the construction industry).

[93] *Northern Contracting*, 2005 WL 2230195 at *20.

[94] 321 F.3d at 981.

construction firm with an owner and only one employee, a secretary, had bid on construction projects worth more than one million dollars.[95]

Adjustments for Size and Earnings. Related to this point on availability and capacity are adjustments to such studies for size and earnings. Plaintiffs in the challenges to race-conscious programs may argue that the disparities shown in the studies are attributable to firm size and experience rather than discrimination. For instance, as previously stated, many plaintiffs will assert that these studies are inaccurate due to the fact that M/WBEs are generally smaller and less experienced than majority firms. In *Rothe Development Corporation v. Department of Defense*, a challenge to the Section 8(d) of the Small Business Act, the Federal Circuit Court was critical of the six studies that were relied upon by the government to establish the compelling interest prong of *Croson*.[96] The Federal Circuit reasoned that the parameters of the studies failed to account for the relative capacity of the businesses to perform multiple construction projects.[97] The Federal Circuit Court concluded that the "capacity" issue can be addressed by regression analysis controlling for size and earnings in the disparity study or that the governmental entity's assumptions about capacity and qualifications can be otherwise supported.[98]

Geographic Markets. In order to ensure the relevance of the disparity study, the geographic market of the firms must also be taken into account. While *Croson* did not directly spell out how the geographic market is to be determined, the Ninth Circuit in *Coral Construction Co. v. King County* stated that "an MBE program must limit its geographical scope to the boundaries of the enacting jurisdiction."[99] As *Croson* did not provide a bright line rule for the local market area, the determination is fact-based and a governmental entity can limit the scope of evidence of discrimination to its own jurisdiction.

The recommended approach, however, is to determine the geographic market by determining where the governmental entity is spending the majority of its contracting dollars. The NCHRP Report recommends that at least 75 percent of contract and subcontract dollars be spent in a defined geographic area in order to determine the relevant geographic market regardless of the jurisdictional boundaries of the governmental entity.[100]

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[95] *North Shore Concrete and Assoc., Inc. v. City of New York,* No. 94-CV-4017, 1998 WL 273027 at *25 (E.D.N.Y. April 12, 1998).

[96] 545 F.3d 1023, 1042–1043 (Fed. Cir. 2008).

[97] *Id*. at 1044.

[98] *Id*., but *cf. Concrete Works*, 321 F.3d at 979 (holding that a failure to control for prior business experience, religion, culture variables did not undermine the business formation studies' reliability).

[99] *Coral Construction,* 941 F.2d at 919.

[100] NCHRP Report, *supra* note 72 at 29.

There are no cases directly on point approving a set percentage in the Fourth Circuit and disparity studies have determined the relevant geographic market using 60 percent to 95 percent of spending to define the market area.[101]

Period of Time Covered by the Study. Additionally, it appears that the recommended study period be a minimum of three to five years. The critical issue is that the study period be long enough in duration to provide an adequate picture of the governmental entity's spending profile and create a sufficiently large sample for statistical analysis. In *Contractors Association of Eastern Pennsylvania v. City of Philadelphia*,[102] the Third Circuit Court reviewed a study relied upon by the city using data for three fiscal years.[103] In *H.B. Rowe Company v. Tippett,* the Fourth Circuit also affirmed North Carolina's program which was supported by a disparity study using data for a five year period.[104]

Notwithstanding the above, if the data covered by the study dates back too far, then the court may find such data to be stale. In *Builders Association*, the City of Chicago used data from 1990 to justify the compelling need to continue the race-based program in 2003. The Court stated that "viewed through the prism of 2003" the present program could not have been considered "narrowly tailored."[105] This is in contrast to the district court's footnote in *Rothe Development Corp. v. U.S. Department of Defense*, where the District Court stated that "Congress cannot be expected to work in a vacuum" and that "Congress must have some sense of an institutional memory," rejecting plaintiff's objection to all evidence proffered by the Government that was prior to a certain year.[106]

Non-goal contract data. Furthermore, the use of non-goal contract data can be probative in supporting a finding of discrimination. In *Northern Contracting*, the State of Illinois introduced evidence regarding 5 percent of IDOT contracts, which did not use DBE goals. On these "zero goal" contracts, the DBEs ended up receiving just 1.5 percent of the total value of the contracts. This, in conjunction with evidence relating to contracts with DBE goals, was used to conclude at the district court level that IDOT's program met the compelling evidence standard.

Adoption of Study by the Governmental Entity. Finally, the governmental entity should adopt the findings of disparity studies in order for a court to find such disparity study to be established as evidence. In *W.H. Scott Construction v. City of Jackson,* the City failed to establish a compelling interest, where the City did not adopt any particularized findings of discrimination in the construction industry and the disparity study commissioned by the city was not adopted by the

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[101] *Concrete Works of Colorado v. City of Denver*, 36 F.3d 1513, 1528 (10th Cir. 1994) (local market defined as Denver MSA – 80 percent of construction and design dollars); George R. La Noue, *Standards for the Second Generation of* Croson-*Inspired Disparity Studies*, 26 URB. LAW. 495–96 & n.36 (1994) (geographic market defined as New York State and Eight Counties in New Jersey – 90% of state dollars).

[102] *Contractors Ass'n*, 91 F.3d 586 (3d Cir. 1996).

[103] *Id*. at 594.

[104] *Rowe,* 615 F.3d 233 (4th Cir. 2010).

[105] *Builders Ass'n,* 298 F. Supp. 2d at 742.

[106] *Rothe Development Corp. v. U.S. Dep't of Defense*, 324 F. Supp. 2d 840, 851 (W.D. Tex. 2004).

city. [107] The Court in that case stated that "whatever probity the study's findings might have had on our analysis is of no moment" as the "City refused to adopt the study when it was issued in 1995, and its belated reliance is unpersuasive."[108] It appears that having the municipality or state agency adopt the study is an important element to establish the compelling interest component of the strict scrutiny standard, and failure to do so might be dispositive.

4. Passive Participation

A significant form of evidence that the government may present is passive participation in the discrimination. In requiring that a state or local government show that it perpetuated the discrimination to be remedied by the M/WBE program, the *Croson* Court noted that the government need not be an active participant in the discrimination. Rather, the Court stated that passive participation would suffice in satisfying the Court's strict scrutiny standard.[109]

The difference between active and passive participation can be illustrated by this example: evidence of active participation would be if the governmental entity actively created barriers to exclude M/WBEs from contracting opportunities. Evidence of passive participation would be the government's infusion of tax dollars into a discriminatory industry. The *Croson* court highlighted that a government could passively participate in private sector discrimination simply through its monetary involvement, stating "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."[110]

In *Concrete Works of Colorado v. City and County of Denver*,[111] the City of Denver relied upon marketplace data that measured discrimination in the overall Denver construction market to satisfy the *Croson* compelling interest standard. The City produced evidence at trial that it indirectly contributed to private sector discrimination by awarding public contracts to firms that discriminated against M/WBEs in their private sector work.[112] Concrete Works argued that marketplace data was irrelevant because only discrimination by the City or its prime contractors could demonstrate a strong basis in evidence.[113] The Tenth Circuit Court of Appeals in *Concrete Works* rejected this argument and noted that it did not read *Croson* or the Court's prior appellate rulings as requiring the municipality to identify an exact linkage between its award of public contracts and public discrimination.[114] Rather, the Court of Appeals sided with the City in stating that the City's compelling evidence of marketplace discrimination *can* assist in their burden of

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[107] *W.H. Scott Construction Co., Inc. v. City of Jackson*, 199 F.3d 206, 218-219.

[108] *Id.* at 218.

[109] *Croson*, 488 U.S. at 509.

[110] *Id.* at 492.

[111] *Concrete Works of Colo., Inc. v. City & Cnty. of Denver*, 321 F.3d 950, 959 (10th Cir. 2003), *cert denied*, 540 U.S. 1027 (2003).

[112] *Id.* at 976.

[113] *Id.*

[114] *Id.* at 973.

proving there is a compelling interest.[115] The Court of Appeals held that the City's anecdotal evidence and evidence linking its spending practices to the evidence of marketplace discrimination sufficiently illustrated that it indirectly contributed to private discrimination and was a passive participant in private discrimination.

The District Court in *Builders Association of Greater Chicago v. City of Chicago*,[116] also found evidence of the lack of M/WBE participation on private construction contracts probative. In explaining the import of marketplace discrimination, the District Court opined:

> The anecdotal evidence indicates that M/WBEs are sometimes ignored because of racial, ethnic or gender animus or stereotyping. That cannot be quantified…The tendency to stick with the old and ignore the new affects all newer firms, not just M/WBEs. But here the vestiges of past discrimination linger on to skew the marketplace and adversely impact M/WBEs disproportionately as more recent entrants to the industry. Not too long ago white male firms had a near monopoly in the industry and they, therefore, are the beneficiaries of a continuing adherence to old relationships.[117]

The District Court affirmed that the City had a compelling interest not to perpetuate with tax dollars a market skewed by past discrimination that restricts M/WBE competition in the construction market.[118]

5. Anecdotal Evidence

Anecdotal evidence that reflects the personal experiences of individuals 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 nondiscriminatory cause or causes.[119] 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."[120] Testimony about discrimination by prime contractors, unions, bonding companies, suppliers and lenders has been found relevant regarding barriers both to minority firms' business formation and to their success on governmental projects.[121] 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."[122] "[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

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[115] *Id.*

[116] *Builders Ass'n of Greater Chi. v. City of Chi.*, 298 F.Supp.2d 725 (N.D Ill. 2003).

[117] *Id.* at 738.

[118] *Id.*

[119] *Webster v. Fulton Cnty.*, 51 F.Supp.2d 1354, 1363 (N.D. Ga. 1999).

[120] *Int'l Bhd. of Teamsters v. United States*, 431 U.S. 324, 399 (1977).

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

[122] *Concrete Works II*, 36 F.3d at 1520, 1530.

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."[123]

Most recently, the Fourth Circuit found in *Rowe* anecdotal evidence from a telephone survey, personal interviews and focus groups to be relevant and probative of whether North Carolina met its burden. A telephone survey conducted by the consultant resulted in strong evidence of discriminatory treatment of both African American and Native American firms including evidence of: 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 corroborated 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…. [P]rime 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."[124]

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' perception.'"[125] 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."[126]

C. The Narrow Tailoring Analysis

Croson requires that an MBE program be "narrowly tailored" to remedy current evidence of discrimination.[127] In *Rowe*, the Fourth Circuit applied the narrowly tailored analysis to determine

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

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

[125] *Id.* at 249.

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

[127] *See Croson*, 488 U.S. at 509-10.

if the North Carolina statutory scheme met constitutional scrutiny. The Fourth Circuit identified five factors to consider in evaluating whether the state statute is narrowly tailored:

1. the necessity of the policy and the efficiency 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 waivers if the goal cannot be met; and
5. the burden of the policy on innocent third parties.[128]

First, there was ample evidence that the state considered race neutral options, including the state's Small Business Enterprise Program and the race neutral options outlined in the federal DBE program. "Indeed Rowe identifies no viable race neutral alternatives that North Carolina has failed to consider or adopt."[129]

Second, under duration of the policy, the *Rowe* court found elements that were particularly compelling in showing that the state program was narrowly tailored: (i) the program set a specific expiration date, and (ii) the program required that a new disparity study be conducted every five years. Other cases also instruct that "narrowly tailored" means that the remedial program should include these durational limitations.[130] With a core purpose of the Fourteenth Amendment being to eliminate all governmentally imposed discrimination based on race, such race-conscious policies must be limited in time.[131]

Third, the state took concrete steps to ensure that the participation goals were related to the percentage of minority subcontractors in the relevant market.[132] The "project by project basis" goal-setting process accurately reflects the pool of available minority owned businesses.[133] The *Rowe* court summarized the process as follows:

> First, the Department generates a report detailing the type of work that it anticipates subcontractors will perform on a particular project. Next, a goal-setting committee

[128] *Id.* at 252.

[129] *Id.* at 252.

[130] *Western States Paving*, 407 F.3d at 994 (holding that the Transportation Equity Act was subject to reauthorization by Congress); *Sherbrooke,* 345 F.3d at 972 (holding that a state was able to terminate its DBE program if it met its annual overall goal through race-neutral means for two consecutive years); *Associated General Contractors of Ohio v. Drabik*, 214 F.3d 730, 738 (6th Cir. 2000) (holding that a DBE program was not narrowly tailored because it did not have a sunset provision or expiration).

[131] *Id.* at 994.

[132] *Id.* at 253.

[133] *Id.*

> consults its database of certified minority contractors in the relevant geographic area capable of performing those types of work. Consulting the report, the database, and its own members' experience, the committee then sets a project-specific participation goal. Notably, this goal-setting process does not mechanically require minority participation; in fact, between July 2002 and February 2004, the committee set a goal of zero percent minority participation on approximately 10 percent of projects.[134]

Accordingly, the court found that the state had satisfied the third factor in the narrowly tailored analysis.

Fourth, *Rowe* also demonstrated the importance of waivers if project specific contract goals are not met in determining whether race-based programs are narrowly tailored. The *Rowe* court relied upon the "lenient standard and flexibility of the 'good faith' requirement" of the North Carolina statutory scheme. The waiver component of the state's program only rejected 13 of 878 good faith applications including *Rowe* for failing to meet the good faith efforts requirement.[135]

In *Sherbrooke*, the court pointed to the DBE program's "substantial flexibility" and the fact that a state could obtain waivers and exemptions from any requirement and not be penalized for a good faith failure to meet its overall goals.[136] The flexibility to waive contract specific goals supports the courts findings that such race-conscious programs are narrowly tailored and thus constitutional.

Fifth, the *Rowe* court also rejected Rowe's two arguments that the state's contracting program places a substantial burden on prime contractors.[137] There was not an onerous solicitation and follow-up requirement because there was no need for additional employees to dedicate to the tasks.[138] Rowe offered no evidence to support its contention that complying with the state's program required it to subcontract work that it could perform substantially cheaper on its own.[139] The state, on the other hand, offered evidence from the 2004 study that prime contractors need not subcontract work they can self-perform."[140]

Finally, *Rowe* contended that the North Carolina statutory scheme was overinclusive and therefore not narrowly tailored.[141] As held by the *Rowe* court, "the statute expressly limits relief to those racial or ethnicity classifications…that have been subjected to discrimination in the

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[134] *Id.*

[135] *Id.*

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

[137] *Id.* at 254.

[138] *Id.*

[139] *Id.*

[140] *Id.*

[141] *Id*

relevant marketplace and that have been adversely affected in their ability to obtain contracts with the Department."[142]

In summary, the *Rowe* court found the North Carolina statutory scheme narrowly tailored after reviewing all of the factors outlined above.[143]

D. Conclusion

The decision of the U.S. Supreme Court in the *Croson* and *Adarand* cases changed the legal landscape for affirmative action in public contracting programs. The U.S. Supreme Court altered the authority of state and local governments and the federal government to institute remedial race-conscious public contracting programs. This Appendix has examined what *Croson*, *Adarand*, and their progeny require for the City of Baltimore to continue to pursue a constitutional race- and gender-conscious public contracting program. As discussed above, a disparity study must provide the factual predicate for a race- and/or gender-conscious affirmative action contracting program. Depending on the findings of its own Disparity Study, the City of Baltimore may consider race and gender-based remedies for its locally-funded contracts.

E. List of Authorities

Cases

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

Adarand Constructors, Inc. v. Slater, 228 F3d 1147 (10th Cir., 2000), *cert. granted*, 532 U.S. 941, *then dismissed as improvidently granted*, 534 U.S. 103 (2001) ("*Adarand VII*").

Associated General Contractors of America v. City of Columbus, 936 F.Supp 1363 (S.D. Ohio 1996).

Associated General Contractors of Ohio v. Drabik, 50 F.Supp. 741 (S.D. Ohio 1999).

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

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

Brunet v. City of Columbus, 1 F3d 390 (6th Cir. 1993).

Builders Association of Greater Chicago v. City of Chicago, 298 F.Supp2d 725 (N.D. Ill. 2003).

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

[142] *Id.*

[143] *Id.*

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

Concrete Works of Colorado v. City and County of Denver, 321 F.3d 950, *cert. denied*, (10th Cir. 2003) (*Concrete Works II*).

Contractors Association of Eastern Pennsylvania v. City of Philadelphia, 91 F.3d 586 (3rd Cir. 1996).

Coral Construction Co. v. King County, 941 F.2d 910 (9th Cir. 1991), *cert. denied*, 112 S.Ct. 875 (1992).

Craig v. Boren, 429 U.S. 190 (1976).

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

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

Majeske v. City of Chicago, 218 F.3d 816 (7th Cir. 2000).

Michigan Road Builders Association v. Milliken, 834 F.2d 583 (6th Cir. 1987).

Mississippi University for Women v. Hogan, 458 U.S. 718 (1982).

Monterey Mechanical Co. v. Pete Wilson, et al., 125 F.3d 702 (9th Cir. 1997).

Northern Contracting, Inc. v. Illinois Department of Transportation, 473 F3d 715 (7th Cir. 2007).

Northern Contracting, Inc. v. Illinois Department of Transportation, No. 00-C-4515, 2005 WL. 2230195 (N.D. Ill. Sept. 8, 2005).

North Shore Concrete and Assoc., Inc. v. City of New York, No. 94-CV-4017, 1998 WL 273027 (E.D.N.Y. April 12, 1998).

H. B. Rowe, Inc. v. Tippet, et al., 615 F.3d 233 (4th Cir. 2010).

Rothe Development Corp. v. U.S. Department of Defense, 262 F.3d 1306 (Fed. Cir. 2001).

Rothe Development Corp. v. U.S. Department of Defense, 324 F.Supp.2d 840 (W.D. Tex. 2004).

Sherbrooke Turf, Inc. v. Minnesota Department of Transportation, 345 F.3d 964 (8th Cir. 2003), *cert. denied,* 124 S.Ct. 2158 (2004).

United States v. Paradise, 480 U.S. 149, 171 (1987).

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

Webster v. Fulton County, 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*, 546 U.S. 1170 (2006).

Wygant v. Jackson Board of Education, 476 U.S. 267 (1986).

Federal Regulations

64 Fed. Reg. 5096 (Feb. 2, 1999).

49 C.F.R. Part 23.

49 C.F.R. Part 26.

Reports

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.

Appendix C. Master M/WBE Directory Sources

A. Entities with lists of M/WBE firms that were duplicative of previously collected lists

Airport Minority Advisory Council
Baltimore County
Baltimore-Washington International Airport
Black Chamber of Commerce of Anne Arundel County
Carroll County
Cecil County
City of Falls Church
Downtown Partnership of Baltimore
Dulles International Airport
Frostburg State University
Governor's Commission on Hispanic Affairs
Maryland Aviation Administration
Maryland Department of Education
Maryland Department of General Services
Maryland Department of Human Resources
Maryland Department of Information Technology
Maryland Department of Juvenile Services
Maryland Department of Labor, Licensing & Regulation
Maryland Environmental Service
Maryland Governor's Office of Minority Affairs
Maryland Interagency Commission for Public School Construction
Maryland Mass Transit Administration
Maryland Stadium Authority
Maryland State Highway Administration
Maryland State Lottery Agency
Maryland State Police
Maryland Transportation Authority
Maryland Motor Vehicle Administration
Morgan State University
Naval Air Systems Command
Prince George County Public Schools
Richmond International Airport
Salisbury State University
Somerset County
Southern Maryland Consortium of African American Community Organizations
St. Mary's County
Talbot County
University of Baltimore
University of Maryland Baltimore
University of Maryland Baltimore County
Upper Shore Workforce Investment Board
Virginia DOT
Washington County
West Virginia Small Business Development Center
Worcester County

C. Entities that had no directory, or their directory did not identify race and gender

African-American Chamber of Commerce of Montgomery County
Allegany County Chamber of Commerce
Annapolis & Anne Arundel County Chamber of Commerce
Arlington Economic Development
Baltimore Gas & Energy
Baltimore Washington Corridor Chamber of Commerce
Bowie State University
Brunswick Economic Development Commission
Calvert County Chamber of Commerce
Calvert County Economic Development
Caroline County
City of Frederick Department of Economic Development
City of Manassas
Clarke County
Culpeper County

Culpeper County Chamber of Commerce
District of Columbia Department of Public Works
Dorchester County
Dorchester County Chamber of Commerce
Downtown Frederick Partnership
Economic Alliance of Greater Baltimore
Empower Baltimore Management Corporation
Entrepreneur Council of Frederick MD
Fairfax County Economic Development Authority
Fauquier County
Fauquier County Chamber of Commerce
Frederick County Chamber of Commerce
Garrett County Chamber of Commerce
Greater Baltimore Committee
Greater Washington Hispanic Chamber of Commerce
Harford County
Harford County Chamber of Commerce
Howard County Chamber of Commerce
Japan-America Society
Kent County
Kent County Chamber of Commerce
Loudoun County
Maryland Chamber of Commerce
Maryland Commission for Women
Maryland Hispanic Chamber of Commerce
Mid-Atlantic Hispanic Chamber of Commerce
Minority Business & Consumer Resource Directory
Minority Business Advocacy Council
Montgomery County Chamber of Commerce
Norfolk International Airport
Ocean City Chamber of Commerce
Prince George's County
Prince George's County Black Chamber of Commerce
Prince William County Chamber of Commerce
Queen Anne's County
Queen Anne's County Chamber of Commerce
Salisbury-Wicomico Economic Development
St. Mary's County Chamber of Commerce
Talbot Chamber of Commerce
University of Baltimore, Jacob France Institute
US Army Medical Research and Material Command (USAMRMC)
West Virginia Department of Commerce
Wicomico County
Women Entrepreneurs of Baltimore

D. Entities that were non responsive to repeated contacts

Allegany County
American Subcontractors Association of Baltimore
Asian Pacific American Chamber of Commerce
Baltimore American Indian Center
Building Congress and Exchange of Metropolitan Baltimore, Inc.
Caribbean-American Chamber of Commerce and Industry for the Greater Washington Area Network
Cecil County Chamber of Commerce
Chesapeake Women's Network
City of Annapolis
Events DC
Fairfax County
Governor's Commission on Indian Affairs
Hispanic Chamber of Commerce of Montgomery County
Host Hotels and Resorts
Jefferson County Chamber of Commerce
Metropolitan Business League
Prince George's Chamber of Commerce
Prince William County
Virginia Asian Chamber of Commerce
Virginia Hispanic Chamber of Commerce
Women Business Owners of Prince George's County

Women's Business Network of Frederick County

E. Entities that declined to provide the requested information

BlackPages.com
City of Alexandria
City of Fairfax
Concerned Black Women of Calvert County
Fiesta DC
Loudoun Chamber of Commerce
NAACP
National Black Chamber of Commerce
Women Business Owners of Montgomery County

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Appendix D. Detailed Utilization, Availability & Disparity Tables

This appendix presents M/WBE utilization, availability, and disparity statistics analogous to those presented in Chapter VI, Tables 6.3 and 6.4, according to detailed NAICS Industry Groups.[399]

Eight tables are presented; two each for Construction, AE-CRS, Services, and CSE, respectively. Within each procurement category the first two tables include all contracts regardless of funding source, with the first table using dollars awarded as the metric of utilization and the second table using dollars paid. The next two tables within each procurement category are restricted to federally-assisted contracts, and the final two tables to locally-funded contracts.

[399] Comparable statistics were calculated at the NAICS Industry level as well (five-digit and six-digit NAICS). In the interest of space, these results are not reported here. 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.

Table AD.1. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore Construction Contracting (Dollars Awarded)

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.08	6.84	1.14****
Hispanic	29.02	5.92	
Asian	0.00	2.28	0.18****
Native American	0.00	1.36	0.00****
Minority	29.10	16.40	
Nonminority female	1.17	7.49	15.60****
M/WBE Total	30.27	23.89	
Nonresidential Building Construction (NAICS 2362)			
African American	6.12	8.30	73.77
Hispanic	0.78	0.64	
Asian	0.05	4.91	1.03****
Native American	0.00	0.22	0.00
Minority	6.95	14.07	49.37
Nonminority female	2.79	6.45	43.22
M/WBE Total	9.74	20.53	47.44
Building Equipment Contractors (NAICS 2382)			
African American	42.40	8.70	
Hispanic	0.86	1.51	56.91
Asian	0.01	0.23	2.32
Native American	10.79	0.17	
Minority	54.06	10.61	
Nonminority female	3.03	8.58	35.35*
M/WBE Total	57.09	19.19	
Utility System Construction (NAICS 2371)			
African American	0.25	4.25	5.82
Hispanic	0.00	0.00	
Asian	3.79	1.85	
Native American	0.00	0.73	0.00*
Minority	4.04	6.83	59.10
Nonminority female	0.65	12.98	5.00****
M/WBE Total	4.69	19.81	23.66*
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	11.12	8.99	
Hispanic	30.15	6.49	
Asian	4.72	2.24	
Native American	14.60	0.48	
Minority	60.59	18.20	
Nonminority female	12.78	9.71	
M/WBE Total	73.37	27.92	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	79.32	6.17	
Hispanic	0.12	3.33	3.59****
Asian	0.00	0.07	0.00
Native American	0.00	0.90	0.00****
Minority	79.44	10.48	
Nonminority female	1.35	9.94	13.54****
M/WBE Total	80.78	20.42	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	3.53	0.00****
Hispanic	0.00	1.16	0.00
Asian	35.36	2.02	
Native American	0.00	0.00	
Minority	35.36	6.71	
Nonminority female	27.03	17.65	
M/WBE Total	62.39	24.36	
Residential Building Construction (NAICS 2361)			
African American	12.03	9.88	
Hispanic	36.15	3.31	
Asian	0.00	5.69	0.00****
Native American	0.00	0.12	0.00
Minority	48.18	19.00	
Nonminority female	0.25	8.88	2.80****
M/WBE Total	48.42	27.88	
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	2.48	0.00
Hispanic	0.00	4.35	0.00*
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.82	0.00*
Nonminority female	0.00	7.65	0.00*
M/WBE Total	0.00	14.47	0.00****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	13.09	15.87	82.46
Hispanic	1.19	1.05	
Asian	0.00	5.77	0.00****
Native American	0.00	0.60	0.00***
Minority	14.28	23.30	61.29*
Nonminority female	65.98	21.58	
M/WBE Total	80.26	44.88	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
General Freight Trucking (NAICS 4841)			
African American	88.06	14.37	
Hispanic	0.00	3.66	0.00***
Asian	0.00	1.16	0.00
Native American	0.00	0.26	0.00
Minority	88.06	19.45	
Nonminority female	10.31	8.40	
M/WBE Total	98.38	27.85	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.53	0.00****
Hispanic	0.00	0.00	
Asian	0.00	11.05	0.00****
Native American	0.00	0.00	
Minority	0.00	21.58	0.00****
Nonminority female	0.00	15.53	0.00****
M/WBE Total	0.00	37.11	0.00****
Investigation and Security Services (NAICS 5616)			
African American	0.00	24.26	0.00****
Hispanic	0.00	0.97	0.00
Asian	0.00	0.81	0.00
Native American	0.00	0.00	
Minority	0.00	26.04	0.00****
Nonminority female	0.00	19.43	0.00****
M/WBE Total	0.00	45.47	0.00****
Building Finishing Contractors (NAICS 2383)			
African American	14.05	10.51	
Hispanic	21.24	2.87	
Asian	0.00	1.58	0.00***
Native American	1.31	1.42	92.39
Minority	36.59	16.38	
Nonminority female	7.18	10.72	66.96
M/WBE Total	43.77	27.10	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	1.76	7.72	22.73
Hispanic	0.00	4.39	0.00
Asian	0.00	0.00	
Native American	0.00	0.53	0.00
Minority	1.76	12.65	13.88
Nonminority female	0.00	13.17	0.00****
M/WBE Total	1.76	25.82	6.80

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	19.45	8.31	
Hispanic	0.31	2.65	11.55****
Asian	1.40	6.31	22.19****
Native American	0.00	0.32	0.00****
Minority	21.16	17.59	
Nonminority female	7.44	10.63	70.01***
M/WBE Total	28.60	28.22	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	4.46	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.88	0.00
Native American	0.00	0.33	0.00
Minority	0.00	5.67	0.00****
Nonminority female	0.94	8.31	11.36**
M/WBE Total	0.94	13.98	6.76****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	3.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	3.25	0.00
Native American	0.00	2.18	0.00
Minority	0.00	8.68	0.00
Nonminority female	1.87	12.47	14.99
M/WBE Total	1.87	21.15	8.84***
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.69	7.60	9.03
Hispanic	0.00	1.04	0.00
Asian	2.53	3.36	75.26
Native American	0.00	0.00	
Minority	3.22	12.01	26.78
Nonminority female	0.41	8.10	5.08***
M/WBE Total	3.63	20.10	18.04***
Specialized Freight Trucking (NAICS 4842)			
African American	25.51	11.94	
Hispanic	0.00	2.56	0.00***
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	25.51	14.50	
Nonminority female	57.57	13.12	
M/WBE Total	83.09	27.63	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Services (NAICS 5619)			
African American	47.78	18.57	
Hispanic	45.53	0.10	
Asian	0.00	0.12	0.00
Native American	0.00	0.04	0.00
Minority	93.31	18.83	
Nonminority female	2.74	19.25	14.23
M/WBE Total	96.05	38.08	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.51	0.00**
Hispanic	0.00	1.21	0.00
Asian	0.00	1.23	0.00
Native American	0.00	0.00	
Minority	0.00	4.95	0.00****
Nonminority female	7.09	6.61	
M/WBE Total	7.09	11.56	61.34
Business Support Services (NAICS 5614)			
African American	0.68	19.27	3.54****
Hispanic	0.00	0.17	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.10	0.00
Minority	0.68	19.92	3.43****
Nonminority female	98.11	20.96	
M/WBE Total	98.79	40.88	
Building Material and Supplies Dealers (NAICS 4441)			
African American	30.85	5.63	
Hispanic	0.00	2.20	0.00
Asian	0.00	0.15	0.00
Native American	0.00	0.00	
Minority	30.85	7.98	
Nonminority female	0.26	15.94	1.61****
M/WBE Total	31.11	23.92	
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	9.24	0.00****
Hispanic	0.00	1.82	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	11.06	0.00****
Nonminority female	0.00	13.93	0.00****
M/WBE Total	0.00	24.98	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	4.30	8.40	51.17
Hispanic	0.09	2.03	4.46
Asian	0.00	2.25	0.00****
Native American	0.00	1.84	0.00***
Minority	4.39	14.53	30.23**
Nonminority female	40.44	11.67	
M/WBE Total	44.83	26.20	
Facilities Support Services (NAICS 5612)			
African American	13.05	16.27	80.23
Hispanic	0.00	1.59	0.00
Asian	0.00	8.86	0.00****
Native American	0.00	1.59	0.00
Minority	13.05	28.31	46.11
Nonminority female	0.00	18.25	0.00****
M/WBE Total	13.05	46.56	28.03****
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	9.45	6.38	
Hispanic	0.00	0.00	
Asian	0.00	1.14	0.00
Native American	0.00	1.14	0.00
Minority	9.45	8.66	
Nonminority female	0.00	7.22	0.00***
M/WBE Total	9.45	15.88	59.51
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	6.16	0.00***
Hispanic	0.00	0.05	0.00
Asian	0.00	1.39	0.00
Native American	0.00	0.69	0.00
Minority	0.00	8.30	0.00***
Nonminority female	7.70	6.70	
M/WBE Total	7.70	15.00	51.36
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	3.07	8.19	37.44
Hispanic	0.00	1.48	0.00
Asian	0.00	0.27	0.00
Native American	0.00	0.55	0.00
Minority	3.07	10.48	29.24
Nonminority female	0.00	11.01	0.00****
M/WBE Total	3.07	21.50	14.26**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Remediation and Other Waste Management Services (NAICS 5629)			
African American	87.24	6.39	
Hispanic	0.00	2.85	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	87.24	9.25	
Nonminority female	0.00	13.91	0.00****
M/WBE Total	87.24	23.16	
Warehousing and Storage (NAICS 4931)			
African American	0.00	2.23	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.12	0.00
Native American	0.00	0.00	
Minority	0.00	3.35	0.00
Nonminority female	0.00	9.23	0.00
M/WBE Total	0.00	12.57	0.00
Foundries (NAICS 3315)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE Total	0.00	0.00	
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	2.95	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.95	0.00
Nonminority female	0.00	3.94	0.00
M/WBE Total	0.00	6.89	0.00
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	8.46	2.28	
Hispanic	2.33	0.00	
Asian	0.00	3.49	0.00
Native American	0.00	0.00	
Minority	10.79	5.77	
Nonminority female	18.39	10.16	
M/WBE Total	29.19	15.93	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Gasoline Stations (NAICS 4471)			
African American	100.00	7.60	
Hispanic	0.00	0.17	0.00
Asian	0.00	25.13	0.00****
Native American	0.00	0.00	
Minority	100.00	32.90	
Nonminority female	0.00	3.02	0.00
M/WBE Total	100.00	35.92	
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	7.32	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.58	0.00
Native American	0.00	0.00	
Minority	0.00	8.90	0.00
Nonminority female	0.00	14.64	0.00
M/WBE Total	0.00	23.54	0.00
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	99.32	9.65	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	99.32	9.65	
Nonminority female	0.00	6.95	0.00****
M/WBE Total	99.32	16.60	
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	4.11	0.00
Hispanic	0.00	1.88	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.00	
Minority	0.00	6.38	0.00****
Nonminority female	0.00	11.41	0.00****
M/WBE Total	0.00	17.79	0.00****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.41	0.00
Hispanic	0.00	0.58	0.00
Asian	0.00	1.92	0.00
Native American	0.00	0.00	
Minority	0.00	7.90	0.00
Nonminority female	1.36	11.97	11.40
M/WBE Total	1.36	19.87	6.86

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Plastics Product Manufacturing (NAICS 3261)			
African American	32.72	2.13	
Hispanic	0.00	0.00	
Asian	0.00	5.89	0.00
Native American	0.00	0.00	
Minority	32.72	8.01	
Nonminority female	0.00	10.14	0.00
M/WBE Total	32.72	18.16	
Direct Selling Establishments (NAICS 4543)			
African American	96.17	5.56	
Hispanic	0.00	0.00	
Asian	0.00	1.85	0.00
Native American	0.00	0.00	
Minority	96.17	7.41	
Nonminority female	0.00	5.56	0.00
M/WBE Total	96.17	12.96	
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE Total	0.00	0.00	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	15.46	0.00****
Hispanic	0.00	0.31	0.00
Asian	0.00	4.33	0.00**
Native American	0.00	0.02	0.00
Minority	0.00	20.12	0.00****
Nonminority female	92.20	21.28	
M/WBE Total	92.20	41.40	
Rail Transportation (NAICS 4821)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	6.25	0.00
M/WBE Total	0.00	6.25	0.00

Source and Notes: *See* Table 6.3.

Table AD.2. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore Construction Contracting (Dollars Paid)

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.03	6.84	0.41****
Hispanic	35.36	5.92	
Asian	0.00	2.28	0.00****
Native American	0.00	1.36	0.00****
Minority	35.38	16.40	
Nonminority female	1.56	7.49	20.75****
M/WBE Total	36.94	23.89	
Nonresidential Building Construction (NAICS 2362)			
African American	7.10	8.22	86.43
Hispanic	0.68	0.61	
Asian	0.00	4.96	0.00****
Native American	0.00	0.21	0.00
Minority	7.78	14.00	55.60
Nonminority female	1.31	6.37	20.63
M/WBE Total	9.10	20.37	44.67
Utility System Construction (NAICS 2371)			
African American	0.00	4.25	0.00****
Hispanic	0.00	0.00	
Asian	4.46	1.85	
Native American	0.00	0.73	0.00
Minority	4.46	6.83	65.29
Nonminority female	0.04	12.98	0.32****
M/WBE Total	4.50	19.81	22.73
Building Equipment Contractors (NAICS 2382)			
African American	51.30	9.02	
Hispanic	0.22	1.47	15.19
Asian	0.00	0.23	0.00*
Native American	10.06	0.18	
Minority	61.58	10.90	
Nonminority female	3.58	8.50	42.11
M/WBE Total	65.16	19.40	
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	10.35	8.87	
Hispanic	33.74	6.82	
Asian	5.10	2.36	
Native American	14.77	0.54	
Minority	63.96	18.59	
Nonminority female	12.61	9.58	
M/WBE Total	76.57	28.17	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	76.80	5.71	
Hispanic	0.16	3.40	4.83****
Asian	0.00	0.06	0.00
Native American	0.00	0.95	0.00****
Minority	76.96	10.13	
Nonminority female	0.69	9.37	7.39****
M/WBE Total	77.65	19.49	
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	0.00	3.36	0.00****
Hispanic	0.00	1.20	0.00**
Asian	39.15	2.01	
Native American	0.00	0.00	
Minority	39.15	6.57	
Nonminority female	35.02	17.97	
M/WBE Total	74.18	24.54	
Residential Building Construction (NAICS 2361)			
African American	14.08	9.88	
Hispanic	47.16	3.31	
Asian	0.00	5.69	0.00****
Native American	0.00	0.12	0.00
Minority	61.24	19.00	
Nonminority female	0.07	8.88	0.79****
M/WBE Total	61.31	27.88	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	15.07	15.81	95.33
Hispanic	0.70	1.05	66.59
Asian	0.00	5.80	0.00****
Native American	0.00	0.60	0.00****
Minority	15.77	23.26	67.80
Nonminority female	66.59	21.43	
M/WBE Total	82.36	44.69	
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	2.48	0.00
Hispanic	0.00	4.35	0.00****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	6.82	0.00****
Nonminority female	0.00	7.65	0.00****
M/WBE Total	0.00	14.47	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
General Freight Trucking (NAICS 4841)			
African American	93.82	14.05	
Hispanic	0.60	3.64	16.45
Asian	0.00	1.14	0.00**
Native American	0.00	0.26	0.00
Minority	94.42	19.09	
Nonminority female	2.26	8.52	26.49
M/WBE Total	96.68	27.61	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	10.53	0.00****
Hispanic	0.00	0.00	
Asian	0.00	11.05	0.00****
Native American	0.00	0.00	
Minority	0.00	21.58	0.00****
Nonminority female	0.00	15.53	0.00****
M/WBE Total	0.00	37.11	0.00****
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	3.25	0.00**
Hispanic	0.00	0.00	
Asian	0.00	3.25	0.00**
Native American	0.00	2.18	0.00**
Minority	0.00	8.68	0.00****
Nonminority female	4.48	12.47	35.89
M/WBE Total	4.48	21.15	21.16*
Building Finishing Contractors (NAICS 2383)			
African American	17.18	10.47	
Hispanic	27.93	3.04	
Asian	0.00	1.65	0.00****
Native American	1.71	1.41	
Minority	46.82	16.56	
Nonminority female	9.13	11.09	82.32
M/WBE Total	55.95	27.65	
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	7.72	0.00****
Hispanic	0.00	4.39	0.00
Asian	0.00	0.00	
Native American	0.00	0.53	0.00
Minority	0.00	12.65	0.00****
Nonminority female	0.00	13.17	0.00****
M/WBE Total	0.00	25.82	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Investigation and Security Services (NAICS 5616)			
African American	0.00	30.30	0.00****
Hispanic	0.00	1.39	0.00***
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	31.68	0.00****
Nonminority female	0.00	22.50	0.00****
M/WBE Total	0.00	54.19	0.00****
Business Support Services (NAICS 5614)			
African American	0.61	19.27	3.16****
Hispanic	0.00	0.17	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.10	0.00
Minority	0.61	19.92	3.06****
Nonminority female	99.30	20.96	
M/WBE Total	99.91	40.88	
Other Support Services (NAICS 5619)			
African American	37.92	18.57	
Hispanic	58.54	0.10	
Asian	0.00	0.12	0.00
Native American	0.00	0.04	0.00
Minority	96.46	18.83	
Nonminority female	2.79	19.25	14.48
M/WBE Total	99.25	38.08	
Specialized Freight Trucking (NAICS 4842)			
African American	31.81	11.78	
Hispanic	0.00	2.57	0.00****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	31.81	14.35	
Nonminority female	49.09	13.06	
M/WBE Total	80.90	27.41	
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.49	7.44	6.60***
Hispanic	0.00	1.03	0.00**
Asian	3.14	3.43	91.66
Native American	0.00	0.00	
Minority	3.63	11.89	30.52
Nonminority female	1.79	8.42	21.26
M/WBE Total	5.42	20.31	26.68**

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	25.44	9.22	
Hispanic	0.52	2.57	20.17****
Asian	0.39	6.18	6.30****
Native American	0.00	0.33	0.00****
Minority	26.35	18.30	
Nonminority female	8.58	12.19	70.43**
M/WBE Total	34.93	30.48	
Building Material and Supplies Dealers (NAICS 4441)			
African American	31.41	5.61	
Hispanic	0.00	2.20	0.00****
Asian	0.00	0.16	0.00
Native American	0.00	0.00	
Minority	31.41	7.97	
Nonminority female	0.27	15.93	1.71****
M/WBE Total	31.69	23.91	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	1.78	0.00**
Hispanic	0.00	1.47	0.00**
Asian	0.00	1.10	0.00**
Native American	0.00	0.00	
Minority	0.00	4.35	0.00****
Nonminority female	1.91	5.35	35.75
M/WBE Total	1.91	9.70	19.72
Remediation and Other Waste Management Services (NAICS 5629)			
African American	90.54	5.19	
Hispanic	0.00	1.78	0.00***
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	90.54	6.97	
Nonminority female	0.00	13.83	0.00****
M/WBE Total	90.54	20.80	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.00	3.74	0.00****
Hispanic	0.00	0.00	
Asian	0.00	1.26	0.00****
Native American	0.00	0.31	0.00
Minority	0.00	5.32	0.00****
Nonminority female	0.26	8.37	3.16****
M/WBE Total	0.26	13.69	1.93****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	4.08	8.79	46.35
Hispanic	0.11	2.06	5.36**
Asian	0.00	2.32	0.00****
Native American	0.00	1.85	0.00****
Minority	4.19	15.03	27.85****
Nonminority female	28.62	11.84	
M/WBE Total	32.81	26.87	
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.21	6.16	3.49
Hispanic	0.00	0.05	0.00
Asian	0.00	1.39	0.00
Native American	0.00	0.69	0.00
Minority	0.21	8.30	2.59
Nonminority female	13.98	6.70	
M/WBE Total	14.19	15.00	94.61
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	10.01	6.38	
Hispanic	0.00	0.00	
Asian	0.00	1.14	0.00
Native American	0.00	1.14	0.00
Minority	10.01	8.66	
Nonminority female	0.00	7.22	0.00****
M/WBE Total	10.01	15.88	63.01
Facilities Support Services (NAICS 5612)			
African American	15.91	16.27	97.82
Hispanic	0.00	1.59	0.00
Asian	0.00	8.86	0.00
Native American	0.00	1.59	0.00
Minority	15.91	28.31	56.22
Nonminority female	0.00	18.25	0.00
M/WBE Total	15.91	46.56	34.18*
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	3.33	7.79	42.72
Hispanic	0.00	1.43	0.00****
Asian	0.00	0.33	0.00
Native American	0.00	0.67	0.00
Minority	3.33	10.22	32.54
Nonminority female	0.00	11.24	0.00****
M/WBE Total	3.33	21.46	15.50*

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	4.97	0.00****
Hispanic	0.00	2.44	0.00****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.41	0.00****
Nonminority female	0.00	11.98	0.00****
M/WBE Total	0.00	19.39	0.00****
Waste Treatment and Disposal (NAICS 5622)			
African American	1.10	8.09	13.54
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	1.10	8.09	13.54
Nonminority female	0.00	8.96	0.00****
M/WBE Total	1.10	17.06	6.43
Foundries (NAICS 3315)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE Total	0.00	0.00	
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	2.95	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.95	0.00
Nonminority female	0.00	3.94	0.00****
M/WBE Total	0.00	6.89	0.00****
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	4.11	0.00
Hispanic	0.00	1.88	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.00	
Minority	0.00	6.38	0.00****
Nonminority female	0.00	11.41	0.00****
M/WBE Total	0.00	17.79	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	7.32	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.58	0.00
Native American	0.00	0.00	
Minority	0.00	8.90	0.00
Nonminority female	0.00	14.64	0.00
M/WBE Total	0.00	23.54	0.00
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	99.22	9.11	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	99.22	9.11	
Nonminority female	0.00	6.09	0.00****
M/WBE Total	99.22	15.20	
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.41	0.00
Hispanic	0.00	0.58	0.00
Asian	0.00	1.92	0.00
Native American	0.00	0.00	
Minority	0.00	7.90	0.00
Nonminority female	0.00	11.97	0.00
M/WBE Total	0.00	19.87	0.00
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.00	5.79	0.00****
Hispanic	8.31	3.66	
Asian	0.00	1.30	0.00
Native American	0.00	0.00	
Minority	8.31	10.74	77.38
Nonminority female	21.13	10.64	
M/WBE Total	29.44	21.38	
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	5.59	2.28	
Hispanic	3.58	0.00	
Asian	0.00	3.49	0.00****
Native American	0.00	0.00	
Minority	9.17	5.77	
Nonminority female	0.00	10.16	0.00****
M/WBE Total	9.17	15.93	57.57

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Administrative Services (NAICS 5611)			
African American	100.00	19.54	
Hispanic	0.00	0.15	0.00
Asian	0.00	9.21	0.00****
Native American	0.00	0.00	
Minority	100.00	28.90	
Nonminority female	0.00	11.17	0.00****
M/WBE Total	100.00	40.07	
Direct Selling Establishments (NAICS 4543)			
African American	96.17	5.56	
Hispanic	0.00	0.00	
Asian	0.00	1.85	0.00
Native American	0.00	0.00	
Minority	96.17	7.41	
Nonminority female	0.00	5.56	0.00
M/WBE Total	96.17	12.96	
Nonmetallic Mineral Mining and Quarrying (NAICS 2123)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE Total	0.00	0.00	
Plastics Product Manufacturing (NAICS 3261)			
African American	44.82	2.13	
Hispanic	0.00	0.00	
Asian	0.00	5.89	0.00
Native American	0.00	0.00	
Minority	44.82	8.01	
Nonminority female	0.00	10.14	0.00
M/WBE Total	44.82	18.16	
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	74.61	0.00	
Hispanic	0.00	5.68	0.00
Asian	0.00	5.68	0.00
Native American	0.00	0.00	
Minority	74.61	11.37	
Nonminority female	0.00	1.69	0.00
M/WBE Total	74.61	13.06	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Rail Transportation (NAICS 4821)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	6.25	0.00
M/WBE Total	0.00	6.25	0.00
Department Stores (NAICS 4521)			
African American	0.00	12.74	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.94	0.00
Native American	0.00	0.00	
Minority	0.00	14.68	0.00
Nonminority female	0.00	7.24	0.00
M/WBE Total	0.00	21.92	0.00
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	3.79	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.95	0.00
Native American	0.00	0.00	
Minority	0.00	8.74	0.00
Nonminority female	0.00	6.03	0.00
M/WBE Total	0.00	14.78	0.00****
Gasoline Stations (NAICS 4471)			
African American	100.00	7.60	
Hispanic	0.00	0.17	0.00
Asian	0.00	25.13	0.00****
Native American	0.00	0.00	
Minority	100.00	32.90	
Nonminority female	0.00	3.02	0.00
M/WBE Total	100.00	35.92	

Source and Notes: *See* Table 6.3.

Table AD.3. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore AE-CRS Contracting (Dollars Awarded)

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	4.12	6.67	61.75***
Hispanic	0.27	2.38	11.17****
Asian	25.54	6.89	
Native American	0.00	0.23	0.00****
Minority	29.92	16.18	
Nonminority female	3.12	7.56	41.24****
M/WBE Total	33.04	23.74	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	11.49	15.11	76.02
Hispanic	0.00	0.96	0.00****
Asian	5.68	5.10	
Native American	0.00	0.47	0.00
Minority	17.17	21.64	79.36
Nonminority female	24.47	22.68	
M/WBE Total	41.64	44.32	93.96
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.02	15.46	0.15****
Hispanic	0.00	0.31	0.00
Asian	0.00	4.33	0.00**
Native American	0.00	0.02	0.00
Minority	0.02	20.12	0.11****
Nonminority female	2.80	21.28	13.18
M/WBE Total	2.83	41.40	6.83****
Utility System Construction (NAICS 2371)			
African American	74.42	4.25	
Hispanic	0.00	0.00	
Asian	0.76	1.85	41.28
Native American	0.00	0.73	0.00*
Minority	75.18	6.83	
Nonminority female	0.00	12.98	0.00****
M/WBE Total	75.18	19.81	
Remediation and Other Waste Management Services (NAICS 5629)			
African American	96.89	3.19	
Hispanic	0.00	0.00	
Asian	3.11	0.00	
Native American	0.00	0.00	
Minority	100.00	3.19	
Nonminority female	0.00	13.69	0.00****
M/WBE Total	100.00	16.88	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	6.70	0.00****
Hispanic	0.00	0.00	
Asian	94.50	5.91	
Native American	0.00	0.00	
Minority	94.50	12.61	
Nonminority female	1.28	4.70	27.30
M/WBE Total	95.79	17.32	
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	62.99	18.61	
Hispanic	0.00	0.00	
Asian	17.84	3.92	
Native American	0.00	0.00	
Minority	80.83	22.53	
Nonminority female	2.73	29.75	9.18****
M/WBE Total	83.56	52.27	
Computer Systems Design and Related Services (NAICS 5415)			
African American	90.15	13.75	
Hispanic	0.00	10.34	0.00****
Asian	0.00	6.10	0.00****
Native American	0.00	0.05	0.00
Minority	90.15	30.24	
Nonminority female	2.07	9.75	21.22**
M/WBE Total	92.22	39.99	
Residential Building Construction (NAICS 2361)			
African American	100.00	9.88	
Hispanic	0.00	3.31	0.00****
Asian	0.00	5.69	0.00****
Native American	0.00	0.12	0.00
Minority	100.00	19.00	
Nonminority female	0.00	8.88	0.00****
M/WBE Total	100.00	27.88	
Building Equipment Contractors (NAICS 2382)			
African American	9.08	6.55	
Hispanic	37.96	1.93	
Asian	0.00	0.21	0.00
Native American	0.00	0.11	0.00
Minority	47.04	8.80	
Nonminority female	0.00	9.28	0.00****
M/WBE Total	47.04	18.08	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	1.32	0.00
Hispanic	0.00	0.00	
Asian	0.00	2.63	0.00
Native American	0.00	0.00	
Minority	0.00	3.95	0.00**
Nonminority female	0.00	6.00	0.00**
M/WBE Total	0.00	9.95	0.00****
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	3.51	0.00
M/WBE Total	0.00	3.51	0.00

Source and Notes: *See* Table 6.3.

Table AD.4. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore AE-CRS Contracting (Dollars Paid)

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	2.46	6.57	37.41****
Hispanic	0.22	2.37	9.21****
Asian	26.59	6.92	
Native American	0.00	0.23	0.00***
Minority	29.27	16.08	
Nonminority female	1.72	7.38	23.36****
M/WBE Total	30.99	23.46	
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	10.05	14.57	68.94
Hispanic	0.00	0.90	0.00****
Asian	3.46	5.03	68.82
Native American	0.00	0.41	0.00
Minority	13.51	20.91	64.59
Nonminority female	21.46	21.82	98.34
M/WBE Total	34.97	42.73	81.83
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	15.46	0.00****
Hispanic	0.00	0.31	0.00
Asian	0.00	4.33	0.00****
Native American	0.00	0.02	0.00
Minority	0.00	20.12	0.00****
Nonminority female	2.70	21.28	12.67*
M/WBE Total	2.70	41.40	6.51****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	97.60	3.19	
Hispanic	0.00	0.00	
Asian	2.40	0.00	
Native American	0.00	0.00	
Minority	100.00	3.19	
Nonminority female	0.00	13.69	0.00****
M/WBE Total	100.00	16.88	
Utility System Construction (NAICS 2371)			
African American	69.59	4.25	
Hispanic	0.00	0.00	
Asian	0.00	1.85	0.00
Native American	0.00	0.73	0.00
Minority	69.59	6.83	
Nonminority female	0.00	12.98	0.00****
M/WBE Total	69.59	19.81	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	6.70	0.00****
Hispanic	0.00	0.00	
Asian	94.43	5.91	
Native American	0.00	0.00	
Minority	94.43	12.61	
Nonminority female	0.00	4.70	0.00****
M/WBE Total	94.43	17.32	
Computer Systems Design and Related Services (NAICS 5415)			
African American	82.05	13.75	
Hispanic	0.00	10.34	0.00****
Asian	0.00	6.10	0.00****
Native American	0.00	0.05	0.00
Minority	82.05	30.24	
Nonminority female	1.27	9.75	13.04***
M/WBE Total	83.32	39.99	
Building Equipment Contractors (NAICS 2382)			
African American	0.00	9.00	0.00****
Hispanic	37.20	1.36	
Asian	0.00	0.23	0.00*
Native American	0.00	0.19	0.00
Minority	37.20	10.79	
Nonminority female	0.00	8.43	0.00****
M/WBE Total	37.20	19.22	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	0.00	0.99	0.00
Hispanic	0.00	0.69	0.00
Asian	0.00	0.99	0.00
Native American	0.00	0.99	0.00
Minority	0.00	3.66	0.00
Nonminority female	0.00	9.69	0.00***
M/WBE Total	0.00	13.35	0.00***
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	53.15	17.77	
Hispanic	0.00	0.52	0.00
Asian	0.00	3.92	0.00****
Native American	0.00	0.17	0.00
Minority	53.15	22.37	
Nonminority female	0.00	29.02	0.00****
M/WBE Total	53.15	51.40	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	3.51	0.00
M/WBE Total	0.00	3.51	0.00
Business Support Services (NAICS 5614)			
African American	0.00	19.27	0.00****
Hispanic	0.00	0.17	0.00
Asian	100.00	0.38	
Native American	0.00	0.10	0.00
Minority	100.00	19.92	
Nonminority female	0.00	20.96	0.00****
M/WBE Total	100.00	40.88	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	1.32	0.00*
Hispanic	0.00	0.00	
Asian	0.00	2.63	0.00*
Native American	0.00	0.00	
Minority	0.00	3.95	0.00****
Nonminority female	0.00	6.00	0.00****
M/WBE Total	0.00	9.95	0.00****

Source and Notes: *See* Table 6.3.

Table AD.5. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore Services Contracting (Dollars Awarded)

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	21.64	14.30	
Hispanic	0.53	3.42	15.45
Asian	29.16	7.25	
Native American	0.00	0.37	0.00
Minority	51.33	25.34	
Nonminority female	4.55	11.44	39.74
M/WBE Total	55.87	36.78	
Insurance Carriers (NAICS 5241)			
African American	0.85	16.37	5.21
Hispanic	0.00	0.00	
Asian	0.00	1.71	0.00
Native American	0.00	0.00	
Minority	0.85	18.08	4.72
Nonminority female	0.00	10.82	0.00
M/WBE Total	0.85	28.90	2.95 ***
Employment Services (NAICS 5613)			
African American	33.73	8.28	
Hispanic	0.00	0.66	0.00
Asian	0.00	2.49	0.00
Native American	0.00	0.29	0.00
Minority	33.73	11.72	
Nonminority female	4.84	25.80	18.77 ***
M/WBE Total	38.57	37.52	
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	5.44	0.00 *
Hispanic	0.00	0.74	0.00
Asian	0.00	4.47	0.00 *
Native American	0.00	0.00	
Minority	0.00	10.65	0.00 ****
Nonminority female	0.00	13.95	0.00 ****
M/WBE Total	0.00	24.60	0.00 ****
Investigation and Security Services (NAICS 5616)			
African American	36.63	16.06	
Hispanic	0.00	0.65	0.00
Asian	0.00	1.78	0.00
Native American	0.00	0.49	0.00
Minority	36.63	18.98	
Nonminority female	0.65	15.54	4.21
M/WBE Total	37.29	34.52	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.55	8.53	6.41
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.55	8.53	6.41
Nonminority female	0.00	8.75	0.00
M/WBE Total	0.55	17.29	3.17
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	5.04	0.00 ***
Hispanic	0.00	7.82	0.00 ****
Asian	0.00	15.64	0.00 ****
Native American	0.00	1.95	0.00
Minority	0.00	30.45	0.00 ****
Nonminority female	0.00	1.13	0.00
M/WBE Total	0.00	31.58	0.00 ****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	33.56	14.22	
Hispanic	0.23	0.71	32.27
Asian	0.00	4.97	0.00 ****
Native American	0.21	0.28	74.23
Minority	34.00	20.19	
Nonminority female	10.05	20.41	49.26 ***
M/WBE Total	44.05	40.59	
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	13.70	7.19	
Hispanic	0.20	4.15	4.83 ****
Asian	19.58	4.69	
Native American	2.11	0.56	
Minority	35.59	16.59	
Nonminority female	5.12	9.89	51.75 ****
M/WBE Total	40.71	26.48	
Building Equipment Contractors (NAICS 2382)			
African American	22.33	9.61	
Hispanic	17.80	1.80	
Asian	0.00	0.21	0.00
Native American	0.03	0.16	17.08
Minority	40.15	11.77	
Nonminority female	12.88	8.61	
M/WBE Total	53.04	20.39	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.03	1.99	1.30
Hispanic	0.00	1.37	0.00
Asian	0.00	1.12	0.00
Native American	0.00	0.00	
Minority	0.03	4.48	0.58 **
Nonminority female	0.27	5.81	4.70
M/WBE Total	0.30	10.29	2.91 **
Services to Buildings and Dwellings (NAICS 5617)			
African American	24.75	16.17	
Hispanic	0.10	2.09	4.79
Asian	7.23	3.06	
Native American	0.00	1.84	0.00 ***
Minority	32.08	23.16	
Nonminority female	18.78	15.73	
M/WBE Total	50.86	38.89	
Special Food Services (NAICS 7223)			
African American	1.22	25.67	4.75
Hispanic	0.00	0.06	0.00
Asian	0.00	4.71	0.00
Native American	0.00	0.00	
Minority	1.22	30.44	4.00
Nonminority female	19.95	21.33	93.52
M/WBE Total	21.17	51.77	40.89
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	0.46	6.38	7.25
Hispanic	0.00	0.00	
Asian	0.00	1.14	0.00
Native American	0.00	1.14	0.00
Minority	0.46	8.66	5.34 ***
Nonminority female	16.59	7.22	
M/WBE Total	17.06	15.88	
General Medical and Surgical Hospitals (NAICS 6221)			
African American	0.00	0.00	
Hispanic	0.00	0.70	0.00
Asian	0.00	3.83	0.00
Native American	0.00	0.00	
Minority	0.00	4.54	0.00
Nonminority female	0.00	5.00	0.00
M/WBE Total	0.00	9.54	0.00

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Personal Services (NAICS 8129)			
African American	27.54	21.60	
Hispanic	0.26	4.51	5.83
Asian	0.00	4.51	0.00
Native American	0.00	0.00	
Minority	27.80	30.61	90.83
Nonminority female	0.46	1.79	26.00
M/WBE Total	28.27	32.40	87.26
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.85	0.00 ****
Hispanic	0.00	2.28	0.00
Asian	0.13	1.85	6.99
Native American	0.00	2.70	0.00
Minority	0.13	14.68	0.88 ****
Nonminority female	4.21	9.42	44.69
M/WBE Total	4.34	24.10	18.00 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	8.69	0.00 ****
Hispanic	0.00	0.40	0.00
Asian	10.83	0.81	
Native American	0.00	0.00	
Minority	10.83	9.89	
Nonminority female	0.00	11.32	0.00 ****
M/WBE Total	10.83	21.21	51.07
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	9.88	16.13	61.23
Hispanic	0.00	0.39	0.00
Asian	0.00	1.23	0.00
Native American	0.00	0.00	
Minority	9.88	17.76	55.61
Nonminority female	0.78	27.47	2.83 ***
M/WBE Total	10.65	45.22	23.55
Other Telecommunications (NAICS 5179)			
African American	31.08	17.80	
Hispanic	0.00	2.02	0.00
Asian	2.47	3.72	66.45
Native American	0.00	0.12	0.00
Minority	33.55	23.67	
Nonminority female	44.28	13.96	
M/WBE Total	77.83	37.63	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	15.64	2.70	
Hispanic	0.00	1.20	0.00
Asian	0.00	0.84	0.00
Native American	0.00	1.46	0.00
Minority	15.64	6.20	
Nonminority female	0.00	9.43	0.00 ***
M/WBE Total	15.64	15.63	
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	0.55	0.00
Hispanic	0.00	5.36	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.92	0.00
Nonminority female	0.00	0.86	0.00
M/WBE Total	0.00	6.78	0.00
Other Specialty Trade Contractors (NAICS 2389)			
African American	39.28	7.69	
Hispanic	0.00	3.10	0.00 ****
Asian	0.00	0.12	0.00
Native American	0.00	0.72	0.00 **
Minority	39.28	11.63	
Nonminority female	11.68	11.83	98.76
M/WBE Total	50.95	23.45	
Software Publishers (NAICS 5112)			
African American	0.00	6.87	0.00 ****
Hispanic	0.00	1.66	0.00
Asian	5.29	5.09	
Native American	0.00	0.00	
Minority	5.29	13.62	38.85
Nonminority female	0.68	11.29	6.04 ****
M/WBE Total	5.97	24.91	23.98 ****
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	10.81	0.00 *
Hispanic	0.00	0.15	0.00
Asian	0.00	3.73	0.00
Native American	0.00	1.79	0.00
Minority	0.00	16.49	0.00 *
Nonminority female	0.00	20.45	0.00 ***
M/WBE Total	0.00	36.94	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Printing and Related Support Activities (NAICS 3231)			
African American	23.81	1.68	
Hispanic	0.00	0.00	
Asian	0.08	1.60	5.01
Native American	0.00	0.76	0.00
Minority	23.89	4.04	
Nonminority female	0.81	44.17	1.84 ****
M/WBE Total	24.70	48.21	51.24
Ship and Boat Building (NAICS 3366)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	15.07	0.00 ****
M/WBE Total	0.00	15.07	0.00 ****
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	5.42	4.97	
Hispanic	0.00	0.03	0.00
Asian	0.00	0.73	0.00
Native American	0.00	0.01	0.00
Minority	5.42	5.76	94.22
Nonminority female	1.28	30.57	4.19 ****
M/WBE Total	6.70	36.33	18.45 ****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	37.24	6.01	
Hispanic	7.29	2.51	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	44.53	8.52	
Nonminority female	0.00	13.88	0.00 ****
M/WBE Total	44.53	22.41	
Outpatient Care Centers (NAICS 6214)			
African American	0.00	27.25	0.00 ****
Hispanic	0.00	0.88	0.00
Asian	0.00	0.88	0.00
Native American	0.00	0.88	0.00
Minority	0.00	29.91	0.00 ****
Nonminority female	0.00	20.29	0.00 ***
M/WBE Total	0.00	50.20	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	5.01	0.00 **
Hispanic	0.00	1.09	0.00
Asian	0.00	0.81	0.00
Native American	0.00	1.63	0.00
Minority	0.00	8.54	0.00 ****
Nonminority female	6.41	12.88	49.78
M/WBE Total	6.41	21.42	29.93
General Freight Trucking (NAICS 4841)			
African American	11.48	27.78	41.31 **
Hispanic	0.00	4.17	0.00 ***
Asian	0.00	2.04	0.00
Native American	0.00	0.10	0.00
Minority	11.48	34.08	33.67 ****
Nonminority female	0.64	3.67	17.42
M/WBE Total	12.12	37.75	32.09 ****
Building Finishing Contractors (NAICS 2383)			
African American	1.31	10.89	12.04 ****
Hispanic	34.62	3.16	
Asian	0.00	1.71	0.00 ***
Native American	0.00	1.52	0.00 ***
Minority	35.93	17.28	
Nonminority female	3.12	10.91	28.57 **
M/WBE Total	39.05	28.19	
Legal Services (NAICS 5411)			
African American	0.49	1.28	38.26
Hispanic	0.00	2.03	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	0.49	3.34	14.65
Nonminority female	0.00	15.52	0.00 ***
M/WBE Total	0.49	18.85	2.59 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	6.84	0.00 ****
Hispanic	26.32	5.92	
Asian	0.26	2.28	11.50 ***
Native American	0.00	1.36	0.00 ****
Minority	26.58	16.40	
Nonminority female	0.00	7.49	0.00 ****
M/WBE Total	26.58	23.89	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Specialized Design Services (NAICS 5414)			
African American	0.03	18.34	0.15 **
Hispanic	0.00	0.86	0.00
Asian	0.00	3.61	0.00
Native American	0.00	0.08	0.00
Minority	0.03	22.88	0.12 ***
Nonminority female	79.11	37.99	
M/WBE Total	79.14	60.87	
Office Administrative Services (NAICS 5611)			
African American	1.64	19.54	8.38 **
Hispanic	0.00	0.15	0.00
Asian	0.00	9.21	0.00
Native American	0.00	0.00	
Minority	1.64	28.90	5.67 ***
Nonminority female	0.00	11.17	0.00
M/WBE Total	1.64	40.07	4.09 ****
Residential Building Construction (NAICS 2361)			
African American	9.74	9.39	
Hispanic	0.00	3.01	0.00 ****
Asian	0.00	4.62	0.00 ****
Native American	3.97	0.74	
Minority	13.71	17.76	77.18
Nonminority female	0.00	9.86	0.00 ****
M/WBE Total	13.71	27.62	49.64 **
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	1.69	7.05	24.01 ****
Hispanic	32.57	5.58	
Asian	5.85	1.81	
Native American	0.00	0.21	0.00
Minority	40.12	14.66	
Nonminority female	3.00	9.19	32.69 ****
M/WBE Total	43.12	23.85	
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	2.49	4.99	49.92
Hispanic	0.00	0.00	
Asian	0.00	2.20	0.00 ***
Native American	0.00	0.59	0.00
Minority	2.49	7.78	32.02
Nonminority female	6.50	7.75	83.83
M/WBE Total	8.99	15.52	57.88

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Home Health Care Services (NAICS 6216)			
African American	77.87	21.55	
Hispanic	0.00	1.16	0.00
Asian	0.00	0.73	0.00
Native American	0.00	0.65	0.00
Minority	77.87	24.10	
Nonminority female	0.00	15.53	0.00 ****
M/WBE Total	77.87	39.63	
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	33.91	15.46	
Hispanic	0.25	0.31	82.25
Asian	0.00	4.33	0.00 **
Native American	0.00	0.02	0.00
Minority	34.16	20.12	
Nonminority female	5.50	21.28	25.82
M/WBE Total	39.66	41.40	95.79
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	6.25	0.00
Hispanic	0.00	1.04	0.00
Asian	0.00	2.08	0.00
Native American	0.00	0.00	
Minority	0.00	9.38	0.00
Nonminority female	0.00	11.46	0.00
M/WBE Total	0.00	20.83	0.00
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	11.06	0.00
Hispanic	0.00	5.01	0.00
Asian	0.00	0.71	0.00
Native American	0.00	3.83	0.00
Minority	0.00	20.61	0.00
Nonminority female	0.00	13.35	0.00
M/WBE Total	0.00	33.97	0.00 ***
Nonresidential Building Construction (NAICS 2362)			
African American	0.83	9.01	9.22 ****
Hispanic	14.93	0.93	
Asian	16.89	4.47	
Native American	0.00	0.32	0.00 *
Minority	32.65	14.73	
Nonminority female	0.00	7.23	0.00 ****
M/WBE Total	32.65	21.96	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	2.70	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.70	0.00
Nonminority female	0.00	0.00	
M/WBE Total	0.00	2.70	0.00
Other Ambulatory Health Care Services (NAICS 6219)			
African American	0.00	20.09	0.00 ****
Hispanic	0.00	1.44	0.00
Asian	0.00	0.75	0.00
Native American	0.00	0.76	0.00
Minority	0.00	23.04	0.00 ****
Nonminority female	1.76	15.85	11.10 ***
M/WBE Total	1.76	38.89	4.53 ****
Automobile Dealers (NAICS 4411)			
African American	0.00	8.38	0.00
Hispanic	0.00	1.80	0.00
Asian	0.00	2.70	0.00
Native American	0.00	0.00	
Minority	0.00	12.88	0.00
Nonminority female	0.00	6.20	0.00
M/WBE Total	0.00	19.08	0.00 ****
Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)			
African American	0.00	26.92	0.00 ****
Hispanic	0.00	3.85	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	30.77	0.00 ****
Nonminority female	0.00	50.00	0.00 ****
M/WBE Total	0.00	80.77	0.00 ****
Other Support Activities for Transportation (NAICS 4889)			
African American	10.91	19.10	57.11
Hispanic	0.00	4.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.13	0.00
Minority	10.91	23.34	46.73
Nonminority female	0.00	13.86	0.00 ***
M/WBE Total	10.91	37.20	29.32 ***

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Road Transportation (NAICS 4884)			
African American	22.48	18.39	
Hispanic	0.00	3.90	0.00 *
Asian	0.00	0.68	0.00
Native American	0.00	0.00	
Minority	22.48	22.97	97.88
Nonminority female	0.00	14.67	0.00 ****
M/WBE Total	22.48	37.64	59.73
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.30	7.53	4.01 ***
Hispanic	0.00	0.92	0.00
Asian	0.00	4.76	0.00 ****
Native American	0.00	0.00	
Minority	0.30	13.22	2.28 ****
Nonminority female	0.00	9.38	0.00 ****
M/WBE Total	0.30	22.60	1.34 ****
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	6.14	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	7.06	0.00 ****
Native American	0.00	0.00	
Minority	0.00	13.20	0.00 ****
Nonminority female	0.00	11.10	0.00 ****
M/WBE Total	0.00	24.31	0.00 ****
Support Activities for Rail Transportation (NAICS 4882)			
African American	0.00	28.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	8.12	0.00
Minority	0.00	36.52	0.00
Nonminority female	0.00	10.72	0.00
M/WBE Total	0.00	47.25	0.00
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	12.64	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	12.64	0.00 ****
Nonminority female	0.00	8.97	0.00 ****
M/WBE Total	0.00	21.61	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
School and Employee Bus Transportation (NAICS 4854)			
African American	20.47	21.05	97.27
Hispanic	0.00	0.32	0.00
Asian	0.00	2.26	0.00
Native American	0.00	0.32	0.00
Minority	20.47	23.96	85.46
Nonminority female	0.00	22.59	0.00 ****
M/WBE Total	20.47	46.54	43.99
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	8.94	0.00
Hispanic	0.00	1.71	0.00
Asian	0.00	0.05	0.00
Native American	0.00	0.00	
Minority	0.00	10.71	0.00
Nonminority female	0.00	11.36	0.00
M/WBE Total	0.00	22.08	0.00
Business Support Services (NAICS 5614)			
African American	32.05	19.27	
Hispanic	0.00	0.17	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.10	0.00
Minority	32.05	19.92	
Nonminority female	7.47	20.96	35.65 *
M/WBE Total	39.52	40.88	96.67
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	1.04	2.28	45.55
Hispanic	0.00	0.00	
Asian	0.00	3.49	0.00
Native American	0.00	0.00	
Minority	1.04	5.77	18.00
Nonminority female	9.22	10.16	90.80
M/WBE Total	10.26	15.93	64.42
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	13.96	5.13	
Hispanic	0.00	0.05	0.00
Asian	0.00	0.23	0.00
Native American	0.00	0.51	0.00
Minority	13.96	5.92	
Nonminority female	3.85	12.60	30.53
M/WBE Total	17.80	18.52	96.15

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Schools and Instruction (NAICS 6116)			
African American	0.00	15.81	0.00 ****
Hispanic	0.00	0.94	0.00
Asian	0.00	4.96	0.00
Native American	0.00	1.42	0.00
Minority	0.00	23.13	0.00 ****
Nonminority female	3.20	20.57	15.54 ****
M/WBE Total	3.20	43.70	7.31 ****
Other Support Services (NAICS 5619)			
African American	2.41	18.57	12.98
Hispanic	0.00	0.10	0.00
Asian	0.00	0.12	0.00
Native American	0.00	0.04	0.00
Minority	2.41	18.83	12.80
Nonminority female	10.59	19.25	55.03
M/WBE Total	13.00	38.08	34.15 *
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.16	3.51	4.63
M/WBE Total	0.16	3.51	4.63
Specialized Freight Trucking (NAICS 4842)			
African American	86.09	12.67	
Hispanic	0.00	5.99	0.00 ****
Asian	0.00	1.91	0.00 *
Native American	0.00	0.00	
Minority	86.09	20.57	
Nonminority female	0.00	9.53	0.00 ****
M/WBE Total	86.09	30.10	
Drycleaning and Laundry Services (NAICS 8123)			
African American	6.03	38.92	15.49
Hispanic	0.00	0.00	
Asian	0.00	0.21	0.00
Native American	0.00	0.00	
Minority	6.03	39.13	15.41
Nonminority female	0.00	31.88	0.00
M/WBE Total	6.03	71.01	8.49 *

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	1.14	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.14	0.00
Native American	0.00	0.00	
Minority	0.00	2.27	0.00
Nonminority female	100.00	51.21	
M/WBE Total	100.00	53.48	
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	18.70	0.00
Hispanic	0.00	0.85	0.00
Asian	0.00	0.71	0.00
Native American	0.00	0.57	0.00
Minority	0.00	20.83	0.00
Nonminority female	0.00	14.38	0.00
M/WBE Total	0.00	35.22	0.00
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	11.49	0.00 *
Hispanic	0.00	2.93	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	14.43	0.00 ****
Nonminority female	0.00	5.87	0.00 *
M/WBE Total	0.00	20.29	0.00 ****
Motion Picture and Video Industries (NAICS 5121)			
African American	100.00	28.41	
Hispanic	0.00	1.45	0.00
Asian	0.00	0.00	
Native American	0.00	0.29	0.00
Minority	100.00	30.14	
Nonminority female	0.00	15.06	0.00
M/WBE Total	100.00	45.20	
Audio and Video Equipment Manufacturing (NAICS 3343)			
African American	0.00	5.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.29	0.00
Native American	0.00	0.00	
Minority	0.00	12.85	0.00 ****
Nonminority female	0.00	5.57	0.00
M/WBE Total	0.00	18.42	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Utility System Construction (NAICS 2371)			
African American	0.00	4.25	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	1.85	0.00 *
Native American	0.00	0.73	0.00 *
Minority	0.00	6.83	0.00 ****
Nonminority female	21.78	12.98	
M/WBE Total	21.78	19.81	
Charter Bus Industry (NAICS 4855)			
African American	2.34	27.34	8.57
Hispanic	0.00	0.69	0.00
Asian	0.00	4.84	0.00
Native American	0.00	0.69	0.00
Minority	2.34	33.56	6.98
Nonminority female	0.00	8.76	0.00
M/WBE Total	2.34	42.32	5.53
Electronics and Appliance Stores (NAICS 4431)			
African American	1.26	10.15	12.41
Hispanic	0.00	0.23	0.00
Asian	9.92	1.85	
Native American	0.00	0.56	0.00
Minority	11.18	12.80	87.34
Nonminority female	0.00	12.13	0.00
M/WBE Total	11.18	24.93	44.83
Educational Support Services (NAICS 6117)			
African American	0.00	15.55	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	5.66	0.00
Native American	0.00	2.37	0.00
Minority	0.00	23.95	0.00 ****
Nonminority female	41.15	21.60	
M/WBE Total	41.15	45.55	90.33
Radio and Television Broadcasting (NAICS 5151)			
African American	0.00	5.99	0.00
Hispanic	0.00	2.58	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	8.56	0.00
Nonminority female	0.00	9.25	0.00
M/WBE Total	0.00	17.81	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Social Advocacy Organizations (NAICS 8133)			
African American	6.44	24.78	25.98 ****
Hispanic	0.00	1.68	0.00
Asian	0.00	0.00	
Native American	0.00	0.37	0.00
Minority	6.44	26.84	23.99 ****
Nonminority female	0.00	10.01	0.00
M/WBE Total	6.44	36.85	17.48 ****
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.85	0.00
Hispanic	0.00	3.22	0.00
Asian	0.00	3.22	0.00
Native American	0.00	0.00	
Minority	0.00	20.30	0.00
Nonminority female	0.00	10.61	0.00
M/WBE Total	0.00	30.92	0.00
Facilities Support Services (NAICS 5612)			
African American	12.22	16.27	75.14
Hispanic	0.00	1.59	0.00
Asian	24.74	8.86	
Native American	0.00	1.59	0.00
Minority	36.97	28.31	
Nonminority female	0.00	18.25	0.00 ****
M/WBE Total	36.97	46.56	79.40
Waste Collection (NAICS 5621)			
African American	0.00	4.29	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	4.29	0.00
Nonminority female	0.00	8.57	0.00
M/WBE Total	0.00	12.86	0.00
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	1.25	8.33	14.96
Hispanic	0.00	0.70	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	1.25	9.04	13.79
Nonminority female	6.78	24.41	27.76
M/WBE Total	8.02	33.45	23.98 *

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Apparel Accessories and Other Apparel Manufacturing (NAICS 3159)			
African American	0.00	7.45	0.00
Hispanic	0.00	0.34	0.00
Asian	0.00	2.03	0.00
Native American	0.00	0.00	
Minority	0.00	9.83	0.00
Nonminority female	0.00	15.62	0.00
M/WBE Total	0.00	25.45	0.00
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	3.25	0.00
Hispanic	0.00	0.00	
Asian	0.00	3.25	0.00
Native American	0.00	2.18	0.00
Minority	0.00	8.68	0.00
Nonminority female	3.35	12.47	26.89
M/WBE Total	3.35	21.15	15.85 *
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	23.70	0.00 ****
Hispanic	0.00	3.35	0.00
Asian	0.00	0.73	0.00
Native American	1.16	3.17	36.45
Minority	1.16	30.96	3.73 ****
Nonminority female	0.00	23.36	0.00 ****
M/WBE Total	1.16	54.32	2.13 ****
Lessors of Real Estate (NAICS 5311)			
African American	0.00	5.49	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.49	0.00
Nonminority female	0.00	13.89	0.00
M/WBE Total	0.00	19.38	0.00
Individual and Family Services (NAICS 6241)			
African American	0.00	22.16	0.00 ****
Hispanic	0.00	1.24	0.00
Asian	0.00	0.00	
Native American	0.00	1.15	0.00
Minority	0.00	24.55	0.00 ****
Nonminority female	0.00	12.60	0.00
M/WBE Total	0.00	37.15	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	1.97	10.40	18.90
Hispanic	0.00	3.57	0.00
Asian	0.00	0.00	
Native American	0.00	0.31	0.00
Minority	1.97	14.28	13.77
Nonminority female	0.00	21.82	0.00 ****
M/WBE Total	1.97	36.10	5.45 ****
Death Care Services (NAICS 8122)			
African American	0.00	39.93	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	0.11	0.00
Native American	0.00	0.00	
Minority	0.00	40.04	0.00 ****
Nonminority female	0.00	30.76	0.00 ****
M/WBE Total	0.00	70.80	0.00 ****
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	2.75	0.00
Hispanic	0.00	2.75	0.00
Asian	0.00	2.75	0.00
Native American	0.00	0.00	
Minority	0.00	8.25	0.00
Nonminority female	0.00	8.58	0.00
M/WBE Total	0.00	16.83	0.00
Traveler Accommodation (NAICS 7211)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.25	0.00
Asian	0.00	11.39	0.00
Native American	0.00	5.24	0.00
Minority	0.00	19.33	0.00
Nonminority female	0.00	10.88	0.00
M/WBE Total	0.00	30.21	0.00 ****
Technical and Trade Schools (NAICS 6115)			
African American	0.00	7.11	0.00
Hispanic	11.08	0.29	
Asian	0.00	1.87	0.00
Native American	0.00	0.58	0.00
Minority	11.08	9.85	
Nonminority female	0.00	65.86	0.00
M/WBE Total	11.08	75.71	14.64

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	4.11	0.00
Hispanic	0.00	1.88	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.00	
Minority	0.00	6.38	0.00 ****
Nonminority female	0.00	11.41	0.00 ****
M/WBE Total	0.00	17.79	0.00 ****
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	5.26	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.26	0.00
Nonminority female	0.00	0.00	
M/WBE Total	0.00	5.26	0.00
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	28.57	0.00 ****
Hispanic	0.00	4.44	0.00
Asian	0.00	0.00	
Native American	0.00	0.29	0.00
Minority	0.00	33.30	0.00 ****
Nonminority female	0.00	48.04	0.00 ****
M/WBE Total	0.00	81.35	0.00 ****
Rail Transportation (NAICS 4821)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	6.25	0.00
M/WBE Total	0.00	6.25	0.00
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	1.00	22.28	4.48
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	1.00	22.28	4.48
Nonminority female	0.00	3.04	0.00
M/WBE Total	1.00	25.32	3.94

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nursing Care Facilities (NAICS 6231)			
African American	0.00	22.48	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	2.12	0.00
Native American	0.00	0.00	
Minority	0.00	24.76	0.00
Nonminority female	0.00	17.57	0.00
M/WBE Total	0.00	42.32	0.00
Business Schools and Computer and Management Training (NAICS 6114)			
African American	4.18	16.75	24.97
Hispanic	0.00	0.48	0.00
Asian	24.24	5.15	
Native American	0.00	0.95	0.00
Minority	28.42	23.32	
Nonminority female	0.00	29.21	0.00 ****
M/WBE Total	28.42	52.53	54.10
Grantmaking and Giving Services (NAICS 8132)			
African American	0.00	12.50	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	12.50	0.00
Nonminority female	0.00	8.33	0.00
M/WBE Total	0.00	20.83	0.00 ****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	21.53	0.00
Hispanic	0.00	0.85	0.00
Asian	0.00	0.43	0.00
Native American	0.00	0.00	
Minority	0.00	22.81	0.00
Nonminority female	10.75	12.05	89.19
M/WBE Total	10.75	34.86	30.83
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	5.48	0.00
Hispanic	0.00	2.20	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.68	0.00
Nonminority female	0.00	20.57	0.00 ****
M/WBE Total	0.00	28.25	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Wood Product Manufacturing (NAICS 3219)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	1.48	0.00
Native American	0.00	0.00	
Minority	0.00	1.48	0.00
Nonminority female	0.00	11.11	0.00
M/WBE Total	0.00	12.59	0.00
Couriers and Express Delivery Services (NAICS 4921)			
African American	33.40	17.81	
Hispanic	0.00	4.18	0.00
Asian	0.00	8.37	0.00
Native American	0.00	0.00	
Minority	33.40	30.36	
Nonminority female	0.00	0.00	
M/WBE Total	33.40	30.36	
Offices of Physicians (NAICS 6211)			
African American	0.00	18.34	0.00 ****
Hispanic	0.00	0.76	0.00
Asian	0.00	0.69	0.00
Native American	0.00	0.42	0.00
Minority	0.00	20.22	0.00 ****
Nonminority female	0.00	14.12	0.00
M/WBE Total	0.00	34.35	0.00 ****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	17.83	6.12	
Hispanic	0.00	2.42	0.00
Asian	0.00	1.43	0.00
Native American	0.00	0.00	
Minority	17.83	9.97	
Nonminority female	0.00	22.98	0.00 ****
M/WBE Total	17.83	32.95	54.13
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	4.55	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.52	0.00
Native American	0.00	0.00	
Minority	0.00	6.06	0.00 ***
Nonminority female	0.00	6.06	0.00 ***
M/WBE Total	0.00	12.12	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Full-Service Restaurants (NAICS 7221)			
African American	0.00	24.26	0.00
Hispanic	0.00	0.17	0.00
Asian	84.81	6.65	
Native American	0.00	0.04	0.00
Minority	84.81	31.12	
Nonminority female	0.00	19.04	0.00
M/WBE Total	84.81	50.16	
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	94.56	16.12	
Hispanic	0.00	1.19	0.00
Asian	0.00	4.05	0.00
Native American	0.00	0.00	
Minority	94.56	21.36	
Nonminority female	0.00	21.46	0.00 ***
M/WBE Total	94.56	42.82	
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	7.32	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.58	0.00
Native American	0.00	0.00	
Minority	0.00	8.90	0.00
Nonminority female	0.00	14.64	0.00
M/WBE Total	0.00	23.54	0.00
Scientific Research and Development Services (NAICS 5417)			
African American	1.83	15.29	11.97 **
Hispanic	0.00	0.85	0.00
Asian	25.02	4.78	
Native American	0.00	0.42	0.00
Minority	26.85	21.33	
Nonminority female	3.27	26.63	12.27 ****
M/WBE Total	30.12	47.96	62.81 ***

Source and Notes: *See* Table 6.3.

Table AD.6. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore Services Contracting (Dollars Paid)

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Computer Systems Design and Related Services (NAICS 5415)			
African American	21.44	14.31	
Hispanic	0.03	3.52	0.75 ****
Asian	31.67	7.23	
Native American	0.00	0.36	0.00
Minority	53.14	25.42	
Nonminority female	5.46	11.39	47.95
M/WBE Total	58.60	36.81	
Communications Equipment Manufacturing (NAICS 3342)			
African American	0.00	5.46	0.00 *
Hispanic	0.00	0.83	0.00
Asian	0.00	4.61	0.00 *
Native American	0.00	0.00	
Minority	0.00	10.91	0.00 ****
Nonminority female	0.00	13.77	0.00 ****
M/WBE Total	0.00	24.68	0.00 ****
Insurance Carriers (NAICS 5241)			
African American	1.35	16.31	8.30
Hispanic	0.00	0.00	
Asian	0.00	1.70	0.00
Native American	0.00	0.00	
Minority	1.35	18.01	7.52
Nonminority female	0.00	10.82	0.00 ****
M/WBE Total	1.35	28.83	4.70 ***
Wireless Telecommunications Carriers (except Satellite) (NAICS 5172)			
African American	0.00	5.04	0.00 ****
Hispanic	0.00	7.82	0.00 ****
Asian	0.00	15.64	0.00 ****
Native American	0.00	1.95	0.00 ****
Minority	0.00	30.45	0.00 ****
Nonminority female	0.00	1.13	0.00 ****
M/WBE Total	0.00	31.58	0.00 ****
Employment Services (NAICS 5613)			
African American	4.05	6.10	66.31
Hispanic	0.00	0.64	0.00
Asian	0.00	2.00	0.00 ****
Native American	0.00	0.13	0.00
Minority	4.05	8.88	45.60
Nonminority female	11.82	26.81	44.10 **
M/WBE Total	15.87	35.69	44.48 ***

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Treatment and Disposal (NAICS 5622)			
African American	0.62	8.51	7.31
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.62	8.51	7.31
Nonminority female	0.00	8.77	0.00 ****
M/WBE Total	0.62	17.28	3.60
Investigation and Security Services (NAICS 5616)			
African American	56.83	16.50	
Hispanic	0.00	0.63	0.00
Asian	0.00	1.76	0.00 ***
Native American	0.00	0.41	0.00
Minority	56.83	19.29	
Nonminority female	1.16	15.60	7.42
M/WBE Total	57.99	34.89	
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	1.98	0.00 ****
Hispanic	0.00	1.37	0.00 **
Asian	0.00	1.12	0.00 **
Native American	0.00	0.00	
Minority	0.00	4.47	0.00 ****
Nonminority female	0.25	5.79	4.34
M/WBE Total	0.25	10.26	2.45 **
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	40.02	14.18	
Hispanic	0.29	0.69	42.21
Asian	0.00	5.00	0.00 ****
Native American	0.00	0.25	0.00
Minority	40.31	20.12	
Nonminority female	10.48	19.62	53.41 *
M/WBE Total	50.79	39.74	
Special Food Services (NAICS 7223)			
African American	13.21	25.31	52.19
Hispanic	0.00	0.06	0.00
Asian	0.00	4.67	0.00
Native American	0.00	0.00	
Minority	13.21	30.04	43.98
Nonminority female	21.71	20.71	
M/WBE Total	34.92	50.75	68.81

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	7.63	7.20	
Hispanic	0.00	3.76	0.00 ****
Asian	26.63	5.02	
Native American	1.31	0.49	
Minority	35.56	16.47	
Nonminority female	2.90	9.67	30.04 ****
M/WBE Total	38.47	26.14	
Other Telecommunications (NAICS 5179)			
African American	30.46	17.48	
Hispanic	0.00	1.95	0.00
Asian	2.43	3.73	65.04
Native American	0.00	0.12	0.00
Minority	32.88	23.28	
Nonminority female	43.32	13.64	
M/WBE Total	76.20	36.92	
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.21	16.25	1.29
Hispanic	0.00	0.38	0.00
Asian	0.00	0.98	0.00
Native American	0.00	0.00	
Minority	0.21	17.61	1.19
Nonminority female	0.15	27.95	0.53 ****
M/WBE Total	0.36	45.56	0.79 ****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	0.00	7.23	0.00 ****
Hispanic	0.00	0.28	0.00
Asian	13.09	0.56	
Native American	0.00	0.00	
Minority	13.09	8.06	
Nonminority female	0.00	10.06	0.00 ****
M/WBE Total	13.09	18.12	72.25
Other Personal Services (NAICS 8129)			
African American	4.28	21.60	19.83
Hispanic	2.05	4.51	45.55
Asian	0.00	4.51	0.00 ****
Native American	0.00	0.00	
Minority	6.34	30.61	20.70
Nonminority female	0.70	1.79	39.02
M/WBE Total	7.03	32.40	21.71

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	0.00	10.81	0.00 ****
Hispanic	0.00	0.15	0.00
Asian	0.00	3.73	0.00 ****
Native American	0.00	1.79	0.00
Minority	0.00	16.49	0.00 ****
Nonminority female	0.00	20.45	0.00 ****
M/WBE Total	0.00	36.94	0.00 ****
Services to Buildings and Dwellings (NAICS 5617)			
African American	16.46	16.65	98.85
Hispanic	0.75	2.17	34.52
Asian	1.05	3.25	32.24
Native American	0.00	1.93	0.00 ****
Minority	18.25	23.99	76.07
Nonminority female	10.60	15.71	67.49
M/WBE Total	28.86	39.70	72.68
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	4.60	0.00 ****
Hispanic	0.00	1.06	0.00 ****
Asian	0.00	0.86	0.00
Native American	0.00	1.72	0.00 ****
Minority	0.00	8.24	0.00 ****
Nonminority female	4.64	13.08	35.44
M/WBE Total	4.64	21.32	21.75
Support Activities for Rail Transportation (NAICS 4882)			
African American	0.00	28.41	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	8.12	0.00
Minority	0.00	36.52	0.00
Nonminority female	0.00	10.72	0.00
M/WBE Total	0.00	47.25	0.00
Building Equipment Contractors (NAICS 2382)			
African American	26.23	12.67	
Hispanic	23.08	1.97	
Asian	0.00	0.20	0.00 *
Native American	0.07	0.17	40.72
Minority	49.38	15.01	
Nonminority female	9.91	8.15	
M/WBE Total	59.29	23.17	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Agencies, Brokerages, and Other Insurance Related Activities (NAICS 5242)			
African American	21.58	4.77	
Hispanic	0.00	1.49	0.00
Asian	0.00	1.50	0.00
Native American	0.00	0.06	0.00
Minority	21.58	7.82	
Nonminority female	74.85	14.25	
M/WBE Total	96.43	22.08	
Software Publishers (NAICS 5112)			
African American	0.00	6.87	0.00 ****
Hispanic	0.00	1.66	0.00 ****
Asian	6.01	5.09	
Native American	0.00	0.00	
Minority	6.01	13.62	44.16
Nonminority female	0.31	11.29	2.76 ****
M/WBE Total	6.33	24.91	25.40 ****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	8.14	0.00 ****
Hispanic	0.00	2.33	0.00 ****
Asian	0.29	1.57	18.33
Native American	0.00	2.71	0.00 ****
Minority	0.29	14.74	1.95 ****
Nonminority female	0.98	9.22	10.69 **
M/WBE Total	1.27	23.96	5.31 ****
Legal Services (NAICS 5411)			
African American	0.31	1.28	24.26
Hispanic	0.00	2.03	0.00
Asian	0.00	0.00	
Native American	0.00	0.03	0.00
Minority	0.31	3.34	9.29
Nonminority female	0.00	15.52	0.00 ****
M/WBE Total	0.31	18.85	1.64 ***
Advertising, Public Relations, and Related Services (NAICS 5418)			
African American	1.86	4.67	39.83
Hispanic	0.00	0.04	0.00
Asian	0.00	0.66	0.00
Native American	0.00	0.01	0.00
Minority	1.86	5.38	34.56
Nonminority female	1.35	30.60	4.40 ****
M/WBE Total	3.21	35.98	8.91 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	25.13	8.59	
Hispanic	0.00	2.96	0.00 ****
Asian	0.00	0.14	0.00
Native American	0.00	0.62	0.00 ****
Minority	25.13	12.31	
Nonminority female	18.85	12.95	
M/WBE Total	43.97	25.26	
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	33.92	4.77	
Hispanic	0.00	1.83	0.00
Asian	0.00	0.65	0.00
Native American	0.00	2.02	0.00
Minority	33.92	9.27	
Nonminority female	0.00	9.11	0.00 ***
M/WBE Total	33.92	18.38	
Specialized Design Services (NAICS 5414)			
African American	0.00	18.41	0.00 ****
Hispanic	0.00	0.95	0.00
Asian	0.00	3.74	0.00 *
Native American	0.00	0.16	0.00
Minority	0.00	23.25	0.00 ****
Nonminority female	95.16	36.30	
M/WBE Total	95.16	59.55	
General Freight Trucking (NAICS 4841)			
African American	15.48	27.71	55.89
Hispanic	1.07	4.16	25.81
Asian	0.00	2.03	0.00 ****
Native American	0.00	0.10	0.00
Minority	16.56	34.00	48.70 **
Nonminority female	0.03	3.70	0.86 ****
M/WBE Total	16.59	37.70	44.01 ***
Office Administrative Services (NAICS 5611)			
African American	1.33	19.54	6.83 **
Hispanic	0.00	0.15	0.00
Asian	0.00	9.21	0.00 ****
Native American	0.00	0.00	
Minority	1.33	28.90	4.62 ***
Nonminority female	0.00	11.17	0.00 ****
M/WBE Total	1.33	40.07	3.33 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Remediation and Other Waste Management Services (NAICS 5629)			
African American	15.50	6.82	
Hispanic	9.53	3.23	
Asian	0.00	0.00	
Native American	0.00	0.06	0.00
Minority	25.04	10.12	
Nonminority female	0.00	13.68	0.00 ****
M/WBE Total	25.04	23.80	
Building Finishing Contractors (NAICS 2383)			
African American	4.51	7.94	56.86
Hispanic	0.10	3.83	2.50 ****
Asian	0.00	1.83	0.00 ****
Native American	0.00	1.20	0.00 **
Minority	4.61	14.80	31.15 **
Nonminority female	2.92	11.47	25.47 **
M/WBE Total	7.53	26.27	28.67 ****
Business Support Services (NAICS 5614)			
African American	14.24	19.85	71.71
Hispanic	0.00	1.02	0.00
Asian	0.00	0.16	0.00
Native American	0.00	0.04	0.00
Minority	14.24	21.07	67.55
Nonminority female	3.32	23.36	14.21 ***
M/WBE Total	17.56	44.43	39.51 ***
Electric Power Generation, Transmission and Distribution (NAICS 2211)			
African American	0.00	6.22	0.00 ****
Hispanic	0.00	1.00	0.00
Asian	0.00	2.11	0.00
Native American	0.00	0.00	
Minority	0.00	9.33	0.00 ****
Nonminority female	0.00	11.43	0.00 ****
M/WBE Total	0.00	20.76	0.00 ****
Personal and Household Goods Repair and Maintenance (NAICS 8114)			
African American	0.00	11.06	0.00 ****
Hispanic	0.00	5.01	0.00 ****
Asian	0.00	0.71	0.00
Native American	0.00	3.83	0.00
Minority	0.00	20.61	0.00 ****
Nonminority female	0.00	13.35	0.00 ****
M/WBE Total	0.00	33.97	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	25.71	15.59	
Hispanic	0.27	0.56	47.87
Asian	0.00	4.34	0.00 ****
Native American	0.00	0.02	0.00
Minority	25.97	20.50	
Nonminority female	5.08	22.27	22.82
M/WBE Total	31.06	42.77	72.62
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.66	4.99	13.14
Hispanic	0.00	0.00	
Asian	0.00	2.27	0.00 ****
Native American	0.00	0.60	0.00 **
Minority	0.66	7.85	8.35 ***
Nonminority female	2.03	7.73	26.30
M/WBE Total	2.69	15.58	17.25 ***
Activities Related to Credit Intermediation (NAICS 5223)			
African American	0.00	2.70	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.70	0.00
Nonminority female	0.00	0.00	
M/WBE Total	0.00	2.70	0.00
Printing and Related Support Activities (NAICS 3231)			
African American	53.98	1.65	
Hispanic	0.00	0.00	
Asian	0.00	1.58	0.00 *
Native American	0.00	0.76	0.00 *
Minority	53.98	3.99	
Nonminority female	0.92	44.56	2.06 ****
M/WBE Total	54.90	48.55	
Home Health Care Services (NAICS 6216)			
African American	77.33	21.55	
Hispanic	0.00	1.16	0.00
Asian	0.00	0.73	0.00
Native American	0.00	0.65	0.00
Minority	77.33	24.10	
Nonminority female	0.00	15.53	0.00 ***
M/WBE Total	77.33	39.63	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	4.87	6.38	76.31
Hispanic	0.00	0.00	
Asian	0.00	1.14	0.00
Native American	0.00	1.14	0.00
Minority	4.87	8.66	56.19
Nonminority female	0.00	7.22	0.00 ****
M/WBE Total	4.87	15.88	30.65
Other Ambulatory Health Care Services (NAICS 6219)			
African American	0.00	19.86	0.00 ****
Hispanic	0.00	1.20	0.00
Asian	0.00	0.64	0.00
Native American	0.00	0.65	0.00
Minority	0.00	22.35	0.00 ****
Nonminority female	1.81	15.32	11.83 ****
M/WBE Total	1.81	37.67	4.81 ****
Community Food and Housing, and Emergency and Other Relief Services (NAICS 6242)			
African American	0.00	26.92	0.00 ****
Hispanic	0.00	3.85	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	30.77	0.00 ****
Nonminority female	0.00	50.00	0.00 ****
M/WBE Total	0.00	80.77	0.00 ****
Scientific Research and Development Services (NAICS 5417)			
African American	0.20	15.09	1.30 **
Hispanic	0.00	1.95	0.00
Asian	1.66	7.79	21.34
Native American	0.00	0.29	0.00
Minority	1.86	25.12	7.40
Nonminority female	0.33	22.73	1.47 ****
M/WBE Total	2.19	47.86	4.58 ****
Other Support Activities for Transportation (NAICS 4889)			
African American	11.26	19.10	58.98
Hispanic	0.00	4.11	0.00
Asian	0.00	0.00	
Native American	0.00	0.13	0.00
Minority	11.26	23.34	48.26
Nonminority female	0.00	13.86	0.00 ****
M/WBE Total	11.26	37.20	30.28 ***

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Support Activities for Road Transportation (NAICS 4884)			
African American	22.48	18.39	
Hispanic	0.00	3.90	0.00 ****
Asian	0.00	0.68	0.00
Native American	0.00	0.00	
Minority	22.48	22.97	97.88
Nonminority female	0.00	14.67	0.00 ****
M/WBE Total	22.48	37.64	59.73
Foundation, Structure, and Building Exterior Contractors (NAICS 2381)			
African American	2.61	7.00	37.29 ***
Hispanic	21.97	5.42	
Asian	4.18	1.77	
Native American	0.00	0.20	0.00 *
Minority	28.76	14.40	
Nonminority female	4.26	9.25	46.05 *
M/WBE Total	33.02	23.64	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	6.25	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	7.16	0.00 ****
Native American	0.00	0.00	
Minority	0.00	13.41	0.00 ****
Nonminority female	0.00	11.21	0.00 ****
M/WBE Total	0.00	24.62	0.00 ****
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	6.84	0.00 ****
Hispanic	8.98	5.92	
Asian	0.54	2.28	23.50 *
Native American	0.00	1.36	0.00 ****
Minority	9.51	16.40	58.01 *
Nonminority female	0.00	7.49	0.00 ****
M/WBE Total	9.51	23.89	39.81 ****
Automobile Dealers (NAICS 4411)			
African American	0.00	8.38	0.00
Hispanic	0.00	1.80	0.00
Asian	0.00	2.70	0.00
Native American	0.00	0.00	
Minority	0.00	12.88	0.00
Nonminority female	0.00	6.20	0.00
M/WBE Total	0.00	19.08	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business, Professional, Labor, Political, and Similar Organizations (NAICS 8139)			
African American	0.00	12.64	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	12.64	0.00 ****
Nonminority female	0.00	8.97	0.00 ****
M/WBE Total	0.00	21.61	0.00 ****
School and Employee Bus Transportation (NAICS 4854)			
African American	20.47	21.05	97.27
Hispanic	0.00	0.32	0.00
Asian	0.00	2.26	0.00
Native American	0.00	0.32	0.00
Minority	20.47	23.96	85.46
Nonminority female	0.00	22.59	0.00 ****
M/WBE Total	20.47	46.54	43.99
Outpatient Care Centers (NAICS 6214)			
African American	0.00	27.25	0.00 ****
Hispanic	0.00	0.88	0.00
Asian	0.00	0.88	0.00
Native American	0.00	0.88	0.00
Minority	0.00	29.91	0.00 ****
Nonminority female	0.00	20.29	0.00 ****
M/WBE Total	0.00	50.20	0.00 ****
Residential Building Construction (NAICS 2361)			
African American	2.18	9.23	23.67 ***
Hispanic	0.00	2.90	0.00 ****
Asian	0.00	4.25	0.00 ****
Native American	7.98	0.96	
Minority	10.16	17.34	58.61
Nonminority female	0.00	10.19	0.00 ****
M/WBE Total	10.16	27.53	36.91 ****
Other Schools and Instruction (NAICS 6116)			
African American	0.00	15.81	0.00 ****
Hispanic	0.00	0.94	0.00
Asian	0.00	4.96	0.00
Native American	0.00	1.42	0.00
Minority	0.00	23.13	0.00 ****
Nonminority female	3.20	20.57	15.54 ****
M/WBE Total	3.20	43.70	7.31 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	1.46	2.28	64.13
Hispanic	0.00	0.00	
Asian	0.00	3.49	0.00 ****
Native American	0.00	0.00	
Minority	1.46	5.77	25.34
Nonminority female	3.58	10.16	35.29
M/WBE Total	5.05	15.93	31.68
Other Support Services (NAICS 5619)			
African American	2.45	18.57	13.18
Hispanic	0.00	0.10	0.00
Asian	0.00	0.12	0.00
Native American	0.00	0.04	0.00
Minority	2.45	18.83	13.00
Nonminority female	10.75	19.25	55.86
M/WBE Total	13.20	38.08	34.66 **
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	1.14	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.14	0.00
Native American	0.00	0.00	
Minority	0.00	2.27	0.00
Nonminority female	100.00	51.21	
M/WBE Total	100.00	53.48	
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.00	7.53	0.00 ****
Hispanic	0.00	0.92	0.00 **
Asian	0.00	4.76	0.00 ****
Native American	0.00	0.00	
Minority	0.00	13.22	0.00 ****
Nonminority female	0.00	9.38	0.00 ****
M/WBE Total	0.00	22.60	0.00 ****
Automotive Equipment Rental and Leasing (NAICS 5321)			
African American	0.00	9.03	0.00
Hispanic	0.00	1.69	0.00
Asian	0.00	0.09	0.00
Native American	0.00	0.00	
Minority	0.00	10.82	0.00
Nonminority female	0.00	10.48	0.00
M/WBE Total	0.00	21.30	0.00

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	11.49	0.00 ****
Hispanic	0.00	2.93	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	14.43	0.00 ****
Nonminority female	0.00	5.87	0.00 ****
M/WBE Total	0.00	20.29	0.00 ****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	1.30	0.00
Hispanic	0.00	0.71	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.01	0.00
Nonminority female	0.00	4.34	0.00
M/WBE Total	0.00	6.36	0.00
Motion Picture and Video Industries (NAICS 5121)			
African American	100.00	28.41	
Hispanic	0.00	1.45	0.00
Asian	0.00	0.00	
Native American	0.00	0.29	0.00
Minority	100.00	30.14	
Nonminority female	0.00	15.06	0.00 ****
M/WBE Total	100.00	45.20	
Medical and Diagnostic Laboratories (NAICS 6215)			
African American	0.00	18.70	0.00
Hispanic	0.00	0.85	0.00
Asian	0.00	0.71	0.00
Native American	0.00	0.57	0.00
Minority	0.00	20.83	0.00
Nonminority female	0.00	14.38	0.00
M/WBE Total	0.00	35.22	0.00 ****
Audio and Video Equipment Manufacturing (NAICS 3343)			
African American	0.00	5.57	0.00
Hispanic	0.00	0.00	
Asian	0.00	7.29	0.00
Native American	0.00	0.00	
Minority	0.00	12.85	0.00 ****
Nonminority female	0.00	5.57	0.00
M/WBE Total	0.00	18.42	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lessors of Real Estate (NAICS 5311)			
African American	0.00	5.22	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.04	0.00
Minority	0.00	5.26	0.00 ****
Nonminority female	0.00	13.74	0.00 ****
M/WBE Total	0.00	19.00	0.00 ****
Charter Bus Industry (NAICS 4855)			
African American	2.34	27.34	8.57
Hispanic	0.00	0.69	0.00
Asian	0.00	4.84	0.00
Native American	0.00	0.69	0.00
Minority	2.34	33.56	6.98
Nonminority female	0.00	8.76	0.00
M/WBE Total	2.34	42.32	5.53
Radio and Television Broadcasting (NAICS 5151)			
African American	0.00	6.15	0.00
Hispanic	0.00	2.55	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	8.70	0.00
Nonminority female	0.00	9.18	0.00
M/WBE Total	0.00	17.89	0.00 ****
Other Transit and Ground Passenger Transportation (NAICS 4859)			
African American	0.01	31.68	0.02 ****
Hispanic	0.00	1.74	0.00
Asian	0.00	6.54	0.00
Native American	0.00	1.74	0.00
Minority	0.01	41.69	0.01 ****
Nonminority female	0.00	10.16	0.00 ****
M/WBE Total	0.01	51.85	0.01 ****
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	4.55	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	1.52	0.00
Native American	0.00	0.00	
Minority	0.00	6.06	0.00 ****
Nonminority female	0.00	6.06	0.00 ****
M/WBE Total	0.00	12.12	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Social Advocacy Organizations (NAICS 8133)			
African American	6.59	24.78	26.60 ****
Hispanic	0.00	1.68	0.00
Asian	0.00	0.00	
Native American	0.00	0.37	0.00
Minority	6.59	26.84	24.56 ****
Nonminority female	0.00	10.01	0.00
M/WBE Total	6.59	36.85	17.89 ****
Educational Support Services (NAICS 6117)			
African American	0.00	15.55	0.00 ****
Hispanic	0.00	0.37	0.00
Asian	0.00	5.66	0.00
Native American	0.00	2.37	0.00
Minority	0.00	23.95	0.00 ****
Nonminority female	45.69	21.60	
M/WBE Total	45.69	45.55	
Apparel Accessories and Other Apparel Manufacturing (NAICS 3159)			
African American	0.00	7.45	0.00
Hispanic	0.00	0.34	0.00
Asian	0.00	2.03	0.00
Native American	0.00	0.00	
Minority	0.00	9.83	0.00
Nonminority female	0.00	15.62	0.00
M/WBE Total	0.00	25.45	0.00
Independent Artists, Writers, and Performers (NAICS 7115)			
African American	0.00	23.70	0.00 ****
Hispanic	0.00	3.35	0.00
Asian	0.00	0.73	0.00
Native American	1.16	3.17	36.45
Minority	1.16	30.96	3.73 ****
Nonminority female	0.00	23.36	0.00 ****
M/WBE Total	1.16	54.32	2.13 ****
Nonresidential Building Construction (NAICS 2362)			
African American	2.86	10.91	26.21
Hispanic	14.15	1.70	
Asian	0.00	3.28	0.00 ****
Native American	0.00	0.57	0.00
Minority	17.01	16.46	
Nonminority female	0.00	9.32	0.00 ****
M/WBE Total	17.01	25.78	65.99

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Specialized Freight Trucking (NAICS 4842)			
African American	71.68	3.23	
Hispanic	0.00	3.23	0.00 ****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	71.68	6.45	
Nonminority female	0.00	9.68	0.00 ****
M/WBE Total	71.68	16.13	
Urban Transit Systems (NAICS 4851)			
African American	100.00	29.93	
Hispanic	0.00	0.45	0.00
Asian	0.00	3.17	0.00
Native American	0.00	0.45	0.00
Minority	100.00	34.01	
Nonminority female	0.00	3.63	0.00
M/WBE Total	100.00	37.64	
Drycleaning and Laundry Services (NAICS 8123)			
African American	13.92	37.40	37.21
Hispanic	0.00	0.00	
Asian	0.00	0.50	0.00
Native American	0.00	0.00	
Minority	13.92	37.90	36.72
Nonminority female	0.00	34.55	0.00 ****
M/WBE Total	13.92	72.45	19.21 ***
Ship and Boat Building (NAICS 3366)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	15.07	0.00
M/WBE Total	0.00	15.07	0.00
Individual and Family Services (NAICS 6241)			
African American	0.00	22.16	0.00 ****
Hispanic	0.00	1.24	0.00
Asian	0.00	0.00	
Native American	0.00	1.15	0.00
Minority	0.00	24.55	0.00 ****
Nonminority female	0.00	12.60	0.00
M/WBE Total	0.00	37.15	0.00 ****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Wired Telecommunications Carriers (NAICS 5171)			
African American	0.00	13.85	0.00 ****
Hispanic	0.00	3.22	0.00
Asian	0.00	3.22	0.00
Native American	0.00	0.00	
Minority	0.00	20.30	0.00 ****
Nonminority female	0.00	10.61	0.00 ****
M/WBE Total	0.00	30.92	0.00 ****
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	0.18	10.41	1.76
Hispanic	0.00	3.57	0.00
Asian	0.00	0.00	
Native American	0.00	0.31	0.00
Minority	0.18	14.29	1.28 **
Nonminority female	0.00	21.79	0.00 ****
M/WBE Total	0.18	36.07	0.51 ****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	7.58	0.00 ****
Hispanic	0.00	0.00	
Asian	1.36	4.87	27.99
Native American	0.00	0.00	
Minority	1.36	12.45	10.96
Nonminority female	6.12	13.46	45.49
M/WBE Total	7.49	25.91	28.90
Other Heavy and Civil Engineering Construction (NAICS 2379)			
African American	0.00	3.25	0.00 **
Hispanic	0.00	0.00	
Asian	0.00	3.25	0.00 **
Native American	0.00	2.18	0.00 **
Minority	0.00	8.68	0.00 ****
Nonminority female	3.96	12.47	31.77
M/WBE Total	3.96	21.15	18.73 *
Utility System Construction (NAICS 2371)			
African American	0.00	4.25	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	1.85	0.00
Native American	0.00	0.73	0.00
Minority	0.00	6.83	0.00 ****
Nonminority female	40.11	12.98	
M/WBE Total	40.11	19.81	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Facilities Support Services (NAICS 5612)			
African American	19.35	16.27	
Hispanic	0.00	1.59	0.00
Asian	0.00	8.86	0.00
Native American	0.00	1.59	0.00
Minority	19.35	28.31	68.34
Nonminority female	0.00	18.25	0.00
M/WBE Total	19.35	46.56	41.55
Other Amusement and Recreation Industries (NAICS 7139)			
African American	0.00	2.75	0.00
Hispanic	0.00	2.75	0.00
Asian	0.00	2.75	0.00
Native American	0.00	0.00	
Minority	0.00	8.25	0.00
Nonminority female	0.00	8.58	0.00
M/WBE Total	0.00	16.83	0.00 ****
Traveler Accommodation (NAICS 7211)			
African American	0.00	2.46	0.00
Hispanic	0.00	0.25	0.00
Asian	0.00	11.39	0.00
Native American	0.00	5.24	0.00
Minority	0.00	19.33	0.00
Nonminority female	0.00	10.88	0.00
M/WBE Total	0.00	30.21	0.00 ****
Death Care Services (NAICS 8122)			
African American	0.00	39.93	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	0.11	0.00
Native American	0.00	0.00	
Minority	0.00	40.04	0.00 ****
Nonminority female	0.00	30.76	0.00 ****
M/WBE Total	0.00	70.80	0.00 ****
Technical and Trade Schools (NAICS 6115)			
African American	0.00	7.11	0.00
Hispanic	11.08	0.29	
Asian	0.00	1.87	0.00
Native American	0.00	0.58	0.00
Minority	11.08	9.85	
Nonminority female	0.00	65.86	0.00
M/WBE Total	11.08	75.71	14.64

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	22.28	0.00 ****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	22.28	0.00 ****
Nonminority female	0.00	3.04	0.00
M/WBE Total	0.00	25.32	0.00 ****
Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)			
African American	0.00	4.11	0.00
Hispanic	0.00	1.88	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.00	
Minority	0.00	6.38	0.00 ****
Nonminority female	0.00	11.41	0.00 ****
M/WBE Total	0.00	17.79	0.00 ****
Electronics and Appliance Stores (NAICS 4431)			
African American	42.76	10.15	
Hispanic	0.00	0.23	0.00
Asian	23.80	1.85	
Native American	0.00	0.56	0.00
Minority	66.55	12.80	
Nonminority female	0.00	12.13	0.00 ****
M/WBE Total	66.55	24.93	
Computer and Peripheral Equipment Manufacturing (NAICS 3341)			
African American	0.00	6.05	0.00
Hispanic	0.00	0.00	
Asian	0.00	4.11	0.00
Native American	0.00	0.00	
Minority	0.00	10.16	0.00
Nonminority female	0.00	4.56	0.00
M/WBE Total	0.00	14.72	0.00
Rail Transportation (NAICS 4821)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	6.25	0.00
M/WBE Total	0.00	6.25	0.00

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Collection (NAICS 5621)			
African American	0.00	4.29	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	4.29	0.00
Nonminority female	0.00	8.57	0.00
M/WBE Total	0.00	12.86	0.00
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	5.26	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.26	0.00
Nonminority female	0.00	0.00	
M/WBE Total	0.00	5.26	0.00
Vocational Rehabilitation Services (NAICS 6243)			
African American	0.00	28.57	0.00 ****
Hispanic	0.00	4.44	0.00
Asian	0.00	0.00	
Native American	0.00	0.29	0.00
Minority	0.00	33.30	0.00 ****
Nonminority female	0.00	48.04	0.00 ****
M/WBE Total	0.00	81.35	0.00 ****
Couriers and Express Delivery Services (NAICS 4921)			
African American	48.69	17.81	
Hispanic	0.00	4.18	0.00
Asian	0.00	8.37	0.00 ****
Native American	0.00	0.00	
Minority	48.69	30.36	
Nonminority female	0.00	0.00	
M/WBE Total	48.69	30.36	
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	96.27	16.12	
Hispanic	0.00	1.19	0.00
Asian	0.00	4.05	0.00 **
Native American	0.00	0.00	
Minority	96.27	21.36	
Nonminority female	0.00	21.46	0.00 ****
M/WBE Total	96.27	42.82	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nursing Care Facilities (NAICS 6231)			
African American	0.00	22.48	0.00
Hispanic	0.00	0.16	0.00
Asian	0.00	2.12	0.00
Native American	0.00	0.00	
Minority	0.00	24.76	0.00
Nonminority female	0.00	17.57	0.00
M/WBE Total	0.00	42.32	0.00
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	26.18	6.12	
Hispanic	0.00	2.42	0.00 ****
Asian	0.00	1.43	0.00
Native American	0.00	0.00	
Minority	26.18	9.97	
Nonminority female	4.04	22.98	17.57 ***
M/WBE Total	30.22	32.95	91.73
Grantmaking and Giving Services (NAICS 8132)			
African American	0.00	12.50	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	12.50	0.00
Nonminority female	0.00	8.33	0.00
M/WBE Total	0.00	20.83	0.00 ****
Taxi and Limousine Service (NAICS 4853)			
African American	0.00	17.16	0.00 ****
Hispanic	0.00	2.35	0.00 ****
Asian	0.00	8.41	0.00 ****
Native American	0.00	0.74	0.00
Minority	0.00	28.66	0.00 ****
Nonminority female	0.00	9.42	0.00 ****
M/WBE Total	0.00	38.08	0.00 ****
Data Processing, Hosting, and Related Services (NAICS 5182)			
African American	0.00	21.53	0.00
Hispanic	0.00	0.85	0.00
Asian	0.00	0.43	0.00
Native American	0.00	0.00	
Minority	0.00	22.81	0.00
Nonminority female	10.75	12.05	89.19
M/WBE Total	10.75	34.86	30.83

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Business Schools and Computer and Management Training (NAICS 6114)			
African American	4.15	16.75	24.76
Hispanic	0.00	0.48	0.00
Asian	27.08	5.15	
Native American	0.00	0.95	0.00
Minority	31.22	23.32	
Nonminority female	0.00	29.21	0.00 ****
M/WBE Total	31.22	52.53	59.43
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	5.48	0.00
Hispanic	0.00	2.20	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.68	0.00
Nonminority female	0.00	20.57	0.00 ****
M/WBE Total	0.00	28.25	0.00 ****
Offices of Physicians (NAICS 6211)			
African American	0.00	18.34	0.00 ****
Hispanic	0.00	0.76	0.00
Asian	0.00	0.69	0.00
Native American	0.00	0.42	0.00
Minority	0.00	20.22	0.00 ****
Nonminority female	0.00	14.12	0.00
M/WBE Total	0.00	34.35	0.00 ****
Full-Service Restaurants (NAICS 7221)			
African American	0.00	24.26	0.00 ****
Hispanic	0.00	0.17	0.00
Asian	84.81	6.65	
Native American	0.00	0.04	0.00
Minority	84.81	31.12	
Nonminority female	0.00	19.04	0.00 ****
M/WBE Total	84.81	50.16	
Water, Sewage and Other Systems (NAICS 2213)			
African American	0.00	7.32	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.58	0.00
Native American	0.00	0.00	
Minority	0.00	8.90	0.00
Nonminority female	0.00	14.64	0.00
M/WBE Total	0.00	23.54	0.00

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Logging (NAICS 1133)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	6.67	0.00
Minority	0.00	6.67	0.00
Nonminority female	0.00	0.00	
M/WBE Total	0.00	6.67	0.00
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	2.71	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.71	0.00
Nonminority female	0.00	16.32	0.00 ****
M/WBE Total	0.00	19.03	0.00 ****
Pharmaceutical and Medicine Manufacturing (NAICS 3254)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE Total	0.00	0.00	

Source and Notes: *See* Table 6.3.

Table AD.7. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore CSE Contracting (Dollars Awarded)

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	24.78	0.00	
Hispanic	0.00	5.68	0.00****
Asian	0.00	5.68	0.00****
Native American	0.00	0.00	
Minority	24.78	11.37	
Nonminority female	0.00	1.69	0.00*
M/WBE Total	24.78	13.06	
Automobile Dealers (NAICS 4411)			
African American	0.00	8.36	0.00****
Hispanic	0.00	1.80	0.00****
Asian	0.00	2.70	0.00****
Native American	0.00	0.00	
Minority	0.00	12.87	0.00****
Nonminority female	0.67	6.21	10.78****
M/WBE Total	0.67	19.08	3.51****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.12	6.74	1.75****
Hispanic	0.00	0.35	0.00****
Asian	0.00	2.54	0.00****
Native American	0.00	0.32	0.00****
Minority	0.12	9.95	1.19****
Nonminority female	0.09	9.52	0.95****
M/WBE Total	0.21	19.47	1.07****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	3.33	0.00****
Hispanic	0.00	0.41	0.00***
Asian	0.00	0.93	0.00***
Native American	0.00	0.00	
Minority	0.00	4.66	0.00****
Nonminority female	2.77	7.29	38.08
M/WBE Total	2.77	11.95	23.22****
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	2.63	0.00****
Hispanic	0.00	0.00	
Asian	0.00	1.32	0.00*
Native American	0.00	0.00	
Minority	0.00	3.95	0.00****
Nonminority female	0.75	14.63	5.11****
M/WBE Total	0.75	18.57	4.02****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	1.23	11.69	10.52****
Hispanic	0.00	0.42	0.00****
Asian	2.70	0.77	
Native American	0.00	0.08	0.00
Minority	3.93	12.96	30.33**
Nonminority female	0.37	17.77	2.07****
M/WBE Total	4.30	30.73	13.99****
Basic Chemical Manufacturing (NAICS 3251)			
African American	0.00	6.02	0.00*
Hispanic	0.00	2.41	0.00
Asian	0.00	3.61	0.00*
Native American	0.00	1.20	0.00
Minority	0.00	13.25	0.00****
Nonminority female	0.00	12.05	0.00****
M/WBE Total	0.00	25.30	0.00****
Computer Systems Design and Related Services (NAICS 5415)			
African American	12.23	15.42	79.30
Hispanic	0.00	3.01	0.00****
Asian	22.33	7.12	
Native American	0.00	0.41	0.00****
Minority	34.56	25.96	
Nonminority female	3.41	11.45	29.77***
M/WBE Total	37.97	37.42	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	6.84	0.00****
Hispanic	9.16	5.92	
Asian	0.00	2.28	0.00****
Native American	0.00	1.36	0.00***
Minority	9.16	16.40	55.86*
Nonminority female	0.00	7.49	0.00****
M/WBE Total	9.16	23.89	38.34****
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	2.20	2.43	90.70
Hispanic	0.00	0.00	
Asian	0.43	3.25	13.06
Native American	0.00	0.20	0.00
Minority	2.63	5.88	44.68
Nonminority female	0.00	10.11	0.00****
M/WBE Total	2.63	15.99	16.43****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.84	0.00****
Hispanic	0.00	1.24	0.00***
Asian	0.00	1.40	0.00****
Native American	0.00	0.00	
Minority	0.00	5.48	0.00****
Nonminority female	18.90	6.55	
M/WBE Total	18.90	12.03	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	1.42	0.00****
Hispanic	0.00	0.00	
Asian	0.00	2.85	0.00****
Native American	0.00	0.00	
Minority	0.00	4.27	0.00****
Nonminority female	0.00	9.66	0.00****
M/WBE Total	0.00	13.93	0.00****
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	4.42	0.00****
M/WBE Total	0.00	4.42	0.00****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.31	0.00****
Hispanic	0.00	2.18	0.00****
Asian	0.00	2.09	0.00****
Native American	0.00	2.57	0.00****
Minority	0.00	14.15	0.00****
Nonminority female	0.00	9.66	0.00****
M/WBE Total	0.00	23.81	0.00****
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	7.58	0.00***
Hispanic	0.00	0.00	
Asian	2.12	4.87	43.50
Native American	0.00	0.00	
Minority	2.12	12.45	17.03
Nonminority female	97.44	13.46	
M/WBE Total	99.56	25.91	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Communications Equipment Manufacturing (NAICS 3342)			
African American	1.29	6.06	21.23
Hispanic	0.00	4.15	0.00****
Asian	0.00	9.63	0.00****
Native American	0.00	0.00	
Minority	1.29	19.83	6.48****
Nonminority female	0.36	7.66	4.69**
M/WBE Total	1.65	27.49	5.98****
Aerospace Product and Parts Manufacturing (NAICS 3364)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	14.21	0.00
M/WBE Total	0.00	14.21	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	11.11	0.00****
Hispanic	0.00	4.96	0.00****
Asian	0.00	1.67	0.00
Native American	0.00	0.56	0.00
Minority	0.00	18.30	0.00****
Nonminority female	0.00	10.69	0.00****
M/WBE Total	0.00	28.99	0.00****
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	6.48	0.00****
Hispanic	0.00	3.72	0.00****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	10.20	0.00****
Nonminority female	0.00	6.86	0.00****
M/WBE Total	0.00	17.06	0.00****
Software Publishers (NAICS 5112)			
African American	0.37	6.87	5.35****
Hispanic	0.00	1.66	0.00****
Asian	1.04	5.09	20.49***
Native American	0.00	0.00	
Minority	1.41	13.62	10.36****
Nonminority female	0.00	11.29	0.00****
M/WBE Total	1.41	24.91	5.66****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Cut and Sew Apparel Manufacturing (NAICS 3152)			
African American	0.00	4.98	0.00****
Hispanic	0.00	0.75	0.00
Asian	0.00	9.22	0.00****
Native American	0.00	0.60	0.00
Minority	0.00	15.54	0.00****
Nonminority female	0.00	20.74	0.00****
M/WBE Total	0.00	36.28	0.00****
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	8.26	10.81	76.41
Hispanic	0.00	0.15	0.00
Asian	0.00	3.73	0.00****
Native American	0.00	1.79	0.00****
Minority	8.26	16.49	50.11
Nonminority female	0.49	20.45	2.40****
M/WBE Total	8.75	36.94	23.69****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	7.86	0.00****
Hispanic	0.00	0.30	0.00
Asian	0.00	5.01	0.00****
Native American	0.00	0.00	
Minority	0.00	13.17	0.00****
Nonminority female	0.65	27.67	2.35****
M/WBE Total	0.65	40.84	1.59****
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	2.56	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.56	0.00****
Nonminority female	0.00	6.63	0.00****
M/WBE Total	0.00	9.20	0.00****
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.02	7.43	0.31****
Hispanic	0.00	1.04	0.00
Asian	0.00	3.31	0.00****
Native American	0.00	0.00	
Minority	0.02	11.78	0.20****
Nonminority female	2.10	8.07	25.97
M/WBE Total	2.12	19.85	10.68****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	1.70	3.44	49.41
Hispanic	0.00	1.24	0.00**
Asian	0.00	1.07	0.00**
Native American	0.00	1.43	0.00**
Minority	1.70	7.18	23.64
Nonminority female	0.00	9.76	0.00****
M/WBE Total	1.70	16.95	10.02****
Office Administrative Services (NAICS 5611)			
African American	0.00	19.54	0.00****
Hispanic	0.00	0.15	0.00
Asian	0.00	9.21	0.00**
Native American	0.00	0.00	
Minority	0.00	28.90	0.00****
Nonminority female	0.00	11.17	0.00***
M/WBE Total	0.00	40.07	0.00****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.33	5.89	5.61****
Hispanic	0.00	1.84	0.00***
Asian	0.00	1.08	0.00
Native American	0.00	0.00	
Minority	0.33	8.81	3.75****
Nonminority female	16.51	26.95	61.28
M/WBE Total	16.84	35.76	47.10**
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	5.59	0.00****
Hispanic	0.00	1.83	0.00**
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.42	0.00****
Nonminority female	0.00	15.04	0.00****
M/WBE Total	0.00	22.46	0.00****
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	5.60	0.00****
Hispanic	0.00	2.08	0.00**
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.68	0.00****
Nonminority female	0.00	11.14	0.00****
M/WBE Total	0.00	18.82	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	1.75	5.37	32.49
Hispanic	0.00	1.09	0.00****
Asian	0.00	0.91	0.00****
Native American	0.00	0.00	
Minority	1.75	7.37	23.70
Nonminority female	0.00	22.60	0.00****
M/WBE Total	1.75	29.97	5.83****
Lime and Gypsum Product Manufacturing (NAICS 3274)			
African American	0.00	3.17	0.00
Hispanic	0.00	3.17	0.00
Asian	0.00	0.00	
Native American	0.00	1.59	0.00
Minority	0.00	7.94	0.00
Nonminority female	0.00	9.52	0.00
M/WBE Total	0.00	17.46	0.00****
Electronics and Appliance Stores (NAICS 4431)			
African American	3.02	9.76	30.91
Hispanic	0.00	0.20	0.00
Asian	0.68	1.80	37.83
Native American	0.00	0.49	0.00
Minority	3.70	12.25	30.19
Nonminority female	0.00	12.42	0.00****
M/WBE Total	3.70	24.67	14.99****
Other Transit and Ground Passenger Transportation (NAICS 4859)			
African American	0.00	31.68	0.00****
Hispanic	0.00	1.74	0.00
Asian	0.00	6.54	0.00
Native American	0.00	1.74	0.00
Minority	0.00	41.69	0.00****
Nonminority female	0.00	10.16	0.00
M/WBE Total	0.00	51.85	0.00****
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	6.16	0.00****
Hispanic	0.00	0.05	0.00
Asian	76.68	1.39	
Native American	0.00	0.69	0.00
Minority	76.68	8.30	
Nonminority female	0.00	6.70	0.00****
M/WBE Total	76.68	15.00	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	7.11	0.00****
Hispanic	0.00	0.00	
Asian	0.00	4.37	0.00****
Native American	0.00	2.18	0.00
Minority	0.00	13.66	0.00****
Nonminority female	0.00	24.09	0.00****
M/WBE Total	0.00	37.75	0.00****
Other Telecommunications (NAICS 5179)			
African American	0.00	9.22	0.00****
Hispanic	0.00	0.00	
Asian	4.83	3.86	
Native American	0.00	0.00	
Minority	4.83	13.08	36.92
Nonminority female	0.00	5.36	0.00****
M/WBE Total	4.83	18.44	26.20
Pharmaceutical and Medicine Manufacturing (NAICS 3254)			
African American	0.97	4.51	21.38***
Hispanic	0.00	2.33	0.00****
Asian	0.00	1.09	0.00****
Native American	0.00	0.28	0.00
Minority	0.97	8.21	11.76****
Nonminority female	0.00	3.45	0.00****
M/WBE Total	0.97	11.66	8.27****
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.38	13.51	2.83****
Hispanic	0.00	0.25	0.00
Asian	0.00	3.14	0.00***
Native American	0.00	0.00	
Minority	0.38	16.90	2.26****
Nonminority female	0.25	8.32	3.06****
M/WBE Total	0.64	25.21	2.53****
Ship and Boat Building (NAICS 3366)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	13.50	0.00****
M/WBE Total	0.00	13.50	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Direct Selling Establishments (NAICS 4543)			
African American	4.01	5.56	72.22
Hispanic	0.00	0.00	
Asian	0.00	1.85	0.00****
Native American	0.00	0.00	
Minority	4.01	7.41	54.16
Nonminority female	0.00	5.56	0.00****
M/WBE Total	4.01	12.96	30.95
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	15.63	0.00****
Hispanic	0.00	0.00	
Asian	0.00	4.44	0.00****
Native American	0.00	0.00	
Minority	0.00	20.08	0.00****
Nonminority female	0.00	19.80	0.00****
M/WBE Total	0.00	39.88	0.00****
Health and Personal Care Stores (NAICS 4461)			
African American	0.00	7.34	0.00****
Hispanic	0.00	1.40	0.00****
Asian	0.00	1.86	0.00****
Native American	0.00	1.72	0.00****
Minority	0.00	12.32	0.00****
Nonminority female	0.00	6.89	0.00****
M/WBE Total	0.00	19.21	0.00****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	5.89	0.00****
Hispanic	0.00	0.00	
Asian	0.00	3.52	0.00****
Native American	0.00	0.00	
Minority	0.00	9.41	0.00****
Nonminority female	0.00	5.33	0.00****
M/WBE Total	0.00	14.74	0.00****
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	12.15	0.00****
Hispanic	0.00	2.41	0.00****
Asian	0.00	0.25	0.00
Native American	0.00	0.21	0.00
Minority	0.00	15.01	0.00****
Nonminority female	0.00	17.37	0.00****
M/WBE Total	0.00	32.38	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	15.08	0.00****
Hispanic	0.00	2.01	0.00*
Asian	0.00	7.95	0.00****
Native American	0.00	0.29	0.00
Minority	0.00	25.33	0.00****
Nonminority female	0.00	22.52	0.00****
M/WBE Total	0.00	47.85	0.00****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	1.14	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.14	0.00
Native American	0.00	0.00	
Minority	0.00	2.27	0.00
Nonminority female	0.00	51.21	0.00****
M/WBE Total	0.00	53.48	0.00****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.41	0.00****
Hispanic	0.00	0.58	0.00
Asian	0.00	1.92	0.00
Native American	0.00	0.00	
Minority	0.00	7.90	0.00****
Nonminority female	0.00	11.97	0.00****
M/WBE Total	0.00	19.87	0.00****
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	2.13	0.00
Hispanic	0.00	0.00	
Asian	0.00	5.89	0.00**
Native American	0.00	0.00	
Minority	0.00	8.01	0.00**
Nonminority female	0.00	10.14	0.00****
M/WBE Total	0.00	18.16	0.00****
General Freight Trucking (NAICS 4841)			
African American	100.00	2.80	
Hispanic	0.00	3.21	0.00****
Asian	0.00	0.40	0.00
Native American	0.00	0.40	0.00
Minority	100.00	6.81	
Nonminority female	0.00	12.49	0.00****
M/WBE Total	100.00	19.30	

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	3.64	3.69	98.70
Hispanic	0.00	1.23	0.00
Asian	0.00	0.81	0.00
Native American	0.00	0.00	
Minority	3.64	5.73	63.54
Nonminority female	0.00	12.25	0.00****
M/WBE Total	3.64	17.98	20.25***
Clothing Stores (NAICS 4481)			
African American	0.00	10.21	0.00****
Hispanic	0.00	0.66	0.00
Asian	0.00	3.43	0.00
Native American	0.00	0.34	0.00
Minority	0.00	14.64	0.00****
Nonminority female	1.27	20.64	6.15****
M/WBE Total	1.27	35.28	3.60****
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	3.43	0.00****
Hispanic	0.00	1.17	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	4.61	0.00****
Nonminority female	0.00	12.51	0.00****
M/WBE Total	0.00	17.12	0.00****
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	0.00	6.38	0.00****
Hispanic	0.00	0.00	
Asian	0.00	1.14	0.00
Native American	0.00	1.14	0.00
Minority	0.00	8.66	0.00****
Nonminority female	0.00	7.22	0.00****
M/WBE Total	0.00	15.88	0.00****
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	8.87	0.00****
Hispanic	0.00	3.40	0.00****
Asian	0.00	1.04	0.00
Native American	0.00	0.00	
Minority	0.00	13.31	0.00****
Nonminority female	0.00	11.99	0.00****
M/WBE Total	0.00	25.29	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	6.27	0.00****
Hispanic	0.00	5.00	0.00****
Asian	0.00	9.05	0.00****
Native American	0.00	3.73	0.00****
Minority	0.00	24.05	0.00****
Nonminority female	4.87	19.62	24.82****
M/WBE Total	4.87	43.67	11.15****
Building Equipment Contractors (NAICS 2382)			
African American	0.00	8.78	0.00****
Hispanic	0.00	1.41	0.00****
Asian	0.00	0.23	0.00
Native American	0.00	0.18	0.00
Minority	0.00	10.61	0.00****
Nonminority female	0.00	8.50	0.00****
M/WBE Total	0.00	19.11	0.00****
Other Motor Vehicle Dealers (NAICS 4412)			
African American	0.00	1.79	0.00****
Hispanic	0.00	1.65	0.00****
Asian	0.00	1.65	0.00****
Native American	0.00	0.00	
Minority	0.00	5.09	0.00****
Nonminority female	0.00	12.84	0.00****
M/WBE Total	0.00	17.93	0.00****
Other Schools and Instruction (NAICS 6116)			
African American	0.00	16.09	0.00****
Hispanic	0.00	0.93	0.00
Asian	0.00	5.23	0.00****
Native American	0.00	1.28	0.00
Minority	0.00	23.53	0.00****
Nonminority female	0.00	21.38	0.00****
M/WBE Total	0.00	44.92	0.00****
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	10.00	0.00****
Hispanic	0.00	1.67	0.00**
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	11.67	0.00****
Nonminority female	0.00	10.00	0.00****
M/WBE Total	0.00	21.67	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	8.45	0.00****
Hispanic	0.00	0.00	
Asian	0.00	1.30	0.00
Native American	0.00	0.00	
Minority	0.00	9.75	0.00****
Nonminority female	0.00	17.69	0.00****
M/WBE Total	0.00	27.44	0.00****
Residential Building Construction (NAICS 2361)			
African American	0.00	7.40	0.00****
Hispanic	0.00	1.77	0.00****
Asian	0.00	0.23	0.00
Native American	0.00	3.31	0.00****
Minority	0.00	12.72	0.00****
Nonminority female	0.00	13.84	0.00****
M/WBE Total	0.00	26.56	0.00****
Footwear Manufacturing (NAICS 3162)			
African American	0.00	8.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.72	0.00
Native American	0.00	0.00	
Minority	0.00	10.34	0.00
Nonminority female	0.00	7.76	0.00
M/WBE Total	0.00	18.10	0.00****
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	2.67	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.65	0.00
Native American	0.00	0.00	
Minority	0.00	3.31	0.00****
Nonminority female	0.00	14.42	0.00****
M/WBE Total	0.00	17.73	0.00****
Apparel Accessories and Other Apparel Manufacturing (NAICS 3159)			
African American	0.00	8.62	0.00****
Hispanic	0.00	0.00	
Asian	0.00	1.72	0.00
Native American	0.00	0.00	
Minority	0.00	10.34	0.00****
Nonminority female	0.00	7.76	0.00****
M/WBE Total	0.00	18.10	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)			
African American	0.00	3.80	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	3.80	0.00
Nonminority female	0.00	5.06	0.00****
M/WBE Total	0.00	8.86	0.00****
Furniture Stores (NAICS 4421)			
African American	0.00	4.78	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.90	0.00****
Native American	0.00	0.00	
Minority	0.00	14.68	0.00****
Nonminority female	0.00	9.58	0.00****
M/WBE Total	0.00	24.26	0.00****
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	4.16	0.00
Hispanic	0.00	1.94	0.00
Asian	10.00	6.76	
Native American	0.00	2.66	0.00
Minority	10.00	15.51	64.47
Nonminority female	0.00	15.01	0.00****
M/WBE Total	10.00	30.52	32.76
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)			
African American	0.00	5.21	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.21	0.00****
Nonminority female	2.03	11.46	17.73***
M/WBE Total	2.03	16.67	12.19****
Converted Paper Product Manufacturing (NAICS 3222)			
African American	0.00	4.00	0.00****
Hispanic	0.00	0.00	
Asian	0.00	4.00	0.00****
Native American	0.00	0.00	
Minority	0.00	8.00	0.00****
Nonminority female	0.00	4.00	0.00****
M/WBE Total	0.00	12.00	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Personal Services (NAICS 8129)			
African American	0.00	21.60	0.00****
Hispanic	0.00	4.51	0.00
Asian	0.00	4.51	0.00
Native American	0.00	0.00	
Minority	0.00	30.61	0.00****
Nonminority female	0.00	1.79	0.00
M/WBE Total	0.00	32.40	0.00****
Printing and Related Support Activities (NAICS 3231)			
African American	7.66	1.65	
Hispanic	0.00	0.00	
Asian	0.00	1.58	0.00***
Native American	0.00	0.76	0.00
Minority	7.66	3.99	
Nonminority female	9.55	44.56	21.43***
M/WBE Total	17.21	48.55	35.45
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	11.84	0.00****
Hispanic	0.00	2.10	0.00*
Asian	0.00	7.13	0.00****
Native American	0.00	2.83	0.00*
Minority	0.00	23.90	0.00****
Nonminority female	0.00	18.31	0.00****
M/WBE Total	0.00	42.21	0.00****
Audio and Video Equipment Manufacturing (NAICS 3343)			
African American	0.00	5.57	0.00****
Hispanic	0.00	0.00	
Asian	0.00	7.29	0.00****
Native American	0.00	0.00	
Minority	0.00	12.85	0.00****
Nonminority female	0.00	5.57	0.00****
M/WBE Total	0.00	18.42	0.00****
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	14.61	10.12	
Hispanic	0.00	3.38	0.00****
Asian	2.70	0.00	
Native American	0.00	0.29	0.00
Minority	17.30	13.79	
Nonminority female	0.00	23.34	0.00****
M/WBE Total	17.30	37.14	46.60****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Motor Vehicle Manufacturing (NAICS 3361)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	26.35	6.06	
M/WBE Total	26.35	6.06	
Business Support Services (NAICS 5614)			
African American	0.00	19.27	0.00****
Hispanic	0.00	0.17	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.10	0.00
Minority	0.00	19.92	0.00****
Nonminority female	0.00	20.96	0.00****
M/WBE Total	0.00	40.88	0.00****
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	8.33	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	8.33	0.00
Nonminority female	0.00	3.79	0.00
M/WBE Total	0.00	12.12	0.00
Specialized Design Services (NAICS 5414)			
African American	0.00	18.56	0.00****
Hispanic	0.00	1.12	0.00
Asian	0.00	4.00	0.00***
Native American	0.00	0.32	0.00
Minority	0.00	23.99	0.00****
Nonminority female	0.00	32.87	0.00****
M/WBE Total	0.00	56.87	0.00****
Waste Collection (NAICS 5621)			
African American	0.00	11.37	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	11.37	0.00
Nonminority female	0.00	6.07	0.00
M/WBE Total	0.00	17.44	0.00

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	6.07	0.00****
Hispanic	0.00	1.90	0.00****
Asian	0.00	1.81	0.00****
Native American	0.00	1.73	0.00****
Minority	0.00	11.51	0.00****
Nonminority female	0.00	10.65	0.00****
M/WBE Total	0.00	22.16	0.00****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	14.00	0.00****
Hispanic	0.00	0.91	0.00****
Asian	0.00	5.12	0.00****
Native American	0.00	0.00	
Minority	0.00	20.03	0.00****
Nonminority female	0.00	20.05	0.00****
M/WBE Total	0.00	40.08	0.00****
Electronic Shopping and Mail-Order Houses (NAICS 4541)			
African American	2.44	14.02	17.40**
Hispanic	0.00	0.72	0.00
Asian	0.00	2.80	0.00
Native American	0.00	0.00	
Minority	2.44	17.54	13.91**
Nonminority female	0.00	22.26	0.00****
M/WBE Total	2.44	39.79	6.13****
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	2.11	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.11	0.00
Nonminority female	0.00	10.22	0.00****
M/WBE Total	0.00	12.33	0.00****
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	3.19	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	3.19	0.00****
Nonminority female	0.00	13.69	0.00****
M/WBE Total	0.00	16.88	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	10.91	0.00****
Hispanic	0.00	1.70	0.00****
Asian	0.00	3.28	0.00****
Native American	0.00	0.57	0.00
Minority	0.00	16.46	0.00****
Nonminority female	0.00	9.32	0.00****
M/WBE Total	0.00	25.78	0.00****
Used Merchandise Stores (NAICS 4533)			
African American	0.00	7.28	0.00****
Hispanic	0.00	1.71	0.00
Asian	0.00	0.00	
Native American	0.00	1.71	0.00
Minority	0.00	10.71	0.00****
Nonminority female	0.00	41.43	0.00****
M/WBE Total	0.00	52.14	0.00****
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	4.42	0.00
Hispanic	0.00	1.77	0.00
Asian	0.00	2.65	0.00
Native American	0.00	0.88	0.00
Minority	0.00	9.72	0.00****
Nonminority female	0.00	8.84	0.00****
M/WBE Total	0.00	18.55	0.00****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	12.30	0.00****
Hispanic	0.00	0.69	0.00****
Asian	0.00	5.81	0.00****
Native American	0.00	0.23	0.00*
Minority	0.00	19.03	0.00****
Nonminority female	0.00	13.09	0.00****
M/WBE Total	0.00	32.12	0.00****
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	3.77	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.33	0.00
Native American	0.00	0.00	
Minority	0.00	5.10	0.00****
Nonminority female	0.00	7.76	0.00****
M/WBE Total	0.00	12.86	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	15.46	0.00****
Hispanic	0.00	0.31	0.00
Asian	0.00	4.33	0.00****
Native American	0.00	0.02	0.00
Minority	0.00	20.12	0.00****
Nonminority female	0.00	21.28	0.00****
M/WBE Total	0.00	41.40	0.00****
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	3.17	0.00
Hispanic	0.00	3.17	0.00
Asian	0.00	0.00	
Native American	0.00	1.59	0.00
Minority	0.00	7.94	0.00***
Nonminority female	16.01	9.52	
M/WBE Total	16.01	17.46	91.67
Special Food Services (NAICS 7223)			
African American	0.00	25.67	0.00****
Hispanic	0.00	0.06	0.00
Asian	0.00	4.71	0.00****
Native American	0.00	0.00	
Minority	0.00	30.44	0.00****
Nonminority female	0.00	21.33	0.00****
M/WBE Total	0.00	51.77	0.00****
Other Textile Product Mills (NAICS 3149)			
African American	0.00	3.30	0.00
Hispanic	0.00	3.32	0.00
Asian	0.00	7.91	0.00****
Native American	0.00	0.90	0.00
Minority	0.00	15.42	0.00****
Nonminority female	6.76	41.36	16.35****
M/WBE Total	6.76	56.78	11.91****
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	14.57	0.00****
Hispanic	0.00	0.54	0.00
Asian	0.00	4.52	0.00****
Native American	0.00	0.00	
Minority	0.00	19.63	0.00****
Nonminority female	0.00	21.26	0.00****
M/WBE Total	0.00	40.89	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Support Services (NAICS 5619)			
African American	0.00	18.57	0.00****
Hispanic	0.00	0.10	0.00
Asian	0.00	0.12	0.00
Native American	0.00	0.04	0.00
Minority	0.00	18.83	0.00****
Nonminority female	0.00	19.25	0.00****
M/WBE Total	0.00	38.08	0.00****
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	18.30	0.00****
M/WBE Total	0.00	18.30	0.00****
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	5.26	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.26	0.00****
Nonminority female	0.00	0.00	
M/WBE Total	0.00	5.26	0.00****
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	0.95	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.95	0.00
Nonminority female	0.00	1.27	0.00
M/WBE Total	0.00	2.22	0.00
Pulp, Paper, and Paperboard Mills (NAICS 3221)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE Total	0.00	0.00	

Source and Notes: *See* Table 6.3.

Table AD.8. Industry Group Utilization, Availability, and Disparity Results for City of Baltimore CSE Contracting (Dollars Paid)

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Petroleum and Petroleum Products Merchant Wholesalers (NAICS 4247)			
African American	24.78	0.00	
Hispanic	0.00	5.68	0.00****
Asian	0.00	5.68	0.00****
Native American	0.00	0.00	
Minority	24.78	11.37	
Nonminority female	0.00	1.69	0.00****
M/WBE Total	24.78	13.06	
Automobile Dealers (NAICS 4411)			
African American	0.00	8.36	0.00****
Hispanic	0.00	1.80	0.00****
Asian	0.00	2.70	0.00****
Native American	0.00	0.00	
Minority	0.00	12.87	0.00****
Nonminority female	0.67	6.21	10.78****
M/WBE Total	0.67	19.08	3.51****
Machinery, Equipment, and Supplies Merchant Wholesalers (NAICS 4238)			
African American	0.12	6.74	1.75****
Hispanic	0.00	0.35	0.00****
Asian	0.00	2.54	0.00****
Native American	0.00	0.32	0.00****
Minority	0.12	9.95	1.19****
Nonminority female	0.09	9.52	0.95****
M/WBE Total	0.21	19.47	1.07****
Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers (NAICS 4231)			
African American	0.00	3.33	0.00****
Hispanic	0.00	0.41	0.00****
Asian	0.00	0.93	0.00****
Native American	0.00	0.00	
Minority	0.00	4.66	0.00****
Nonminority female	2.77	7.29	38.08*
M/WBE Total	2.77	11.95	23.22****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Chemical and Allied Products Merchant Wholesalers (NAICS 4246)			
African American	0.00	2.63	0.00****
Hispanic	0.00	0.00	
Asian	0.00	1.32	0.00****
Native American	0.00	0.00	
Minority	0.00	3.95	0.00****
Nonminority female	0.75	14.63	5.11****
M/WBE Total	0.75	18.57	4.02****
Professional and Commercial Equipment and Supplies Merchant Wholesalers (NAICS 4234)			
African American	1.23	11.69	10.52****
Hispanic	0.00	0.42	0.00****
Asian	2.70	0.77	
Native American	0.00	0.08	0.00
Minority	3.93	12.96	30.33***
Nonminority female	0.37	17.77	2.07****
M/WBE Total	4.30	30.73	13.99****
Basic Chemical Manufacturing (NAICS 3251)			
African American	0.00	6.02	0.00*
Hispanic	0.00	2.41	0.00
Asian	0.00	3.61	0.00*
Native American	0.00	1.20	0.00
Minority	0.00	13.25	0.00****
Nonminority female	0.00	12.05	0.00****
M/WBE Total	0.00	25.30	0.00****
Computer Systems Design and Related Services (NAICS 5415)			
African American	12.23	15.42	79.30
Hispanic	0.00	3.01	0.00****
Asian	22.33	7.12	
Native American	0.00	0.41	0.00****
Minority	34.56	25.96	
Nonminority female	3.41	11.45	29.77**
M/WBE Total	37.97	37.42	
Highway, Street, and Bridge Construction (NAICS 2373)			
African American	0.00	6.84	0.00****
Hispanic	9.16	5.92	
Asian	0.00	2.28	0.00****
Native American	0.00	1.36	0.00****
Minority	9.16	16.40	55.86
Nonminority female	0.00	7.49	0.00****
M/WBE Total	9.16	23.89	38.34****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Electrical and Electronic Goods Merchant Wholesalers (NAICS 4236)			
African American	2.20	2.43	90.70
Hispanic	0.00	0.00	
Asian	0.43	3.25	13.06
Native American	0.00	0.20	0.00
Minority	2.63	5.88	44.68
Nonminority female	0.00	10.11	0.00****
M/WBE Total	2.63	15.99	16.43****
Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers (NAICS 4237)			
African American	0.00	2.84	0.00****
Hispanic	0.00	1.24	0.00****
Asian	0.00	1.40	0.00****
Native American	0.00	0.00	
Minority	0.00	5.48	0.00****
Nonminority female	18.90	6.55	
M/WBE Total	18.90	12.03	
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345)			
African American	0.00	1.42	0.00****
Hispanic	0.00	0.00	
Asian	0.00	2.85	0.00****
Native American	0.00	0.00	
Minority	0.00	4.27	0.00****
Nonminority female	0.00	9.66	0.00****
M/WBE Total	0.00	13.93	0.00****
Motor Vehicle Body and Trailer Manufacturing (NAICS 3362)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	4.42	0.00****
M/WBE Total	0.00	4.42	0.00****
Automotive Repair and Maintenance (NAICS 8111)			
African American	0.00	7.31	0.00****
Hispanic	0.00	2.18	0.00****
Asian	0.00	2.09	0.00****
Native American	0.00	2.57	0.00****
Minority	0.00	14.15	0.00****
Nonminority female	0.00	9.66	0.00****
M/WBE Total	0.00	23.81	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Office Supplies, Stationery, and Gift Stores (NAICS 4532)			
African American	0.00	7.58	0.00****
Hispanic	0.00	0.00	
Asian	2.12	4.87	43.50
Native American	0.00	0.00	
Minority	2.12	12.45	17.03
Nonminority female	97.44	13.46	
M/WBE Total	99.56	25.91	
Communications Equipment Manufacturing (NAICS 3342)			
African American	1.29	6.06	21.23
Hispanic	0.00	4.15	0.00****
Asian	0.00	9.63	0.00****
Native American	0.00	0.00	
Minority	1.29	19.83	6.48****
Nonminority female	0.36	7.66	4.69**
M/WBE Total	1.65	27.49	5.98****
Aerospace Product and Parts Manufacturing (NAICS 3364)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	14.21	0.00
M/WBE Total	0.00	14.21	0.00
Other Chemical Product and Preparation Manufacturing (NAICS 3259)			
African American	0.00	11.11	0.00****
Hispanic	0.00	4.96	0.00****
Asian	0.00	1.67	0.00
Native American	0.00	0.56	0.00
Minority	0.00	18.30	0.00****
Nonminority female	0.00	10.69	0.00****
M/WBE Total	0.00	28.99	0.00****
Commercial and Service Industry Machinery Manufacturing (NAICS 3333)			
African American	0.00	6.48	0.00****
Hispanic	0.00	3.72	0.00****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	10.20	0.00****
Nonminority female	0.00	6.86	0.00****
M/WBE Total	0.00	17.06	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Software Publishers (NAICS 5112)			
African American	0.37	6.87	5.35****
Hispanic	0.00	1.66	0.00****
Asian	1.04	5.09	20.49***
Native American	0.00	0.00	
Minority	1.41	13.62	10.36****
Nonminority female	0.00	11.29	0.00****
M/WBE Total	1.41	24.91	5.66****
Cut and Sew Apparel Manufacturing (NAICS 3152)			
African American	0.00	4.98	0.00****
Hispanic	0.00	0.75	0.00
Asian	0.00	9.22	0.00****
Native American	0.00	0.60	0.00
Minority	0.00	15.54	0.00****
Nonminority female	0.00	20.74	0.00****
M/WBE Total	0.00	36.28	0.00****
Other Miscellaneous Store Retailers (NAICS 4539)			
African American	8.26	10.81	76.41
Hispanic	0.00	0.15	0.00
Asian	0.00	3.73	0.00****
Native American	0.00	1.79	0.00****
Minority	8.26	16.49	50.11
Nonminority female	0.49	20.45	2.40****
M/WBE Total	8.75	36.94	23.69****
Miscellaneous Durable Goods Merchant Wholesalers (NAICS 4239)			
African American	0.00	7.86	0.00****
Hispanic	0.00	0.30	0.00
Asian	0.00	5.01	0.00****
Native American	0.00	0.00	
Minority	0.00	13.17	0.00****
Nonminority female	0.65	27.67	2.35****
M/WBE Total	0.65	40.84	1.59****
Agriculture, Construction, and Mining Machinery Manufacturing (NAICS 3331)			
African American	0.00	2.56	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.56	0.00****
Nonminority female	0.00	6.63	0.00****
M/WBE Total	0.00	9.20	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Architectural and Structural Metals Manufacturing (NAICS 3323)			
African American	0.02	7.43	0.31****
Hispanic	0.00	1.04	0.00***
Asian	0.00	3.31	0.00****
Native American	0.00	0.00	
Minority	0.02	11.78	0.20****
Nonminority female	2.10	8.07	25.97
M/WBE Total	2.12	19.85	10.68****
Electronic and Precision Equipment Repair and Maintenance (NAICS 8112)			
African American	1.70	3.44	49.41
Hispanic	0.00	1.24	0.00**
Asian	0.00	1.07	0.00**
Native American	0.00	1.43	0.00**
Minority	1.70	7.18	23.64
Nonminority female	0.00	9.76	0.00****
M/WBE Total	1.70	16.95	10.02****
Office Administrative Services (NAICS 5611)			
African American	0.00	19.54	0.00****
Hispanic	0.00	0.15	0.00
Asian	0.00	9.21	0.00****
Native American	0.00	0.00	
Minority	0.00	28.90	0.00****
Nonminority female	0.00	11.17	0.00****
M/WBE Total	0.00	40.07	0.00****
Other Miscellaneous Manufacturing (NAICS 3399)			
African American	0.33	5.89	5.61****
Hispanic	0.00	1.84	0.00****
Asian	0.00	1.08	0.00****
Native American	0.00	0.00	
Minority	0.33	8.81	3.75****
Nonminority female	16.51	26.95	61.28
M/WBE Total	16.84	35.76	47.10***
Building Material and Supplies Dealers (NAICS 4441)			
African American	0.00	5.59	0.00****
Hispanic	0.00	1.83	0.00****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.42	0.00****
Nonminority female	0.00	15.04	0.00****
M/WBE Total	0.00	22.46	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Fabricated Metal Product Manufacturing (NAICS 3329)			
African American	0.00	5.60	0.00****
Hispanic	0.00	2.08	0.00****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	7.68	0.00****
Nonminority female	0.00	11.14	0.00****
M/WBE Total	0.00	18.82	0.00****
Lumber and Other Construction Materials Merchant Wholesalers (NAICS 4233)			
African American	1.75	5.37	32.49
Hispanic	0.00	1.09	0.00****
Asian	0.00	0.91	0.00****
Native American	0.00	0.00	
Minority	1.75	7.37	23.70
Nonminority female	0.00	22.60	0.00****
M/WBE Total	1.75	29.97	5.83****
Lime and Gypsum Product Manufacturing (NAICS 3274)			
African American	0.00	3.17	0.00
Hispanic	0.00	3.17	0.00
Asian	0.00	0.00	
Native American	0.00	1.59	0.00
Minority	0.00	7.94	0.00
Nonminority female	0.00	9.52	0.00
M/WBE Total	0.00	17.46	0.00
Electronics and Appliance Stores (NAICS 4431)			
African American	3.02	9.76	30.91
Hispanic	0.00	0.20	0.00
Asian	0.68	1.80	37.83
Native American	0.00	0.49	0.00
Minority	3.70	12.25	30.19
Nonminority female	0.00	12.42	0.00****
M/WBE Total	3.70	24.67	14.99****
Other Transit and Ground Passenger Transportation (NAICS 4859)			
African American	0.00	31.68	0.00****
Hispanic	0.00	1.74	0.00
Asian	0.00	6.54	0.00****
Native American	0.00	1.74	0.00
Minority	0.00	41.69	0.00****
Nonminority female	0.00	10.16	0.00****
M/WBE Total	0.00	51.85	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Metal and Mineral (except Petroleum) Merchant Wholesalers (NAICS 4235)			
African American	0.00	6.16	0.00****
Hispanic	0.00	0.05	0.00
Asian	76.68	1.39	
Native American	0.00	0.69	0.00
Minority	76.68	8.30	
Nonminority female	0.00	6.70	0.00****
M/WBE Total	76.68	15.00	
Apparel, Piece Goods, and Notions Merchant Wholesalers (NAICS 4243)			
African American	0.00	7.11	0.00****
Hispanic	0.00	0.00	
Asian	0.00	4.37	0.00****
Native American	0.00	2.18	0.00
Minority	0.00	13.66	0.00****
Nonminority female	0.00	24.09	0.00****
M/WBE Total	0.00	37.75	0.00****
Other Telecommunications (NAICS 5179)			
African American	0.00	9.22	0.00****
Hispanic	0.00	0.00	
Asian	4.83	3.86	
Native American	0.00	0.00	
Minority	4.83	13.08	36.92
Nonminority female	0.00	5.36	0.00****
M/WBE Total	4.83	18.44	26.20
Pharmaceutical and Medicine Manufacturing (NAICS 3254)			
African American	0.97	4.51	21.38***
Hispanic	0.00	2.33	0.00****
Asian	0.00	1.09	0.00****
Native American	0.00	0.28	0.00
Minority	0.97	8.21	11.76****
Nonminority female	0.00	3.45	0.00****
M/WBE Total	0.97	11.66	8.27****
Paper and Paper Product Merchant Wholesalers (NAICS 4241)			
African American	0.38	13.51	2.83****
Hispanic	0.00	0.25	0.00
Asian	0.00	3.14	0.00****
Native American	0.00	0.00	
Minority	0.38	16.90	2.26****
Nonminority female	0.25	8.32	3.06****
M/WBE Total	0.64	25.21	2.53****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Ship and Boat Building (NAICS 3366)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	13.50	0.00****
M/WBE Total	0.00	13.50	0.00****
Direct Selling Establishments (NAICS 4543)			
African American	4.01	5.56	72.22
Hispanic	0.00	0.00	
Asian	0.00	1.85	0.00****
Native American	0.00	0.00	
Minority	4.01	7.41	54.16
Nonminority female	0.00	5.56	0.00****
M/WBE Total	4.01	12.96	30.95
Office Furniture (including Fixtures) Manufacturing (NAICS 3372)			
African American	0.00	15.63	0.00****
Hispanic	0.00	0.00	
Asian	0.00	4.44	0.00****
Native American	0.00	0.00	
Minority	0.00	20.08	0.00****
Nonminority female	0.00	19.80	0.00****
M/WBE Total	0.00	39.88	0.00****
Health and Personal Care Stores (NAICS 4461)			
African American	0.00	7.34	0.00****
Hispanic	0.00	1.40	0.00****
Asian	0.00	1.86	0.00****
Native American	0.00	1.72	0.00****
Minority	0.00	12.32	0.00****
Nonminority female	0.00	6.89	0.00****
M/WBE Total	0.00	19.21	0.00****
Other General Purpose Machinery Manufacturing (NAICS 3339)			
African American	0.00	5.89	0.00****
Hispanic	0.00	0.00	
Asian	0.00	3.52	0.00****
Native American	0.00	0.00	
Minority	0.00	9.41	0.00****
Nonminority female	0.00	5.33	0.00****
M/WBE Total	0.00	14.74	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Specialty Trade Contractors (NAICS 2389)			
African American	0.00	12.15	0.00****
Hispanic	0.00	2.41	0.00****
Asian	0.00	0.25	0.00*
Native American	0.00	0.21	0.00*
Minority	0.00	15.01	0.00****
Nonminority female	0.00	17.37	0.00****
M/WBE Total	0.00	32.38	0.00****
Scientific Research and Development Services (NAICS 5417)			
African American	0.00	15.08	0.00****
Hispanic	0.00	2.01	0.00
Asian	0.00	7.95	0.00****
Native American	0.00	0.29	0.00
Minority	0.00	25.33	0.00****
Nonminority female	0.00	22.52	0.00****
M/WBE Total	0.00	47.85	0.00****
Electric Lighting Equipment Manufacturing (NAICS 3351)			
African American	0.00	1.14	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.14	0.00
Native American	0.00	0.00	
Minority	0.00	2.27	0.00
Nonminority female	0.00	51.21	0.00****
M/WBE Total	0.00	53.48	0.00****
Furniture and Home Furnishing Merchant Wholesalers (NAICS 4232)			
African American	0.00	5.41	0.00**
Hispanic	0.00	0.58	0.00
Asian	0.00	1.92	0.00
Native American	0.00	0.00	
Minority	0.00	7.90	0.00****
Nonminority female	0.00	11.97	0.00****
M/WBE Total	0.00	19.87	0.00****
Plastics Product Manufacturing (NAICS 3261)			
African American	0.00	2.13	0.00**
Hispanic	0.00	0.00	
Asian	0.00	5.89	0.00****
Native American	0.00	0.00	
Minority	0.00	8.01	0.00****
Nonminority female	0.00	10.14	0.00****
M/WBE Total	0.00	18.16	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
General Freight Trucking (NAICS 4841)			
African American	100.00	2.80	
Hispanic	0.00	3.21	0.00****
Asian	0.00	0.40	0.00
Native American	0.00	0.40	0.00
Minority	100.00	6.81	
Nonminority female	0.00	12.49	0.00****
M/WBE Total	100.00	19.30	
Automotive Parts, Accessories, and Tire Stores (NAICS 4413)			
African American	3.64	3.69	98.70
Hispanic	0.00	1.23	0.00
Asian	0.00	0.81	0.00
Native American	0.00	0.00	
Minority	3.64	5.73	63.54
Nonminority female	0.00	12.25	0.00****
M/WBE Total	3.64	17.98	20.25****
Clothing Stores (NAICS 4481)			
African American	0.00	10.21	0.00****
Hispanic	0.00	0.66	0.00
Asian	0.00	3.43	0.00****
Native American	0.00	0.34	0.00
Minority	0.00	14.64	0.00****
Nonminority female	1.27	20.64	6.15****
M/WBE Total	1.27	35.28	3.60****
Lawn and Garden Equipment and Supplies Stores (NAICS 4442)			
African American	0.00	3.43	0.00****
Hispanic	0.00	1.17	0.00
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	4.61	0.00****
Nonminority female	0.00	12.51	0.00****
M/WBE Total	0.00	17.12	0.00****
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance (NAICS 8113)			
African American	0.00	6.38	0.00****
Hispanic	0.00	0.00	
Asian	0.00	1.14	0.00****
Native American	0.00	1.14	0.00****
Minority	0.00	8.66	0.00****
Nonminority female	0.00	7.22	0.00****
M/WBE Total	0.00	15.88	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Medical Equipment and Supplies Manufacturing (NAICS 3391)			
African American	0.00	8.87	0.00****
Hispanic	0.00	3.40	0.00****
Asian	0.00	1.04	0.00
Native American	0.00	0.00	
Minority	0.00	13.31	0.00****
Nonminority female	0.00	11.99	0.00****
M/WBE Total	0.00	25.29	0.00****
Drugs and Druggists' Sundries Merchant Wholesalers (NAICS 4242)			
African American	0.00	6.27	0.00****
Hispanic	0.00	5.00	0.00****
Asian	0.00	9.05	0.00****
Native American	0.00	3.73	0.00****
Minority	0.00	24.05	0.00****
Nonminority female	4.87	19.62	24.82****
M/WBE Total	4.87	43.67	11.15****
Building Equipment Contractors (NAICS 2382)			
African American	0.00	8.78	0.00****
Hispanic	0.00	1.41	0.00****
Asian	0.00	0.23	0.00*
Native American	0.00	0.18	0.00*
Minority	0.00	10.61	0.00****
Nonminority female	0.00	8.50	0.00****
M/WBE Total	0.00	19.11	0.00****
Other Motor Vehicle Dealers (NAICS 4412)			
African American	0.00	1.79	0.00****
Hispanic	0.00	1.65	0.00****
Asian	0.00	1.65	0.00****
Native American	0.00	0.00	
Minority	0.00	5.09	0.00****
Nonminority female	0.00	12.84	0.00****
M/WBE Total	0.00	17.93	0.00****
Other Schools and Instruction (NAICS 6116)			
African American	0.00	16.09	0.00****
Hispanic	0.00	0.93	0.00
Asian	0.00	5.23	0.00****
Native American	0.00	1.28	0.00
Minority	0.00	23.53	0.00****
Nonminority female	0.00	21.38	0.00****
M/WBE Total	0.00	44.92	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Commercial and Industrial Machinery and Equipment Rental and Leasing (NAICS 5324)			
African American	0.00	10.00	0.00****
Hispanic	0.00	1.67	0.00****
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	11.67	0.00****
Nonminority female	0.00	10.00	0.00****
M/WBE Total	0.00	21.67	0.00****
Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371)			
African American	0.00	8.45	0.00****
Hispanic	0.00	0.00	
Asian	0.00	1.30	0.00
Native American	0.00	0.00	
Minority	0.00	9.75	0.00****
Nonminority female	0.00	17.69	0.00****
M/WBE Total	0.00	27.44	0.00****
Residential Building Construction (NAICS 2361)			
African American	0.00	7.40	0.00****
Hispanic	0.00	1.77	0.00****
Asian	0.00	0.23	0.00
Native American	0.00	3.31	0.00****
Minority	0.00	12.72	0.00****
Nonminority female	0.00	13.84	0.00****
M/WBE Total	0.00	26.56	0.00****
Footwear Manufacturing (NAICS 3162)			
African American	0.00	8.62	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.72	0.00
Native American	0.00	0.00	
Minority	0.00	10.34	0.00
Nonminority female	0.00	7.76	0.00
M/WBE Total	0.00	18.10	0.00****
Sporting Goods, Hobby, and Musical Instrument Stores (NAICS 4511)			
African American	0.00	2.67	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.65	0.00
Native American	0.00	0.00	
Minority	0.00	3.31	0.00****
Nonminority female	0.00	14.42	0.00****
M/WBE Total	0.00	17.73	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Apparel Accessories and Other Apparel Manufacturing (NAICS 3159)			
African American	0.00	8.62	0.00****
Hispanic	0.00	0.00	
Asian	0.00	1.72	0.00
Native American	0.00	0.00	
Minority	0.00	10.34	0.00****
Nonminority female	0.00	7.76	0.00****
M/WBE Total	0.00	18.10	0.00****
Engine, Turbine, and Power Transmission Equipment Manufacturing (NAICS 3336)			
African American	0.00	3.80	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	3.80	0.00
Nonminority female	0.00	5.06	0.00****
M/WBE Total	0.00	8.86	0.00****
Furniture Stores (NAICS 4421)			
African American	0.00	4.78	0.00
Hispanic	0.00	0.00	
Asian	0.00	9.90	0.00****
Native American	0.00	0.00	
Minority	0.00	14.68	0.00****
Nonminority female	0.00	9.58	0.00****
M/WBE Total	0.00	24.26	0.00****
Grocery and Related Product Merchant Wholesalers (NAICS 4244)			
African American	0.00	4.16	0.00****
Hispanic	0.00	1.94	0.00
Asian	10.00	6.76	
Native American	0.00	2.66	0.00****
Minority	10.00	15.51	64.47
Nonminority female	0.00	15.01	0.00****
M/WBE Total	10.00	30.52	32.76*
Greenhouse, Nursery, and Floriculture Production (NAICS 1114)			
African American	0.00	5.21	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.21	0.00****
Nonminority female	2.03	11.46	17.73***
M/WBE Total	2.03	16.67	12.19****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Converted Paper Product Manufacturing (NAICS 3222)			
African American	0.00	4.00	0.00****
Hispanic	0.00	0.00	
Asian	0.00	4.00	0.00****
Native American	0.00	0.00	
Minority	0.00	8.00	0.00****
Nonminority female	0.00	4.00	0.00****
M/WBE Total	0.00	12.00	0.00****
Other Personal Services (NAICS 8129)			
African American	0.00	21.60	0.00****
Hispanic	0.00	4.51	0.00****
Asian	0.00	4.51	0.00****
Native American	0.00	0.00	
Minority	0.00	30.61	0.00****
Nonminority female	0.00	1.79	0.00****
M/WBE Total	0.00	32.40	0.00****
Printing and Related Support Activities (NAICS 3231)			
African American	7.66	1.65	
Hispanic	0.00	0.00	
Asian	0.00	1.58	0.00****
Native American	0.00	0.76	0.00**
Minority	7.66	3.99	
Nonminority female	9.55	44.56	21.43****
M/WBE Total	17.21	48.55	35.45***
Miscellaneous Nondurable Goods Merchant Wholesalers (NAICS 4249)			
African American	0.00	11.84	0.00****
Hispanic	0.00	2.10	0.00****
Asian	0.00	7.13	0.00****
Native American	0.00	2.83	0.00****
Minority	0.00	23.90	0.00****
Nonminority female	0.00	18.31	0.00****
M/WBE Total	0.00	42.21	0.00****
Audio and Video Equipment Manufacturing (NAICS 3343)			
African American	0.00	5.57	0.00****
Hispanic	0.00	0.00	
Asian	0.00	7.29	0.00****
Native American	0.00	0.00	
Minority	0.00	12.85	0.00****
Nonminority female	0.00	5.57	0.00****
M/WBE Total	0.00	18.42	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Newspaper, Periodical, Book, and Directory Publishers (NAICS 5111)			
African American	14.61	10.12	
Hispanic	0.00	3.38	0.00****
Asian	2.70	0.00	
Native American	0.00	0.29	0.00
Minority	17.30	13.79	
Nonminority female	0.00	23.34	0.00****
M/WBE Total	17.30	37.14	46.60****
Motor Vehicle Manufacturing (NAICS 3361)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	26.35	6.06	
M/WBE Total	26.35	6.06	
Business Support Services (NAICS 5614)			
African American	0.00	19.27	0.00****
Hispanic	0.00	0.17	0.00
Asian	0.00	0.38	0.00
Native American	0.00	0.10	0.00
Minority	0.00	19.92	0.00****
Nonminority female	0.00	20.96	0.00****
M/WBE Total	0.00	40.88	0.00****
Iron and Steel Mills and Ferroalloy Manufacturing (NAICS 3311)			
African American	0.00	8.33	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	8.33	0.00
Nonminority female	0.00	3.79	0.00
M/WBE Total	0.00	12.12	0.00
Specialized Design Services (NAICS 5414)			
African American	0.00	18.56	0.00****
Hispanic	0.00	1.12	0.00
Asian	0.00	4.00	0.00****
Native American	0.00	0.32	0.00
Minority	0.00	23.99	0.00****
Nonminority female	0.00	32.87	0.00****
M/WBE Total	0.00	56.87	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Waste Collection (NAICS 5621)			
African American	0.00	11.37	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	11.37	0.00
Nonminority female	0.00	6.07	0.00
M/WBE Total	0.00	17.44	0.00
Services to Buildings and Dwellings (NAICS 5617)			
African American	0.00	6.07	0.00****
Hispanic	0.00	1.90	0.00****
Asian	0.00	1.81	0.00****
Native American	0.00	1.73	0.00****
Minority	0.00	11.51	0.00****
Nonminority female	0.00	10.65	0.00****
M/WBE Total	0.00	22.16	0.00****
Architectural, Engineering, and Related Services (NAICS 5413)			
African American	0.00	14.00	0.00****
Hispanic	0.00	0.91	0.00****
Asian	0.00	5.12	0.00****
Native American	0.00	0.00	
Minority	0.00	20.03	0.00****
Nonminority female	0.00	20.05	0.00****
M/WBE Total	0.00	40.08	0.00****
Electronic Shopping and Mail-Order Houses (NAICS 4541)			
African American	2.44	14.02	17.40**
Hispanic	0.00	0.72	0.00
Asian	0.00	2.80	0.00
Native American	0.00	0.00	
Minority	2.44	17.54	13.91**
Nonminority female	0.00	22.26	0.00****
M/WBE Total	2.44	39.79	6.13****
Industrial Machinery Manufacturing (NAICS 3332)			
African American	0.00	2.11	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	2.11	0.00
Nonminority female	0.00	10.22	0.00****
M/WBE Total	0.00	12.33	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Remediation and Other Waste Management Services (NAICS 5629)			
African American	0.00	3.19	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	3.19	0.00****
Nonminority female	0.00	13.69	0.00****
M/WBE Total	0.00	16.88	0.00****
Nonresidential Building Construction (NAICS 2362)			
African American	0.00	10.91	0.00****
Hispanic	0.00	1.70	0.00****
Asian	0.00	3.28	0.00****
Native American	0.00	0.57	0.00
Minority	0.00	16.46	0.00****
Nonminority female	0.00	9.32	0.00****
M/WBE Total	0.00	25.78	0.00****
Used Merchandise Stores (NAICS 4533)			
African American	0.00	7.28	0.00****
Hispanic	0.00	1.71	0.00
Asian	0.00	0.00	
Native American	0.00	1.71	0.00
Minority	0.00	10.71	0.00****
Nonminority female	0.00	41.43	0.00****
M/WBE Total	0.00	52.14	0.00****
Paint, Coating, and Adhesive Manufacturing (NAICS 3255)			
African American	0.00	4.42	0.00
Hispanic	0.00	1.77	0.00
Asian	0.00	2.65	0.00
Native American	0.00	0.88	0.00
Minority	0.00	9.72	0.00****
Nonminority female	0.00	8.84	0.00****
M/WBE Total	0.00	18.55	0.00****
Management, Scientific, and Technical Consulting Services (NAICS 5416)			
African American	0.00	12.30	0.00****
Hispanic	0.00	0.69	0.00****
Asian	0.00	5.81	0.00****
Native American	0.00	0.23	0.00
Minority	0.00	19.03	0.00****
Nonminority female	0.00	13.09	0.00****
M/WBE Total	0.00	32.12	0.00****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Other Electrical Equipment and Component Manufacturing (NAICS 3359)			
African American	0.00	3.77	0.00
Hispanic	0.00	0.00	
Asian	0.00	1.33	0.00
Native American	0.00	0.00	
Minority	0.00	5.10	0.00****
Nonminority female	0.00	7.76	0.00****
M/WBE Total	0.00	12.86	0.00****
Other Professional, Scientific, and Technical Services (NAICS 5419)			
African American	0.00	15.46	0.00****
Hispanic	0.00	0.31	0.00***
Asian	0.00	4.33	0.00****
Native American	0.00	0.02	0.00
Minority	0.00	20.12	0.00****
Nonminority female	0.00	21.28	0.00****
M/WBE Total	0.00	41.40	0.00****
Cement and Concrete Product Manufacturing (NAICS 3273)			
African American	0.00	3.17	0.00*
Hispanic	0.00	3.17	0.00*
Asian	0.00	0.00	
Native American	0.00	1.59	0.00
Minority	0.00	7.94	0.00****
Nonminority female	16.01	9.52	
M/WBE Total	16.01	17.46	91.67
Special Food Services (NAICS 7223)			
African American	0.00	25.67	0.00****
Hispanic	0.00	0.06	0.00
Asian	0.00	4.71	0.00****
Native American	0.00	0.00	
Minority	0.00	30.44	0.00****
Nonminority female	0.00	21.33	0.00****
M/WBE Total	0.00	51.77	0.00****
Other Textile Product Mills (NAICS 3149)			
African American	0.00	3.30	0.00
Hispanic	0.00	3.32	0.00
Asian	0.00	7.91	0.00****
Native American	0.00	0.90	0.00
Minority	0.00	15.42	0.00****
Nonminority female	6.76	41.36	16.35****
M/WBE Total	6.76	56.78	11.91****

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Accounting, Tax Preparation, Bookkeeping, and Payroll Services (NAICS 5412)			
African American	0.00	14.57	0.00****
Hispanic	0.00	0.54	0.00
Asian	0.00	4.52	0.00*
Native American	0.00	0.00	
Minority	0.00	19.63	0.00****
Nonminority female	0.00	21.26	0.00****
M/WBE Total	0.00	40.89	0.00****
Other Support Services (NAICS 5619)			
African American	0.00	18.57	0.00****
Hispanic	0.00	0.10	0.00
Asian	0.00	0.12	0.00
Native American	0.00	0.04	0.00
Minority	0.00	18.83	0.00****
Nonminority female	0.00	19.25	0.00****
M/WBE Total	0.00	38.08	0.00****
Motor Vehicle Parts Manufacturing (NAICS 3363)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	18.30	0.00****
M/WBE Total	0.00	18.30	0.00****
Petroleum and Coal Products Manufacturing (NAICS 3241)			
African American	0.00	5.26	0.00****
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	5.26	0.00****
Nonminority female	0.00	0.00	
M/WBE Total	0.00	5.26	0.00****
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing (NAICS 3334)			
African American	0.00	0.95	0.00
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.95	0.00
Nonminority female	0.00	1.27	0.00
M/WBE Total	0.00	2.22	0.00

NAICS Industry Group & M/WBE Type	Utilization (%)	Availability (%)	Disparity Ratio
Pulp, Paper, and Paperboard Mills (NAICS 3221)			
African American	0.00	0.00	
Hispanic	0.00	0.00	
Asian	0.00	0.00	
Native American	0.00	0.00	
Minority	0.00	0.00	
Nonminority female	0.00	0.00	
M/WBE Total	0.00	0.00	

Source and Notes: *See* Table 6.3.

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