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Race, Sex, and Business Enterprise: Evidence from the State of Maryland (Final Report)

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NERA
Economic Consulting

MMC Marsh & McLennan Companies

Project Team

Jon Wainwright, Vice President, NERA

Colette Holt, Esq., Colette Holt & Associates

David Blanchflower, Dartmouth College and NERA

Deborah Norris, Research Analyst, NERA

Kim Stewart, Research Analyst, NERA

Bert Smith & Co. Certified Public Accountants

Schulman, Ronca & Bucuvalas, Inc.

Anchondo Research Management & Strategies

J&D Data Services

Strategic Solutions Center

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NERA Economic Consulting
1006 East 39th St.
Austin, Texas 78751
Tel: +1 512 371 8995
Fax: +1 512 371 8996
www.nera.com

About the Project Team—NERA Economic Consulting

NERA Economic Consulting is an international firm of economists who understand how markets work. We provide economic analysis and advice to corporations, governments, law firms, regulatory agencies, trade associations, and international agencies. Our global team of more than 500 professionals operates in 19 offices across North and South America, Europe, Asia, and Australia.

NERA provides practical economic advice related to highly complex business and legal issues arising from competition, regulation, public policy, strategy, finance, and litigation. Our more than 40 years of experience creating strategies, studies, reports, expert testimony, and policy recommendations reflects our specialization in industrial and financial economics. Because of our commitment to deliver unbiased findings, we are widely recognized for our independence. Our clients come to us expecting integrity; they understand this sometimes calls for their willingness to listen to unexpected or even unwelcome news.

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.

The NERA project team for this Study was led by NERA Vice President Dr. Jon Wainwright. Dr. Wainwright is a nationally recognized expert on business discrimination and affirmative action and has testified in state and federal court on these issues. He is the author of one book, a National Bureau of Economic Research Working Paper, and numerous research studies on the subject. 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.

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Austin, Texas 78751
Tel: +1 512 371 8995
Fax: +1 512 371 8996
www.nera.com

About the Project Team—NERA Research Partners

Colette Holt & Associates is a Chicago-based law practice specializing in public sector affirmative action programs. The firms provides legal and consulting services to governments and businesses relating to procurement and contracting; employment discrimination; regulatory compliance; organizational change; program development, evaluation and implementation; and issues relating to inclusion, diversity and affirmative action. Colette Holt, J.D. is a nationally recognized expert in designing and implementing and legally defensible affirmative action programs and is a frequent author and media commentator in this area. On this Study, Colette Holt served as legal counsel, providing advice and recommendations for the study's design and implementation, conducting the review of Maryland policies and procedures, conducting interviews with business owners and with state personnel, and drafting key study findings, among other duties.

NERA Special Consultant Professor David G. Blanchflower is an internationally recognized labor economist and one of the prominent economists of his generation. He is the Bruce V. Rauner '78 Professor of Economics at Dartmouth College. He was Chairman of the Department of Economics at Dartmouth during 1998–2000 and the Associate Dean of the Faculty for the Social Sciences during 2001–2002. Professor Blanchflower is the author or co-author of six books and dozens of articles. His work is widely cited in the labor economics literature and his publications have appeared in the Quarterly Journal of Economics, The Economic Journal, Industrial and Labor Relations Review, Review of Economics and Statistics, The Journal of Economic Perspectives, The European Economic Review, The Journal of Public Economics, Journal of Japanese and International Economies, Labour Economics and The Journal of Labor Economics, among others. Dr. Blanchflower has worked as an expert economist in litigation on several cases concerning contracting affirmative action. On this Study, Dr. Blanchflower co-authored the research concerning credit discrimination, business formation disparities, and business owner earnings disparities.

Anchondo Research, Management & Strategies (ARMS) provides research, management and strategic planning to clients in Texas, Colorado, Massachusetts, Maryland, and other markets throughout the country. ARMS President J. Jorge Anchondo has over 25 years of public policy consulting experience, and has been working on public contracting and procurement-related issues for more than 15 years. He has conducted disparity studies and related activities and advised governments that are conducting disparity studies or implementing revised MBE programs. On this Study, ARMS provided logistical and technical assistance for the business owner interview sessions and the state personnel MBE program feedback sessions conducted throughout the State.

NERA Economic Consulting
1006 East 39th St.
Austin, Texas 78751
Tel: +1 512 371 8995
Fax: +1 512 371 8996
www.nera.com

About the Project Team—NERA Research Partners, Cont'd

Bert Smith & Co. (BSC) is a full-service Maryland-licensed certified public accounting and management consulting firm, in business since 1948, with offices in Baltimore and in Washington, DC. BSC is one of the largest accounting firms in the Washington, D.C. metropolitan area. Their client base includes federal government agencies, state and local governments, non-profit organizations, colleges and universities and commercial businesses. On the Study, Bert Smith was responsible for collecting first-tier subcontracting records for a sample of the State's recent prime contracts. The BSC team was led by Partner Dorothy Page Proctor, CPA.

Strategic Solutions Center, LLC (SSC) is a Maryland-based management consulting firm providing services to both private and public sector clients in 12 states. SSC President Major Riddick has extensive familiarity with Maryland's finance, procurement, and MBE programs, both in their administration and legislative history, having served as Chief of Staff in the Office of the Governor from 1995-2001, and as Budget Director and Chief Administrative Officer of Prince George's County from 1986-1995. On this Study, SSC provided logistical and technical assistance for the business owner interview sessions conducted throughout the State.

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

J&D Data Services (JDDS) 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. JDDS 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. JDDS has conducted numerous surveys of MBEs and non-MBEs for NERA over the past six years. On this assignment JDDS provided printing, postage, mail-out and mail-back service for two large scale mail surveys and one large scale mailing of business owner interview invitations.

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Fax: +1 512 371 8996
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Contents

List of Tables ix

I. Introduction and Executive Summary 1
- A. Introduction 1
- B. Statistical Evidence 4
- C. Anecdotal Evidence 13
- D. Recommendations 17

II. Legal Standards for Government Affirmative Action Contracting Programs 19
- A. General Overview of Strict Scrutiny 19
- B. Maryland's Compelling Interest in Remedying Identified Discrimination in Its Contracting Marketplaces 29
- C. Narrowly Tailoring a MBE Program 32

III. Defining the Relevant Markets 39
- A. Overview of State Contracting and Procurement Laws and Policies 39
- B. Preparing the Master Construction Contract/Subcontract Database 48
- C. Product Market Definition 52
- D. Geographic Market Definition 53
- E. Tables 54

IV. MBE Availability in the State of Maryland's Marketplace 69
- A. Identifying Businesses in the Relevant Markets 69
- B. Estimates of MBE Availability by Detailed Race, Sex, and Industry 74
- C. Tables 76

V. Statistical Disparities in Minority and Female Business Formation and Business Owner Earnings 107
- A. Review of Relevant Literature 107
- B. Race and Sex Disparities in Earnings 110
- C. Race and Sex Disparities in Business Formation 116
- D. Potential Business Formation Rates — Implications for Current MBE Availability 120
- E. Evidence from The Survey of Minority-Owned and Women-Owned Business Enterprises 121
- F. Tables 124

VI. Statistical Disparities in Capital Markets 147
- A. Theoretical Framework and Review of the Literature 148
- B. Empirical Framework and Description of the Data 151
- C. Qualitative Evidence 153
- D. Differences in Loan Denial Rates by Race/Ethnicity 155
- E. Differences in Interest Rates Charged on Approved Loans 160
- F. Loan Approval Rates and Access to Credit 162
- G. Analysis of Credit Market Discrimination in the U.S. in 1998 164

Contents

H. Further Credit Market Analysis, 1998 166
I. Maryland Area Credit Survey, 2005 169
J. Caveats 172
K. Conclusions 173
L. Tables 174

VII. MBE Utilization and Disparity in Maryland's Contracting and Procurement Markets, 2000–2004 201
A. Introduction 201
B. MBE Utilization 202
C. Disparity Analysis 203
D. Tables 205

VIII. Anecdotal Evidence of Disparities in Maryland's Marketplace 217
A. Business Experiences Surveys 218
B. Business Owner Interviews 226
C. Tables 233

IX. MBE Program Analysis and Feedback Interviews 253
A. Race-Neutral and Gender- Neutral Initiatives 253
B. MBE Program Overview 265
C. Maryland's MBE Program Feedback Interviews 269

X. Recommendations for Revised Contracting Policies and Procedures 289
A. Implement Race- and Gender-neutral initiatives 289
B. Implement Race- and Gender-Conscious Remedies 292

XI. References 299

List of Tables

Table A. Overall Availability—All Procurement Categories Combined 6

Table B. MBE Utilization in State of Maryland Contracting and Procurement, 2000-2005 11

Table C. Overall Disparity Results—FY2000-FY2004..... 12

Table 3.1. Maryland State Agencies Included in the Scope of the Study..... 54

Table 3.2. Summary of Master Contract/Subcontract Database: Prime Contracts and Subcontracts by Procurement Category..... 55

Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts by Year of Award..... 56

Table 3.4. Summary of Master Contract/Subcontract Database: Prime Contracts by Agency 57

Table 3.5. Distribution of Contract and Subcontract Dollars by Major Industry Group: Construction..... 58

Table 3.6. Distribution of Contract and Subcontract Dollars by Major Industry Group: AE-CRS 59

Table 3.7. Distribution of Contract and Subcontract Dollars by Major Industry Group: CSE..... 60

Table 3.8. Distribution of Contract and Subcontract Dollars by Major Industry Group: IT 61

Table 3.9. Distribution of Contract and Subcontract Dollars by Major Industry Group: Maintenance..... 62

Table 3.10. Distribution of Contract and Subcontract Dollars by Major Industry Group: Services 63

Table 3.11. Distribution of Contract and Subcontract Dollars by Detailed Industry: All Procurement Categories Combined 64

Table 3.12. Distribution of Maryland Contract Dollars by Contract Category 67

Table 4.1. Construction—Number of Businesses and Industry Weight, by SIC Code 76

Table 4.2. AE-CRS—Number of Businesses and Industry Weight, by SIC Code..... 78

Table 4.3. CSE—Number of Businesses and Industry Weight, by SIC Code..... 79

Table 4.4. IT—Number of Businesses and Industry Weight, by SIC Code 81

Table 4.5. Maintenance—Number of Businesses and Industry Weight, by SIC Code 82

List of Tables

Table 4.6. Services—Number of Businesses and Industry Weight, by SIC Code 83

Table 4.7. Construction—Listed MBEs and Industry Weight, by SIC Code 84

Table 4.8. AE-CRS—Listed MBEs and Industry Weight, by SIC Code 86

Table 4.9. CSE—Listed MBEs and Industry Weight, by SIC Code 87

Table 4.10. IT—Listed MBEs and Industry Weight, by SIC Code 89

Table 4.11. Maintenance—Listed MBEs and Industry Weight, by SIC Code 90

Table 4.12. Services—Listed MBEs and Industry Weight, by SIC Code 91

Table 4.13. Listed MBE Survey—Amount of Misclassification, by SIC Code Grouping..... 92

Table 4.14. Listed MBE Survey—Amount of Misclassification, by Putative MBE Type..... 93

Table 4.15. Unclassified Businesses Survey —By SIC Code Grouping 94

Table 4.16. Unclassified Businesses Survey—By Race and Sex 95

Table 4.17. Detailed MBE Availability—Construction 96

Table 4.18. Detailed MBE Availability—AE-CRS 99

Table 4.19. Detailed MBE Availability—CSE 100

Table 4.20. Detailed MBE Availability—IT 102

Table 4.21. Detailed MBE Availability—Maintenance 103

Table 4.22. Detailed MBE Availability—Services 105

Table 4.23. Overall Availability—All Procurement Categories Combined 106

Table 5.1. Annual Wage Earnings Regressions, All Industries, 2000 124

Table 5.2. Annual Wage Earnings Regressions, All Industries, 1979-1991 125

Table 5.3. Annual Wage Earnings Regressions, All Industries, 1992-2002 126

Table 5.4. Annual Wage Earnings Regressions, Construction and Related Industries, 2000 127

Table 5.5. Annual Wage Earnings Regressions, Construction and Related Industries, 1979-1991 128

Table 5.6. Annual Wage Earnings Regressions, Construction and Related Industries, 1992-2002 129

Table 5.7. Annual Business Owner Earnings Regressions, All Industries, 2000 130

Table 5.8. Annual Business Owner Earnings Regressions, All Industries, 1979-1991 131

Table 5.9. Annual Business Owner Earnings Regressions, All Industries, 1992-2002 132

Table 5.10. Business Owner Earnings Regressions, Construction and Related Industries, 2000 133

Table 5.11. Business Owner Earnings Regressions, Construction and Related Industries, 1979-1991 134

Table 5.12. Business Owner Earnings Regressions, Construction and Related Industries, 1992-2002 135

Table 5.13. Self-Employment Rates in 2000 for Selected Race and Sex Groups: All Industries; United States and the State of Maryland 136

Table 5.14. Self-Employment Rates in 2000 for Selected Race and Sex Groups: Construction and Related Industries; United States and the State of Maryland 136

Table 5.15. Business Formation Regressions, All Industries, 2000 137

Table 5.16. Business Formation Regressions, All Industries, 1979-1991 138

Table 5.17. Business Formation Regressions, All Industries, 1992-2002 139

Table 5.18. Business Formation Regressions, Construction and Related Industries, 2000 140

Table 5.19. Business Formation Regressions, Construction and Related Industries, 1979-1991 141

Table 5.20. Business Formation Regressions, Construction and Related Industries, 1992-2002 142

Table 5.21. Actual and Potential Business Formation Rates—Maryland Construction Sector.. 143

Table 5.22. Disparity Ratios from Preliminary 2002 Survey of Business Owners—United States—All Industries 144

Table 5.23. Disparity Ratios from Preliminary 2002 Survey of Business Owners—State of Maryland—All Industries 145

Table 6.1. Selected Sample Means of Loan Applicants from 1993 NSSBF Data 174

Table 6.2. Selected Sample Means of Loan Applicants – South Atlantic 175

Table 6.3. Problems Firms Experienced During Preceding 12 Months - USA 176

List of Tables

Table 6.4. Problems Firms Experienced During Preceding 12 Months – South Atlantic 176

Table 6.5. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months - USA 177

Table 6.6. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months – South Atlantic 177

Table 6.7. Types of Problems Facing Your Business, by Race and Gender (%) 178

Table 6.8. Determinants of Loan Denial Rates - USA 179

Table 6.9. Determinants of Loan Denial Rates – South Atlantic Region 180

Table 6.10. Alternative Models of Loan Denials 181

Table 6.11. Models of Credit Card Use - USA 182

Table 6.12. Models of Credit Card Use – South Atlantic 182

Table 6.13. Models of Interest Rate Charged 183

Table 6.14. Racial Differences in Failing to Apply for Loans Fearing Denial 184

Table 6.15. Models of Failure to Obtain Credit Among Firms that Desired Additional Credit. 185

Table 6.16. What is the Most Important Problem Facing Your Business Today? 186

Table 6.17. Loan Denial Probabilities - USA 187

Table 6.18. Loan Denial Probabilities – South Atlantic 188

Table 6.19. More Loan Denial Probabilities 189

Table 6.20. Models of Interest Rate Charged 190

Table 6.21. Racial Differences in Failing to Apply for Loans Fearing Denial 191

Table 6.22. Models of Credit Card Use 192

Table 6.23. Loan / Credit Denial Statistics by Race/Sex – Maryland Area Geographic Market 193

Table 6.24. Selected Sample Means of Loan Applicants – Maryland Area 194

Table 6.25. Percentage of Firms Reporting Most Important Issues Affecting Them Now 195

Table 6.26. Determinants of Loan Denial Rates – Maryland Area 196

Table 6.27. Determinants of Loan Denial Rates – Seven Jurisdictions 197

Table 6.28. Models of Credit Card Use – Maryland Area Geographic Market..... 198

Table 6.29. Determinants of Interest rates – Seven Jurisdictions 199

Table 6.30. Models of Loan Denials in the Maryland Market Area– Checking for Non-response Bias 200

Table 7.1. MBE Utilization in State of Maryland Contracting and Procurement, 2000-2005 ... 205

Table 7.2. Overall Disparity Results—FY2000-FY2004 206

Table 7.3. Disparity Results for Maryland Department of Transportation—FY2000-FY2004 . 208

Table 7.4. Disparity Results for University System of Maryland—FY2000-FY2004 210

Table 7.5. Disparity Results for Morgan State University—FY2000-FY2004 212

Table 7.6. Disparity Results for Interagency Committee for Public School Construction—FY2000-FY2004 214

Table 7.7. Disparity Results for Balance of State Agencies Studied—FY2000-FY2004 215

Table 8.1. Race, Sex and Procurement Category of Mail Survey Respondents 233

Table 8.2. Survey Respondents Indicating They Had Worked or Attempted to Work for Public Sector Agencies in the Last Five Years 234

Table 8.3. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Sex While Participating in Business Dealings 236

Table 8.4. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Sex While Participating in Business Dealings (Rankings) 237

Table 8.5. Prevalence of Disparate Treatment Facing Maryland MBEs 238

Table 8.6. Prevalence of Disparate Treatment Facing Maryland MBEs, by Type of Business Dealing 239

Table 8.7. Firm Age, by MBE Status and Industry 240

Table 8.8. Number of Employees on Payroll, by MBE Status and Industry 242

Table 8.9. Gross Sales or Revenues in 2004, by MBE Status and Industry 244

Table 8.10. Owner's Education, by MBE Status and Industry 246

Table 8.11. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts 247

List of Tables

Table 8.12. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts 248

Table 8.13. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Construction and A&E 249

Table 8.14. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Goods and Services..... 250

Table 8.15. Percent of MBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with M/W/DBE Goals Seldom or Never Hire Them on Projects without Such Goals 251

Table 8.16. Percent of MBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with M/W/DBE Goals Seldom or Never Solicit Them on Projects without Such Goals 252

I. Introduction and Executive Summary

A. Introduction

Like many local governments, the State of Maryland has a long record of commitment to including minority-owned and women-owned business enterprises ("MBEs") in its contracting and procurement activities. As will be documented in this Study, from 2000-2004 the State has continued to be a significant source of demand for the products and services produced by MBE firms—demand that, in general, is found to be lacking in the private sector of the Maryland economy.

The courts have made it clear, however, that in order to implement a race- and gender-based program that is effective, enforceable, and legally defensible, Maryland must meet the judicial test of constitutional "strict scrutiny" to determine the legality of such initiatives. Strict scrutiny requires current "strong evidence" of the persistence of discrimination, and any remedies adopted must be "narrowly tailored" to that discrimination.

Based in part upon a prior MBE Study by NERA Economic Consulting, the State enacted a revised MBE statute in 2001 that increased the MBE goal from 14 percent to 25 percent and set a sunset date of July 1, 2006.[1] In 2001, in an effort to insure continued narrow tailoring of the Program, the State imposed a personal net worth limit on MBE Program eligibility of $750,000, following the example set by the U.S. Department of Transportation's Disadvantaged Business Enterprise Program.[2] In 2004, this limit was raised to $1,500,000.

In 2002, a Performance Audit of the MBE Program was completed by the Office of Legistlative Audits. The report identified several weaknesses in the MBE Program:

- MBE utilization data were often not supported or inconsistent with reporting guidelines;
- Actual payments to MBEs were not always used as the measure of Program success; and
- State agencies did not adequately monitor MBE participation on contracts.

In response, Governor Robert L. Ehrlich, Jr., elevated the Director of the Governor's Office of Minority Affairs (GOMA), to Special Secretary and also issued an Executive Order creating the Governor's Commission on MBE Reform. The Commission was chaired by Lieutenant Governor Michael S. Steele and staffed by GOMA. It made several important recommendations that have been incorporated into the operation of the MBE Program and resulted in the Small Business Reserve Program.

To further ensure continuing compliance with constitutional mandates and MBE best practices, in December 2004 the State again commissioned NERA to examine the past and current status of MBEs in Maryland's geographic and product markets for contracting and procurement. The

[1] House Bill 306 (2001), codified at State Finance and Procurement Artic, Section 14-301 *et seq*., Annotated Code of Maryland.

[2] House Bill 483 (2004); *see* 49 CFR §26.67(a)(2)(i).

results of NERA's Study, summarized below, provide the evidentiary record necessary to implement renewed MBE policies that comply with the requirements of the courts and to assess the extent to which previous MBE policies have assisted MBEs in participating in Maryland's contracting and procurement activity.

The Study found both statistical and anecdotal evidence of business discrimination against MBEs in the private sector of the Maryland marketplace. As a check on our statistical findings, we surveyed the contracting experiences and credit access experiences of MBEs and non-MBEs in the Maryland marketplace and conducted a series of in-depth personal interviews with Maryland business enterprises, both MBE and non-MBE. Statistical analyses of Maryland's public sector contracting behavior are confirmed in Chapters III, IV and VII.

The Study is presented in 10 chapters. Chapter I contains this Executive Summary and overview of the Study. Chapter II provides a detailed overview of the current legal standards regarding public sector affirmative action programs. The remaining Chapters address the following questions:

Chapter III: How are goods and services contracted for and/or procured under Maryland statutes and regulations? What is the relevant geographic market and how is it defined? What are the relevant product markets and how are they defined?

Chapter IV: What percentage of all businesses in Maryland's relevant markets are owned by minorities and/or women? What percentage are "small" versus "large"? How are these availability estimates constructed?

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

Chapter VI: Do minorities and/or women face discrimination in the market for commercial capital and credit compared to similarly-situated White males? How do findings for Maryland differ from findings nationally?

Chapter VII: During the last five years, to what extent have MBEs been utilized by Maryland, and how does this utilization compare to the availability of MBEs in the relevant marketplace?

Chapter VIII: How many MBEs report disparate treatment in the last five years? What types of discriminatory experiences are most frequently encountered by MBEs? How do the experiences of MBEs differ from those of non-MBEs regarding the difficulty of obtaining contracts?

Chapter IX: What race-neutral and gender-neutral activities are currently being undertaken by the State? How does the State's MBE program operate? What were some of the most frequently encountered comments from State personnel and from MBEs and non-MBEs concerning MBE program operations?

Chapter X: What are NERA's recommendations for the State based on the findings of the Study in Chapters II-IX?

In assessing these questions, we present in Chapters IV through VIII a series of quantitative and qualitative analyses that compare minority and/or female outcomes to non-minority male outcomes in all of these business-related areas. The remainder of this Executive Summary provides a brief overview of each Chapter and its key findings and conclusions, where applicable.

1. Legal Standards for Government Affirmative Action Contracting Programs

Chapter II provides a detailed and up-to-date overview of current constitutional standards and case law on strict scrutiny of race-conscious government efforts in public contracting. The elements of Maryland's compelling interest in remedying identified discrimination and the narrow tailoring of its programs to address that important government concern are delineated, and particular judicial decisions, orders, statutes, regulations, etc. are discussed as relevant, with emphasis on critical issues and evidentiary concerns. Examples include the proper tests for examining discrimination and the role of disparities, the applicability of private sector evidence, and Maryland's responsibility for narrowly tailoring of its MBE Program.

2. Defining the Relevant Markets

Chapter III describes Maryland's current procurement environment for the six major procurement categories under consideration in the Study—Construction; Architecture, Engineering and Construction-Related Services; Commodities, Supplies, and Equipment; Information Technology; Maintenance; and Services.

This Chapter next describes how the relevant geographic and product markets were defined for this Study. A large and statistically representative sample of records of public contracts and associated subcontracts gathered from the State and its prime contractors, consultants, and vendors was analyzed to determine the geographic radius around the State that accounts for at least 75 percent of aggregate contract and subcontract spending over the last five years. These records were also analyzed to determine approximately 70 detailed industry categories collectively account for at least 75 percent of contract and subcontract spending over the last five years in the relevant procurement categories. 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 State's relevant geographic market was determined to consist of the State of Maryland, the State of Delaware, and the Washington, DC Metropolitan Statistical Area (including the District of Columbia, the State of Maryland, and parts of Virginia and West Virginia).

B. Statistical Evidence

The *Croson* decision and most of its progeny have held that statistical evidence of disparities in business enterprise activity is a requirement for any state or local entity that desires to establish or maintain race-conscious, ethnicity-conscious, or gender-conscious MBE requirements. Chapter IV estimates current availability levels in Maryland for MBEs in various industry groups. Chapters V and VI document in considerable detail the extent of disparities facing MBEs in the private sector, where contracting and procurement activities are rarely subject to MBE requirements. Chapter VII examines whether there is statistical evidence of disparities in the contracting and subcontracting activities of Maryland itself.

1. MBE Availability in the State of Maryland's Marketplace

Chapter IV estimates the percentage of firms in Maryland's relevant marketplace that are owned by minorities and/or women. For each industry category, MBE availability is defined as the number of MBEs divided by the total number of businesses in Maryland's contracting market area. Determining the total number of businesses in the relevant markets is more straightforward than determining the number of minority-owned or women-owned businesses in those markets. The latter task has three main parts: (1) identify all listed MBEs in the relevant market; (2) verify the ownership status of listed MBEs; and (3) estimate the number of unlisted MBEs in the relevant market.

We used Dun & Bradstreet's *MarketPlace* database to determine the total number of businesses operating in the relevant geographic and product markets. *MarketPlace* is the most comprehensive available database of U. S. businesses. *MarketPlace* contains over 13 million records, is updated continuously, and revised each quarter. For this Study, we used data for the third quarter of 2005. We used the *MarketPlace* database to identify the total number of businesses in each four-digit Standard Industrial Classification (SIC) code to which we had anticipated assigning a product market weight. Industry weights reflect Maryland's prime contracts and associated subcontracts awarded and substantially completed during FY2000-FY2004.

While extensive, *MarketPlace* does not sufficiently identify all businesses owned by minorities or women. Although many such businesses *are* correctly identified in *MarketPlace*, experience has demonstrated that many more are missed. For this reason, several additional steps were required to identify the appropriate percentage of MBEs in the relevant market. First, NERA completed an intensive regional search for information on minority-owned and woman-owned businesses in Maryland and surrounding areas. Beyond the information already in *MarketPlace*, NERA collected listings of MBEs from Maryland itself as well as from numerous other public and private entities in and around Maryland. The MBE businesses identified in this manner are referred to as "listed" MBEs.

If the listed MBEs we identified are *all* in fact MBEs and are the *only* MBEs among all the businesses identified, then an estimate of "listed" MBE availability is simply the number of listed MBEs divided by the total number of businesses in the relevant market. However, neither of these two conditions holds true in practice and therefore this is not an adequate method for measuring MBE availability for two reasons. First, it is likely that some proportion of the MBEs

listed in the tables are not actually minority-owned or woman-owned. Second, it is likely that there are additional "unlisted" MBEs among all the businesses included in our baseline business population. Such businesses do not appear in any of the directories we gathered, and are therefore not included as "listed" MBEs.

To account for this, we conducted a supplementary telephone survey on a stratified random sample of firms in our baseline business population that asked them directly about the race and sex of the firm's primary owner(s). We used the results of this survey to statistically adjust our estimates of MBE availability for misclassification by race and sex. The resulting estimates of MBE availability are presented at the end of Chapter IV and were used in Chapter VII for disparity testing compared to Maryland's own contracting and subcontracting activity over the last five years. These availability figures can also be averaged together to provide guidance on overall goal setting.

Table A below provides a top-level summary of the MBE availability estimates derived in this Study.

Table A. Overall Availability—All Procurement Categories Combined

Detailed Industry	Black	Hispanic	Asian	Native American	White Female	MBE	Non-MBE
CONSTRUCTION	6.09	2.95	2.21	0.49	12.26	24.00	76.00
ARCHITECTURE, ENGINEERING & CONSTRUCTION-RELATED SERVICES	5.80	2.79	7.22	0.45	12.20	28.46	71.54
COMMODITIES, SUPPLIES, & EQUIPMENT	6.91	3.43	7.49	0.81	16.60	35.24	64.76
INFORMATION TECHNOLOGY	12.18	4.23	9.82	0.95	16.24	43.42	56.58
MAINTENANCE	8.11	3.34	3.24	0.56	14.81	30.06	69.94
SERVICES	6.15	3.39	6.42	0.80	17.66	34.42	65.58
TOTAL	6.49	3.17	4.76	0.63	14.56	29.61	70.39

Source: See Table 4.23.

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

Chapter V demonstrates that current MBE availability levels in Maryland, as measured in Chapter IV, are substantially and statistically significantly lower than those that would be expected to be observed if commercial markets operated in a race- and sex-neutral manner.[3] This suggests that minorities and women are substantially and significantly less likely to own their

[3] Typically, for a given disparity statistic to be considered "statistically significant" there must be a substantial probability that the value of that statistic is unlikely to be due to random chance alone. See also *fn*. 150.

own businesses as the result of market place 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 White males, whether they work as employees or entrepreneurs.

Data from the Current Population Survey (CPS) and the Five Percent Public Use Microdata Samples (PUMS) from the 2000 decennial census are used to examine the incidence of minority and female business ownership (self-employment) and the earnings of minority and female business owners across the U.S. and within the Maryland region. The 2000 PUMS contains observations representing five percent of all U.S. housing units and the persons in them (approximately 14 million records), and provides the full range of population and housing information collected in the most recent census. Business ownership status is identified through the "class of worker" variable, which allows us to construct a detailed cross-sectional sample of individual business owners and their associated earnings. The CPS is the source of official government statistics on employment and unemployment and has been conducted monthly for over 40 years by the U.S. Census Bureau and the U.S. Department of Labor. Currently, about 56,500 households are interviewed monthly. Households are scientifically selected on the basis of residence to represent the nation as a whole, individual states, and large metropolitan areas.

Using the PUMS and the CPS we found:

That annual average wages for Blacks (both sexes) in 2000, both economy-wide and nationwide, were almost 30 percent lower than for White males who were otherwise similar in terms of geographic location, industry, age, and education. These differences are large and statistically significant. Large, negative, and statistically significant wage disparities were also observed for Hispanics, Asians, Native Americans, and White 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 Hispanics to a high of -36 percent for White women. Similar results were observed when the analysis was restricted to construction and A&E. That is, large, negative, and statistically significant wage disparities were observed for all minority groups and for White women. All wage and salary disparity analyses were then repeated using interaction terms designed to test whether observed disparities in Maryland were different enough from elsewhere in the country or the economy to alter any of the basic conclusions regarding wage and salary disparity. They were not.

This analysis demonstrates that minorities and women earn substantially and significantly less from their labors than their White 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 MBEs 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 MBE availability levels than would be observed in a race- and sex-neutral marketplace.

Next, we analyzed race and sex disparities in business owner earnings. We observed large, negative, and statistically significant business owner earnings disparities for Blacks, Hispanics, Asians, Native Americans, and White women consistent with the presence of discrimination in these markets. Large, negative, and statistically significant business owner earnings disparities were observed in the PUMS data for construction and A&E sector, as well for all groups but Asians. The CPS construction and A&E data showed large, negative and statistically significant business owner earnings disparities for Blacks, Hispanics, and White females. Coefficients for Asians and Native Americans in the CPS data were typically large and negative but not always statistically significant. As with the wage and salary disparity analysis, we enhanced our basic statistical model to test whether minority and female business owners in the Maryland region 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 White male entrepreneurs. These disparities are a symptom of discrimination in commercial markets that directly and adversely affects MBEs. Other things equal, if minorities and women cannot earn remuneration from their entrepreneurial efforts comparable to that of White males, growth rates will slow, business failure rates will increase, and as demonstrated in this Chapter, business formation rates will decrease. Combined, these phenomena result in lower MBE availability levels than would otherwise be observed in a race- and sex-neutral marketplace.

Next, we analyzed race and sex disparities in business formation. As with earnings, in almost every case we observed large, negative, and statistically significant disparities consistent with the presence of discrimination in these markets. For the economy as a whole, business formation rates for Blacks, Hispanics, and Native Americans were 9-34 percent lower than the corresponding White male business formation rate. For Asians, estimates ranged from 8 percent higher to 12 percent lower. For White women, business formation rates were estimated to be 9-12 percent lower. For the construction and A&E sector, business formation rates for Blacks, Hispanics, and Native Americans were 27-62 percent lower than the corresponding White male business formation rate. For Asians, estimates ranged from 12 percent higher to 42 percent lower. For White women, business formation rates were estimated to be 27-56 percent lower.

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), formerly known as the *Surveys of Minority- and Women-Owned Business Enterprises* (SMWOBE). The SBO collects and disseminates data on the number, sales, employment, and payrolls of businesses owned by women and members of racial and ethnic minority groups, and has been conducted every five years since 1972. Using the SBO data, we calculated the percentage of firms in Maryland in 2002 that were minority-owned or female-owned and compared this to their corresponding share of sales and receipts in that year. We divided the latter by the former and multiplied the product by 100 to create a disparity ratio.

Disparity ratios of 80 percent or less indicate disparate impact consistent with business discrimination against minority-owned and female-owned firms. In Maryland, disparity ratios fall beneath the 80 percent threshold in every case examined. The most severe disparities are observed among Black-owned, Native American-owned, and female-owned firms. The 2002

SBO results also reveal that minority-owned and female-owned firms use significantly more employees per dollar of sales and have significantly higher payrolls per dollar of sales than do non-minority and male-owned firms. One explanation for this observation is that these firms respond to marketplace discrimination by, among other things, employing additional inputs in the production process in the form of more labor (per unit of sales) and higher labor compensation (per unit of sales). This economically rational response to discrimination ironically reinforces minorities' and women's competitive disadvantage in the public and private marketplaces where lowest cost is often a determining or determinative factor in the award of contracting and procurement opportunities.

3. Statistical Disparities in Capital Markets

In Chapter VI, we analyze data from the National Survey of Small Business Finances (NSSBF) conducted by the Federal Reserve Board and the U.S. Small Business Administration, along with data from a survey we conducted in the Maryland region. The survey examined whether discrimination exists in the small business credit market. Discrimination in the credit market against minority-owned small businesses can have an important effect on the likelihood that such firms will succeed. Moreover, discrimination in the credit market might even prevent businesses from opening in the first place. This analysis has been held by the courts to be probative of an entity's compelling interest in remedying discrimination. We provide qualitative and quantitative evidence supporting the view that minority-owned firms, particularly Black-owned firms, suffer discrimination in this market.

The results are as follows:

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

- When minority-owned firms did apply for a loan, their requests were substantially more likely to be denied than other groups, even after accounting for differences in factors like size and credit history.

- When minority-owned firms did receive a loan, they paid higher interest rates than comparable White-owned firms.

- Far more minority-owned firms report that credit market conditions are a serious concern than is the case for White-owned firms.

- A greater share of minority-owned firms believe that the availability of credit is the most important issue likely to confront the firm in the next 12 months.

- Judging from the analysis done using data from the NSSBF, there is no reason to believe that evidence of discrimination in the market for credit is different in Maryland than in the nation as a whole.

- The evidence from our analysis of Maryland's geographic market area, taken from our Maryland Credit Survey, is entirely consistent with the results from the NSSBF.

We conclude that there is evidence of discrimination in Maryland in the small business credit market, particularly against Black-owned firms. We find little or no evidence, however, that White Females are discriminated against in this market.

4. MBE Public Sector Utilization versus Availability in Maryland's Contracting and Procurement Markets, 2000–2004

Chapter VII presents the results of an analysis of the State of Maryland's contract and procurement spending, including associated first-tier subcontractors, subconsultants, and suppliers, awarded and substantially completed between Fiscal Year (FY) 2000 and Fiscal Year 2004. The following State agencies were included in our review:

- Department of Transportation (6 modal agencies plus the Secretary's Office)
- University System of Maryland (Univ. of MD at College Park plus 10 other campuses)
- Department of Budget and Management
- Department of General Services
- Department of Health and Mental Hygiene
- Department of Human Resources
- Department of Public Safety and Correctional Services
- Department of Juvenile Services
- Interagency Committee on Public School Construction
- Morgan State University
- Maryland State Lottery
- Maryland Stadium Authority

Prime contractors in the data were coded by their Standard Industry Classification (SIC) and zip code to determine the scope of the State's geographic and product contracting markets. Prime contractors were also coded by the race and sex of business ownership.

A stratified random sample of prime contracts was drawn from each of the above agencies. NERA engaged Bert Smith & Company Certified Public Accountants, to contact the prime contractors in the sample on behalf of the State and to collect information regarding the first-tier subcontractors, subconsultants, and suppliers, both MBE and non-MBE, used for the contracts in the sample. Subcontractor, subconsultant, and supplier data were assigned SIC codes and zip codes, and classified by race, ethnicity, and sex, in a manner analogous to that used for prime contracts.

The resulting database was used to calculate MBE utilization on State contracts and subcontracts over a five-year period compared to the availability statistics produced in Chapter IV. Table B provides a top-level summary of utilization findings for the Study.

Table B. MBE Utilization in State of Maryland Contracting and Procurement, 2000-2005

MBE Type	Procurement Category						
	Constr. (%)	AE-CRS (%)	CSE (%)	IT (%)	Maint. (%)	Services (%)	Overall (%)
Black	3.57	2.32	1.50	0.34	12.53	3.82	3.48
Hispanic	2.28	0.50	10.13	0.01	2.18	0.04	2.48
Asian	1.93	15.78	0.39	3.56	0.76	0.22	2.14
Native American	0.15	0.87	0.32	3.95	0.28	0.01	0.33
Minority total	7.94	19.47	12.34	7.86	15.76	4.09	8.44
White Females	7.87	5.05	3.12	1.87	18.62	4.44	6.36
MBE Total	15.81	24.52	15.46	9.74	34.38	8.53	14.79
Non-MBE Total	84.19	75.48	84.54	90.26	65.62	91.47	85.21
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total ($)	$4,411,550,975	$499,798,243	$1,008,519,276	$323,249,710	$272,100,761	$2,055,644,094	$8,570,863,060

Source: See Table 7.1

Next, we compared the State's and its prime contractors' use of MBEs to our measure of their availability levels in the relevant marketplaces. If MBE utilization is statistically significantly lower than measured availability in a given category we report this result as a disparity. Table C provides a top-level summary of our disparity findings for the Study. Overall and in general, we find strong evidence of disparity in the State of Maryland's own contracting and procurement activity, despite the presence of the State's MBE Program.

Table C. Overall Disparity Results—FY2000-FY2004

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
All Procurement				
Black:	3.48	6.49	53.6	***
Hispanic	2.48	3.17	78.2	***
Asian	2.14	4.76	45.1	***
Native American	0.33	0.63	52.7	***
Minority total	8.44	15.05	56.0	***
White female	6.36	14.56	43.7	***
MBE total	14.79	29.61	50.0	***
Construction				
Black:	3.57	6.09	58.6	***
Hispanic	2.28	2.95	77.4	***
Asian	1.93	2.21	87.5	***
Native American	0.15	0.49	30.8	***
Minority total	7.94	11.75	67.6	***
White female	7.87	12.26	64.2	***
MBE total	15.81	24.00	65.9	***
AE-CRS				
Black:	2.32	5.80	40.0	***
Hispanic	0.50	2.79	17.9	***
Asian	15.78	7.22	218.5	N/A
Native American	0.87	0.45	194.7	N/A
Minority total	19.47	16.26	119.7	N/A
White female	5.05	12.20	41.4	***
MBE total	24.52	28.46	86.2	***
CSE				
Black:	1.50	6.91	21.6	***
Hispanic	10.13	3.43	295.3	N/A
Asian	0.39	7.49	5.3	***
Native American	0.32	0.81	39.2	***
Minority total	12.34	18.64	66.2	***
White female	3.12	16.60	18.8	***
MBE total	15.46	35.24	43.9	***
IT				
Black:	0.34	12.18	2.8	***
Hispanic	0.01	4.23	0.3	***
Asian	3.56	9.82	36.2	***
Native American	3.95	0.95	414.2	N/A
Minority total	7.86	27.18	28.9	***
White female	1.87	16.24	11.5	***
MBE total	9.74	43.42	22.4	***

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
Maintenance				
Black:	12.53	8.11	154.6	N/A
Hispanic	2.18	3.34	65.2	***
Asian	0.76	3.24	23.5	***
Native American	0.28	0.56	50.5	***
Minority total	15.76	15.26	103.3	N/A
White female	18.62	14.81	125.8	N/A
MBE total	34.38	30.06	114.4	N/A
Services				
Black:	3.82	6.15	62.1	**
Hispanic	0.04	3.39	1.2	***
Asian	0.22	6.42	3.5	***
Native American	0.01	0.80	0.9	***
Minority total	4.09	16.76	24.4	***
White female	4.44	17.66	25.1	***
MBE total	8.53	34.42	24.8	***

Source: See Table 7.9.

Note: "*" indicates an adverse disparity that is statistically significant at the 10% level or better. "**" indicates the disparity is significant at a 5% level or better. "***" indicates significance at a 1% level or better. "N/A" indicates that no adverse disparity was observed in that category.

C. Anecdotal Evidence

1. Anecdotal Evidence of Disparities in Maryland's Marketplace

Chapter VIII presents the results of a large scale mail survey we conducted of both MBEs and non-MBEs about their experiences and difficulties involved in obtaining contracts. The purpose of this survey was to quantify and compare anecdotal evidence on the experiences of MBEs and non-MBEs as a method to examine whether any differences might be due to discrimination.

We mailed MBE and non-MBE questionnaires to a random sample of firms in Maryland's geographic market area. We asked about bid requirements and other factors (bonding and insurance requirements, etc.) affecting their ability to obtain contracts. The questionnaires also asked for characteristics of the firms and the owners, such as the number of years the firm has been in business, the number of employees, firm revenues, and the education level of the primary owner. The MBE questionnaire also asked firms whether they experienced disparate treatment in various business dealings (such as commercial loan applications and obtaining price quotes from suppliers or subcontractors) in the past five years due to their race or gender and how often prime contractors who use them as subcontractors on public-sector projects with MBE goals also solicit or use them on public-sector or private-sector projects without such goals.

Many survey respondents had done business or attempted to do business with the State or other public entities in Maryland in the past five years. The survey results showed that a large

proportion of MBE respondents reported that they had been treated less favorably in various business dealings in the last five years. Moreover, in several categories, a larger fraction of MBEs than non-MBEs reported that various bid requirements and other factors made it harder or impossible to obtain contracts. Finally, the survey also demonstrated that prime contractors who use MBEs on public sector contracts with goals rarely hire, *or even solicit*, such firms on projects without goals, either public or private.

Chapter VIII also presents the results from a series of in-depth personal interviews conducted with MBE and non-MBE business owners in mid-2005. The purpose of these interviews was much the same as the mail surveys. However, the longer interview length and more intimate interview setting were designed to allow for more in-depth responses from business owners. Similar to the survey responses, the interviews strongly suggest that MBEs continue to suffer discriminatory barriers to full and fair access to State and private sector contracts. Participants reported perceptions of MBE incompetence and being subject to higher performance standards; discrimination in access to commercial loans and surety bonds; paying higher prices for supplies than non-MBEs; inability to obtain public sector prime contracts; difficulties in receiving fair treatment in obtaining public sector subcontracts; and virtual exclusion from private sector opportunities to perform as either prime contractors as subcontractors, outside of IT services.

While not definitive proof that Maryland has a compelling interest in implementing race- and gender-conscious remedies for these impediments, the results of the surveys and the personal interviews are the types of anecdotal evidence that, especially in conjunction with the Study's extensive statistical evidence, the courts have found to be highly probative of whether the State would be a passive participant in a discriminatory market place without affirmative interventions.

2. MBE Program Analysis and Feedback Interviews

Chapter IX summarizes the principal race- and gender-neutral initiatives currently underway by the State of Maryland. These include preference programs for small businesses and a variety of outreach programs for small businesses in general and MBEs in particular. This overview of activities includes the Small Business Preference Program, the Governor's Office of Business Advocacy, the Maryland Small Business Development Financing Authority, the Small Business Reserve Program, the Governor's Office of Minority Affairs, and the Commission on Minority Business Enterprise Reform.

Next, Chapter IX provides historical background on the State's MBE Program and a discussion of the operations of the current MBE Program. NERA contacted numerous State agency personnel and business owners to solicit their feedback regarding the MBE Program.

The remainder of Chapter IX presents a summary of our interviews, which covered the following subjects:

- Program eligibility

  In general, MBEs supported the continued eligibility of Blacks, Hispanics, Asians and White women. Some non-MBEs, however, stated that the Program had become too broad by

including groups other than Blacks. Some specialty trade firms were concerned that White women enjoy competitive advantages through the Program not warranted by any past or current discrimination.

Some non-MBEs also urged a limit to the number of years a firm can participate in the Program. However, the DBEs that had graduated from the USDOT Program reported that they received little or no work after graduation.

- The MBE certification process

There were few criticisms of the certification process. Some White women recounted that they had difficulty obtaining certification because of the role of their husbands in the firm's day-to-day operations. Some construction firms expressed concerns about women-owned "front" companies.

- MBE contract goal setting

Non-MBE prime contractors generally felt that the goals were too high or unrealistic. Several mentioned in particular the difficulty of meeting the goal for Blacks, especially for engineering contracts. Further, many prime vendors objected to having to subcontract work that they would prefer to self-perform. This was especially true for specialty construction firms, who recounted having to subcontract work to direct competitors. They urged a review of whether there is an "overconcentration" in some trades of MBEs, such that no goals should be set for those scopes of work. Some firms suggested that no goals be set on smaller contracts, where there are few opportunities for subcontracting, and that lower goals be set for very large contracts, where there are few MBEs capable of performing large subcontracts.

Non-MBE prime bidders outside of construction contracting often found it difficult to meet subcontracting goals, because their industries are not based upon the prime contractor/subcontractor model. MBEs and non-MBEs expressed frustration that minorities and women are often relegated to those ancillary aspects of professional services projects that can be carved out for subcontracting.

Some Asian-owned firms objected to setting separate goals for Blacks and women, preferring the DBE approach of a single goal that can be met using any certified firm. On the other hand, Blacks were concerned that a unitary goal would lead to their receiving even less work.

- Bid evaluation and good faith efforts to meet goals

Prime contractors reported that meeting goals as often very burdensome. MBEs failed to respond or quoted unreasonably high prices. Waivers were felt to be actively discouraged by the State, and difficult to obtain. Many felt system is set up to play "gotcha." MBEs, however, felt that there was ample availability of certified firms to meet goals.

Both groups agreed that more detailed firm profiles and guidance about good faith efforts to meet goals would improve the Program. There was also the consensus that task order

contracts and indefinite deliver/indefinite quantity contracts were especially problematic. The prime bidders do not know how much work they will have and so find it hard to commit to making the goals, and the MBEs do not know how much work they will receive, if any, and so find it hard to schedule their forces.

- MBEs' efforts to seek work as prime State contractors,

MBEs found it very difficult to obtain prime State contracts, primarily because of the size of the procurements. The Small Business Reserve Program was a good first step, but many firms believe the size thresholds are too low. There was also concern about high experience, bonding and insurance requirements that MBEs cannot meet.

- MBEs' efforts to seek work on private sector contracts

With few exceptions. MBEs reported that firms that solicit and use them on projects with affirmative action goals rarely or never do so on projects without goals. A few MBEs providing professional services had some success in the private sector, particularly in the IT segment. A few construction firms had received work on smaller commercial and residential projects. Overall, however, most MBEs felt that the Program and those of other local governments were vital to their survival because of the lack of private sector opportunities.

- Contract performance and MBE Program enforcement

There was universal concern about adequate Program monitoring. Some MBEs reported being substituted on projects without their knowledge. There were also doubts about whether all MBEs perform a commercially useful function or are listed to meet goals then dropped. Several MBEs stated that there has been some improvement since the Lieutenant Governor's Task Force recommendation, but more resources are needed. On the other hand, some non-MBE construction contractors felt it is too difficult to substitute non-performing MBEs, and time lost is charged against the prime contractor.

- Support services for MBEs

There was broad consensus that more support services are needed. MBEs and non-MBEs mentioned that assistance with bidding, bonding, financing, marketing, etc. would enhance MBEs' capabilities. One stop shopping for MBE services and procurement information was also repeatedly suggested.

- Payment

Many firms complained about slow payment, either from the State to the prime vendor or from the prime vendor to the subcontractor. Firms were unaware of the recent adoption by Maryland of electronic funds transfers.

- Discrimination complaint procedures

Few MBEs had filed complaints, fearing retaliation.

- MBE Liaisons' roles and responsibilities

MBEs felt that the Liaisons, while committed and well intentioned, often lacked the information or the power to resolve problems. This view was shared in large degree by State personnel. At many agencies, employees have multiple responsibilities, which lessens the focus on MBE issues and contract compliance. Staff is therefore usually reactive rather than proactive, especially outside of construction. It would help to merge existing databases of firms, as well to install compliance tracking software.

- Maryland's race- and gender-neutral programs

Many MBEs had little awareness of the State's extensive programs to assist small businesses. There was solid support for the Small Business Reserve Program, which many firms felt should be expanded. State personnel were cautious, however, about whether too expansive a definition of "small" would merely increase the administrative burden of unbundling contracts without the commensurate benefit of creating opportunities for MBEs.

D. Recommendations

Chapter X presents our principal recommendations for the consideration of State policy makers, based on the present state of the case law and our findings in this Study.

This Study presents a large variety of statistical evidence, virtually all of which points to a past and continuing presence of business discrimination in Maryland's principal geographic and product markets for contracting and procurement. Statistical findings of disparities for Blacks, Hispanics, Asians, Native Americans and White females were made from a number of primary data sources and high quality secondary data sources. Statistical findings of the Study are buttressed by numerous anecdotal reports of disparate treatment and other barriers to MBE participation in business enterprise opportunities in Maryland.

Data sources examined for this Study included a custom-made directory of directories for MBEs; Dun & Bradstreet *MarketPlace* data for the State's geographic and product markets; a large-scale telephone survey of business owner race and sex attributes; 2000 Decennial Census data; Current Population Survey data for 1979-2002; Survey of Business Owners data from 2002; National Survey of Small Business Finances data from 1993 and 1998; a large-scale mail survey of MBE and non-MBE access to commercial credit and capital; a large-scale mail survey of MBE and non-MBE business owner experiences; and numerous personal interviews with MBEs, non-MBEs, State MBE program personnel, and State contracting/procurement personnel.

II. Legal Standards for Government Affirmative Action Contracting Programs

Like many state governments, Maryland has long been committed to including minority-owned and women-owned business enterprises in its contracting activities. As documented below in Chapter VII, Maryland's prior efforts have produced results—MBE's earned approximately $1.27 billion worth State contracts and subcontracts between FY2000 and FY2004—almost 15 percent of the total. The courts have made it clear, however, that in order to a implement race- and gender-based program that is effective, enforceable and legally defensible, the State must meet the judicial test of constitutional "strict scrutiny" to determine the legality of such initiatives. Strict scrutiny requires current "strong evidence" of the persistence of discrimination, and "narrowly tailored" measures to remedy that discrimination.

A. General Overview of Strict Scrutiny

This area of constitutional law is complex and constantly shifting, and cases are quite fact specific. Over the last 16 years, federal appellate and district courts have developed parameters for establishing a government's compelling interest in remedying discrimination and evaluating whether the remedies adopted to address that discrimination are narrowly tailored. The following are the legal evidentiary and program development issues Maryland must consider in evaluating whether to reauthorize the MBE program.

1. *City of Richmond v. J.A. Croson*[4]

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

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

[4] 488 U.S. 469 (1989).

opinion that the Plan was constitutional; and (d) general statements describing widespread racial discrimination in the local, Virginia, and national construction industries.

In affirming the Court of Appeals' determination that the Plan was unconstitutional, Justice Sandra Day O'Connor's plurality opinion rejected the extreme positions that local governments either have *carte blanche* to enact race-based legislation or must prove their own illegal conduct:

> [A] state or local subdivision … has the authority to eradicate the effects of private discrimination within its own legislative jurisdiction. … [Richmond] can use its spending powers to remedy private discrimination, if it identifies that discrimination with the particularity required by the Fourteenth Amendment. … [I]f the City could show that it had essentially become a "passive participant" in a system of racial exclusion … [it] could take affirmative steps to dismantle such a system.[5]

Strict scrutiny of race-based remedies is required to determine whether racial classifications are in fact motivated by either notions of racial inferiority or blatant racial politics. This highest level of judicial review "smokes out" illegitimate uses of race by assuring that the legislative body is pursuing a goal important enough to warrant use of a highly suspect tool.[6] It further ensures that the means chosen "fit" this compelling goal so closely that there is little or no possibility that the motive for the classification was illegitimate racial prejudice or stereotype. The Court made clear that it is racial stigma that strict scrutiny seeks to expose; racial classifications are said to create racial hostility if they are based on notions of racial inferiority.[7]

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

> [w]hile there is no doubt that the sorry history of both private and public discrimination in this country has contributed to a lack of opportunities for black entrepreneurs, this observation, standing alone, cannot justify a rigid racial quota in the awarding of public contracts in Richmond, Virginia…. [A]n amorphous claim that there has been past discrimination in a particular industry cannot justify the use of an unyielding racial quota. It is sheer speculation how many minority firms there would be in Richmond absent past societal discrimination.[8]

Richmond's evidence was found to be lacking in every respect. The City could not rely upon the disparity between its utilization of MBE prime contractors and Richmond's minority population because not all minority persons would be qualified to perform construction projects; general

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

[6] *See also Grutter v. Bollinger*, ___ U.S. ___, 123 S. Ct. 2325, 2338 (2003) ("Not every decision influenced by race is equally objectionable, and strict scrutiny is designed to provide a framework for carefully examining the importance and the sincerity of the reasons advanced by the governmental decision maker for the use of race in that particular context.").

[7] *Croson* at 493.

[8] *Id*. at 499.

population representation is irrelevant. No data were presented about the availability of MBEs in either the relevant marketplace or their utilization as subcontractors on City projects. According to Justice O'Connor, the extremely low MBE membership in local contractors' associations could be explained by "societal" discrimination or perhaps Blacks' lack of interest in participating as business owners in the construction industry. To be relevant, the City would have to demonstrate statistical disparities between eligible MBEs and actual membership in trade or professional groups. Further, Richmond presented no evidence concerning enforcement of its own anti-discrimination ordinance. Finally, Richmond could not rely upon Congress' determination that there has been nationwide discrimination in the construction industry. Congress recognized that the scope of the problem varies from market to market, and in any event it was exercising its powers under Section Five of the Fourteenth Amendment, whereas a local government is further constrained by the Amendment's Equal Protection Clause.[9]

> In the case at hand, the City has not ascertained how many minority enterprises are present in the local construction market nor the level of their participation in City construction projects. The City points to no evidence that qualified minority contractors have been passed over for City contracts or subcontracts, either as a group or in any individual case. Under such circumstances, it is simply impossible to say that the City has demonstrated "a strong basis in evidence for its conclusion that remedial action was necessary."[10]

The foregoing analysis was applied only to Blacks. The Court then emphasized that there was "absolutely no evidence" against other non-Whites. "The random inclusion of racial groups that, as a practical matter, may have never suffered from discrimination in the construction industry in Richmond, suggests that perhaps the City's purpose was not in fact to remedy past discrimination."[11]

Having found that Richmond had not presented evidence in support of its compelling interest in remedying discrimination— the first prong of strict scrutiny— the Court went on to make two observations about the narrowness of the remedy— the second prong of strict scrutiny. First, Richmond had not considered race-neutral means to increase MBE participation. Second, the 30 percent quota had no basis in evidence, and was applied regardless of whether the individual MBE had suffered discrimination.[12] Further, Justice O'Connor rejected the argument that individualized consideration of Plan eligibility is too administratively burdensome.

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

> Nothing we say today precludes a state or local entity from taking action to rectify the effects of identified discrimination within its jurisdiction. If the City of Richmond had

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

[10] 488 U.S. at 510.

[11] *Id*.

[12] *See Grutter*, 123 S. Ct. at 2343 (quotas are not permitted; race must be used in a flexible, non-mechanical way).

> evidence before it that non-minority contractors were systematically excluding minority businesses from subcontracting opportunities it could take action to end the discriminatory exclusion. Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise. Under such circumstances, the City could act to dismantle the closed business system by taking appropriate measures against those who discriminate on the basis of race or other illegitimate criteria. In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion. Moreover, evidence of a pattern of individual discriminatory acts can, if supported by appropriate statistical proof, lend support to a local government's determination that broader remedial relief is justified.[13]

2. Strict scrutiny as applied to federal enactments

In *Adarand v. Peña*[14], the Court again overruled long settled law and extended the application of strict scrutiny under the Due Process Clause of the Fourteenth Amendment to federal enactments. Just as in the local government context, when evaluating federal legislation and regulations

> [t]he strict scrutiny test involves two questions. The first is whether the interest cited by the government as its reason for injecting the consideration of race into the application of law is sufficiently compelling to overcome the suspicion that racial characteristics ought to be irrelevant so far as treatment by the government is concerned. The second is whether the government has narrowly tailored its use of race, so that race-based classifications are applied only to the extent absolutely required to reach the proffered interest. The strict scrutiny test is thus a recognition that while classifications based on race may be appropriate in certain limited legislative endeavors, such enactments must be carefully justified and meticulously applied so that race is determinative of the outcome in only the very narrow circumstances to which it is truly relevant.[15]

In the wake of *Adarand*, Congress reviewed and revised the Disadvantaged Business Enterprise (DBE) Program statute[16] and implementing regulations[17] for federal-aid contracts in the transportation industry. To date, every court that has considered the issue has found the regulations to be constitutional on their face.[18] While binding strictly only upon the DBE Program, these cases provide important guidance to state and local governments about the types

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[13] 488 U.S. at 509 (citations omitted).

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

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

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

[17] 49 CFR Part 26.

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

of evidence necessary to establish their compelling interest in adopting affirmative action contracting programs and how to narrowly tailor those programs.

For example, in *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*,[19] the court held that Congress had strong evidence of widespread race discrimination in the construction industry.[20] The court took a "hard look" at the evidence Congress considered, and concluded that the legislature had

> spent decades compiling evidence of race discrimination in government highway contracting, of barriers to the formation of minority-owned construction businesses, and of barriers to entry. In rebuttal, the plaintiff presented evidence that the data were susceptible to multiple interpretations, but failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.[21]

Next, the regulations were facially narrowly tailored, as was the state's application of those regulations. Unlike the prior program,[22] Part 26 provides that:

- The overall goal must be based upon demonstrable evidence of the number of DBEs ready, willing and able to participate on the recipient's federally assisted contracts.
- The goal may be adjusted to reflect the availability of DBEs but for the effects of the DBE Program and of discrimination.
- The recipient must meet the maximum feasible portion of the goal through race-neutral measures as well as estimate that portion of the goal it predicts will be met through such measures.
- The use of quotas and set-asides is limited to only those situations where there is no other remedy.
- The goals are to be adjusted during the year to remain narrowly tailored.
- Absent bad faith administration of the Program, a recipient cannot be penalized for not meeting its goal.

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[19] 345 F.3d. 964 (8th Cir. 2003), *cert. denied*, 124 S.Ct. 2158 (2004).

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

[21] *Id*. at 970; see also *Western Sates, ibid*.

[22] 49 CFR Part 23.

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

These elements led the court to conclude that the program is narrowly tailored on its face. First, the regulations place strong emphasis on the use of race-neutral means to achieve minority and women participation. Relying upon *Grutter v. Bollinger*, the court held that while "[n]arrow tailoring does not require the exhaustion of every conceivable race-neutral alternative … it does require serious, good faith consideration of workable race-neutral alternatives."[23]

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

The court next held that the goals are tied to the relevant labor market. "Though the underlying estimates may be inexact, the exercise requires the States to focus on establishing realistic goals for DBE participation in the relevant contracting markets. This stands in stark contrast to the program struck down in *Croson*…."[24]

Finally, Congress has taken significant steps to minimize the race-conscious nature of the Program. "[W]ealthy minority owners and wealthy minority-owned firms are excluded, and certification is available to persons who are not presumptively [socially] disadvantaged but can demonstrate actual social and economic disadvantage. Thus, race is made relevant in the program, but it is not a determinative factor."[25]

Turning to the Minnesota Department of Transportation's (Mn/DOT) application of the regulations to its individual circumstances, the court also held that the results of the regulations as applied were sufficiently narrowly tailored. Mn/DOT relied upon a Study conducted by NERA and Colette Holt & Associates to set its DBE goal. This Study employed a methodology similar to that for Maryland, including the availability analysis and the examination of disparities in the business formation rates and business earnings of minorities and women compared to similarly-situated White males. The Eighth Circuit opined that while plaintiff

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

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

[24] *Id.*

[25] *Id*. at 973.

> of race-conscious and race-neutral methods as the year progresses, as the DOT regulations require.[26]

In the most recent judicial review of the constitutionality of the DBE Program, and a recipient's implementation of the regulations, the U.S. District Court upheld the constitutionality of the Illinois Department of Transportation's (IDOT) DBE Program. In its first opinion, the court held that Part 26 is facially constitutional, relying heavily on *Adarand VII* and *Sherbrooke*.[27] After a thorough review of the evidence considered by Congress in reauthorizing and revising the DBE Program, the judge granted summary judgment for the federal defendants because

> despite the voluminous "evidence" Plaintiff offers to nullify the data relied on by Congress and the *Adarand VII* court, Plaintiff has not met its burden "of introducing credible, particularized evidence to rebut the government's initial showing of the existence of a compelling interest in remedying the nationwide effects of past and present discrimination in the federal construction procurement subcontracting market." *Adarand VII*, 228 F.3d at 1175.[28]

In the second opinion rendering verdict after trial on the claim against the State defendant, the court held that the IDOT DBE Program was narrowly tailored.[29] To determine whether IDOT met its constitutional and regulatory burdens, the court reviewed the evidence of discrimination against minority and women construction firms in the Illinois area. IDOT had commissioned a NERA Study to meet Part 26's requirements. Similar to this Study for Maryland, the IDOT Study included a custom census of the availability of DBEs in IDOT's marketplace, weighted by the location of IDOT's contractors and the types of goods and services IDOT procures. NERA estimated that DBEs currently comprise 22.77 percent of IDOT's available firms.[30] The IDOT Study next examined whether and to what extent there are disparities between the rates at which DBEs form businesses relative to similarly situated White men, and the relative earnings of those businesses. If disparities are large and statistically significant, then the inference of discrimination can be made. Controlling for numerous variables such as the owner's age, education, and the like, the Study found that in a race- and gender-neutral marketplace the availability of DBEs would be approximately 20.8 percent higher, for an estimate of DBE availability "but for" discrimination of 27.51 percent.

In conformance with Part 26's "step 2" analysis of the availability of DBEs "but for" the operation of the DBE program and the effects of discrimination,[31] IDOT relied upon a NERA

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[26] *Id*.

[27] *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2004 U.S. Dist. LEXIS, 3226 (N.D. Ill., Mar. 3, 2004) (*Northern Contracting I*).

[28] *Id.* at 64.

[29] *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2005 U.S. Dist. LEXIS 19868 (Sept. 8, 2005) (*Northern Contracting II)*. Ms. Holt and Dr. Wainwright testified as IDOT's expert witnesses at the trial.

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

[31] 49 CFR §26.45(d).

Study conducted for Metra, the Chicago suburbs' commuter railroad.[32] The Metra Study included a survey in which 50.6 percent of minority- or women-owned construction firms reported that firms that use or solicit their services on contracts with race or gender participation goals rarely or never solicit or subcontract with their firms on non-goals projects. Similarly, 54.1% of minority- or women-owned professional services firms reported that they were seldom or never solicited to bid for non-goals projects. In addition, the Metra Study found that DBEs suffered discrimination in the markets for construction loans. Specifically, the Study found that, controlling for creditworthiness, DBEs were more likely to have loan applications denied, and when such loans are approved, were more likely to pay higher interest rates. Finally, the Metra Study found disparities in the earnings and business formation rates of minorities and women similar to those found in the IDOT Study.

In addition to the NERA Studies, the court reviewed the evidence presented to the Chicago City Council in support of its revised M/WBE Construction Program ordinance in 2004. In addition to other expert reports, the court relied upon an expert report prepared by Dr. David Blanchflower that examined and compared the rates of business formation for minorities and women with those of White males within the City of Chicago. Using 2000 U.S. Census Bureau data, Dr. Blanchflower concluded that, after controlling for relevant variables such as credit worthiness, minorities and women are less likely to form businesses, and that when they do form businesses, those businesses achieve lower earnings than businesses owned by White males.

To supplement this extensive statistical evidence, IDOT also conducted a series of public hearings during 2004 to obtain further information regarding discrimination in the construction industry. A large number of minority and female business owners testified that they were rarely, if ever, solicited to bid on non-goals projects. Several DBEs identified prime contractors who rarely or never solicited their bids on non-goals projects, despite the fact that, in some instances, the witnesses' firms had satisfactorily completed work for the contractors on goals projects. Twenty such prime contractors were identified in the Chicago area, with which IDOT had spent more than 34 percent of its Chicago area expenditures between 2000 and 2004. To follow up this testimony, IDOT requested documents from the 20 firms concerning their use and solicitation of DBEs on non-goal projects. Not one of the firms responded to the letters. Although IDOT took no further action to pursue the matter, the court held the State properly concluded from the firms' silence that the witnesses' allegations had merit.

IDOT also presented and the judge relied upon evidence of "unremediated market data," which established that DBE participation rates on contracts that do not have race- or gender- conscious subcontracting goals in place to remedy discrimination was well below DBE utilization on contracts that had such goals, in the same marketplace. Such data are evidence of what IDOT market conditions would look like in the absence of DBE goals, and thus was relevant both to the continuing effects of discrimination as well as to whether IDOT could achieve its goals without using race-conscious subcontracting goals.

[32] NERA Economic Consulting, 2000, "Disadvantaged Business Enterprise Availability Study," prepared for the Northeast Illinois Regional Commuter Rail Corporation D/B/A Metra.

In addition, Judge Pallmeyer considered IDOT's "Zero Goals" experiment. During 2001 and 2002, IDOT solicited a portion of its highway construction contracts without DBE goals. DBEs received approximately 1.5% of the total dollar value of those contracts, and approximately 17% of the total dollar value of all subcontracts awarded, well below the rates on goals jobs.

At trial, DBEs testified regarding the difficulties they face in obtaining IDOT prime contracts and subcontracts. and described instances in which they believed they were discriminated against based on their race or gender. The witnesses recounted their struggles to obtain work in the private sector, which operates without DBE goals, and unanimously reported that they were rarely invited to bid on such contracts. They explained that they were reluctant to submit unsolicited bids due to the expense involved as well as the low success rate of such bids. A number of DBEs identified specific firms for which they had successfully completed subcontracting work on goals projects, but who nevertheless rarely solicited them to submit bids for subcontracts on non-goals projects. Several DBEs also testified about incidents of direct discrimination in the industry and recounted discrimination in obtaining financing. bonds and insurance. Finally, the DBEs reported that they encountered difficulties in obtaining prompt payment for their work, leading to serious cash-flow problems and jeopardizing their businesses' success. Since public agencies are most likely to pay slowly, the DBEs desired more non-goals private sector work, where prompter payment is the norm. Their greater reliance on public work because of barriers to obtaining private work further increased their vulnerabilities.

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

> The stark disparity in DBE participation rates on goals and non-goals contracts, when combined with the statistical and anecdotal evidence of discrimination in the relevant marketplaces, indicates that IDOT's 2005 DBE goal represents a "plausible lower-bound estimate" of DBE participation in the absence of discrimination.… Plaintiff presented no persuasive evidence contravening the conclusions of IDOT's studies, or explaining the disparate usage of DBEs on goals and non-goals contracts.… IDOT's proffered evidence of discrimination against DBEs was not limited to alleged discrimination by prime contractors in the award of subcontracts. IDOT also presented evidence that discrimination in the bonding, insurance, and financing markets erected barriers to DBE formation and prosperity. Such discrimination inhibits the ability of DBEs to bid on prime contracts, thus allowing the discrimination to indirectly seep into the award of prime contracts, which are otherwise awarded on a race- and gender-neutral basis. This indirect discrimination is sufficient to establish a compelling governmental interest in a DBE program… Having established the existence of such discrimination, a governmental entity "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."[33]

[33] *Northern Contracting*, at *82 (internal citations omitted); *see Croson*, 488 U.S. at 492.

3. Preferences for women

Whether affirmative action procurement programs that benefit women are subject to the lesser constitutional standard of "intermediate scrutiny" has yet to be settled by the Supreme Court.[34] Most circuits have applied intermediate scrutiny to preferences for women, and then upheld or struck down the female preference under that standard.[35] This is probably a distinction without meaningful difference, as only one post-*Croson* court has upheld WBE provisions while striking down M/WBE measures.[36] Further, as observed by the Seventh Circuit Court of Appeals, applying intermediate scrutiny to gender "creates the paradox that a public agency can provide stronger remedies for sex discrimination than for race discrimination; it is difficult to see what sense that makes."[37] Therefore, governments would be wise to meet the rigors of strict scrutiny for gender preferences.

4. Burdens of production and proof

Unlike most legal challenges, the defendant has the initial burden of producing "strong evidence" in support of the program. The plaintiff must then proffer evidence to rebut the government's case, and bears the ultimate burden of production and persuasion that the affirmative action program is unconstitutional.[38] There is no need of formal legislative findings,[39] nor "an ultimate judicial finding of discrimination before [a local government] can take affirmative steps to eradicate discrimination."[40] When the statistical information is sufficient to support the inference of discrimination, the plaintiff must prove that the statistics are flawed.[41] A plaintiff cannot rest upon general criticisms of studies or other evidence; it must carry the case that the government's

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

[35] *See, e.g.*, *Northern Contracting I*, at *44 (women's status as presumptively socially disadvantaged passes intermediate scrutiny); *W.H. Scott Construction Co., Inc. v. City of Jackson*, 199 F.3d 206, 215 n.9 (5th Cir. 1999); *Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Engineering Contractors* ("*Engineering Contractors II*"), 122 F.3d 895, 907-910 (11th Cir. 1997); *Concrete Works, Inc. v. City and County of Denver ("Concrete Works II")*, 36 F.3d 1513, 1519 (10th Cir. 2003); *Contractors Association of Eastern Pennsylvania v. City of Philadelphia ("Philadelphia II")*, 6 F.3d 990, 1009 (3rd Cir, 1993); *Coral Construction Co. v. King County*, 941 F.2d 910, 930-931 (9th Cir. 1991); *Associated Utility Contractors of Maryland, Inc. v. Baltimore*, 83 F.Supp 2d 613 (D. Md. 2000); *but see Brunet v. City of Columbus*, 1 F.3d 390, 404 (6th Cir. 1993) (applying strict scrutiny).

[36] *Coral Construction,* 941 F.2d at 932 (applying intermediate scrutiny); *cf. Western States Paving Co.*, 407 F.3d. at 991 n.6 (no need to conduct a separate analysis of sex-based classifications under intermediate scrutiny because it would not yield a different result from strict scrutiny).

[37] *Builders Association of Greater Chicago v. County of Cook*, 256 F.3d 642, 644 (7th Cir. 2001).

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

[39] *Webster v. Fulton County, Georgia*, 51 F.Supp2d 1354, 1364 (N.D. Ga. 1999).

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

[41] *Engineering Contractors II*, 122 F.3d at 916; *Coral Construction Co. v. King County, Washington*, 941 F.2d 910, 921 (9th Cir. 1991).

proof is inadequate to meet strict scrutiny, rendering the legislation illegal.[42] The determination whether a plaintiff has met this burden is a question of law, subject to *de novo* review.[43]

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

Much of the discussion in the case law has revolved around what type of evidence is sufficiently "strong" to establish the continuing existence and effects of economic discrimination against minorities resulting in diminished opportunities to do business with the government. Proof of the disparate impacts of economic factors on MBEs and the disparate treatment of such firms by actors critical to success is necessary to meet strict scrutiny. Discrimination must be shown through the use of statistics and economic models to examine the effects of systems or markets on different groups, as well as by evidence of personal experiences with discriminatory conduct, policies or systems.[44] Specific evidence of discrimination or its absence may be direct or circumstantial, and should include economic factors and opportunities in the private sector affecting the success of MBEs.[45]

1. Definition of Maryland's Marketplace

Croson counsels that a state or local government may only remedy discrimination within its own contracting marketplace. Richmond was specifically faulted for including minority contractors from across the country in its program.[46] Therefore, this Study employs long established economic principles to empirically establish the geographic and industry dimensions of Maryland's contracting marketplace in order to ensure that the evidence is narrowly tailored.[47]

2. Examining Disparities Between MBE Availability and Utilization

Next, statistical examination of the availability of minorities and women to contract with the State and its history of utilizing MBEs is required. Simple disparities between Maryland's overall minority population and the State's utilization of minority- and women-owned firms are

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

[43] *Adarand VII*, 228 F.3d at 1161; *Associated General Contractors of Ohio v. Drabik*, 214 F.3d 730, 734 (6th Cir. 2000); *Scott*, 199 F.3d at 211; *but see Engineering Contractors II*, 122 F.3d at 917 (meeting constitutional test is a question of fact, subject only to appellate review for abuse of discretion).

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

[45] *Id*.

[46] 488 U.S. at 508.

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

not enough.[48] The primary inquiry is whether there are statistically significant disparities between the availability of MBEs and the State's utilization of such firms.

> Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discrimination could arise. In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion.[49]

This is known as the "disparity index" or "disparity ratio." This index is calculated by dividing the utilization of MBEs by the availability of MBEs. Courts have looked to disparity indices in determining whether *Croson's* evidentiary foundation is satisfied.[50] An index less than 100 percent indicates that a given group is being utilized less than would be expected based on its availability.

The State need not prove that the statistical inferences of discrimination are "correct." In upholding Denver's M/WBE Program, the Tenth Circuit noted that strong evidence supporting Denver's determination that remedial action was necessary need not have been based upon "irrefutable or definitive" proof of discrimination. Statistical evidence creating inferences of discriminatory motivations was sufficient and therefore evidence of marketplace discrimination was properly used to meet strict scrutiny. It is the plaintiff who must prove by a preponderance of the evidence that such proof does not support those inferences.[51]

It is also the case that if MBEs are overutilized under a program, that does not end the inquiry. Where the government has been implementing affirmative action remedies MBE utilization reflects those efforts; it does not signal the end of discrimination. For example, the Tenth Circuit held that Denver's overutilization of M/WBEs on City projects with goals went only to the weight of the evidence because it reflected the effects of a remedial program. Denver presented evidence that goals and non-goals projects were similar in purpose and scope and that the same pool of contractors worked on both types. "Particularly persuasive" was evidence that M/WBE participation declined significantly when the program was amended in 1989. The "utilization of M/WBEs on City projects has been affected by the affirmative action programs that have been in place in one form or another since 1977. Thus, the non-goals data is [sic] the better indicator of discrimination in public contracting" and supports the position that discrimination was present before the enactment of the ordinances.[52]

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

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

[50] *Scott*, 199 F.3d at 218; *Concrete Works II*, 36 F.3d at 1526-1527; *O'Donnell Construction Co., Inc, v. District of Columbia*, 963 F.2d 420, 426 (D.C. Cir. 1992); *Cone Corp. v. Hillsborough County*, 908 F.2d 909, 916 (11th Cir. 1990).

[51] *Concrete Works, Inc. v. City and County of Denver,* 321 F.3d, 950, 975 (10th Cir. 2003) ("*Concrete Works IV"*).

[52] *Id*. at 987-988

Calculations of the availability of minority- and women-owned firms are therefore the crucial foundation for examining affirmative action in contracting.[53] In addition to creating the disparity index, correct measures of availability are necessary to determine whether discriminatory barriers depress the formation of firms by minorities and women, and the success of such firms in doing business in both the private and public sectors.[54]

3. Unremediated markets data

It is also critical to measure MBE participation in the absence of affirmative action goals, if such evidence is available. Evidence of race and gender discrimination in relevant "unremediated"[55] markets provides an important indicator of what level of actual MBE participation can be expected in the absence of government mandated affirmative efforts to contract with MBEs.[56] The courts are clear that the government has a compelling interest in not financing the evil of private prejudice with public dollars.[57] If MBE utilization is below availability in unremediated markets, an inference of discrimination may be supportable. The virtual disappearance of MBE participation after programs has been enjoined or abandoned strongly indicates substantial barriers to minority subcontractors, "raising the specter of racial discrimination."[58] This analysis addresses whether Maryland has been and continues to be a "passive participant" in such discrimination.[59] The courts are clear that the government has a compelling interest in not financing with public dollars the evil of private prejudice.[60] The results of non-goals contracts can help to demonstrate that, but for the interposition of remedial affirmative action measures, discrimination would lead to disparities in government contracting. The "dramatic decline in the use of M/WBEs when an affirmative action program is terminated, and the paucity of use of such firms when no affirmative action program was ever initiated," was proof of the government's compelling interest in employing race- and gender-conscious measures.[61] Evidence of unremediated markets "sharpens the picture of local market conditions for MBEs and WBEs."[62]

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[53] *Philadelphia III*, 91 F.3d at 603; *Webster*, 51 F.Supp.2d at 1372 (no explanation for the source nor any indicia of the accuracy or reliability of availability figures).

[54] *Webster,* 51 F.Supp.2d at 1372; *see Northern Contracting,* at *70 (IDOT's custom census approach was supportable because "discrimination in the credit and bonding markets may artificially reduce the number of registered" minority- and women-owned firms).

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

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

[57] *See, e.g., Drabik*, 214 F.3d at 734-735.

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

[59] *See also Philadelphia III*, 91 F.3d at 599-601.

[60] *Drabik*, 214 F.3d at 734-735.

[61] *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725, 737 (N.D. Ill. 2003); *see also Concrete Works IV*, 321 F.3d at 987-988.

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

4. Anecdotal evidence

Anecdotal evidence of experiences with discrimination in contracting opportunities, including testimony from other governments' studies and programs, is relevant since it goes to the question of whether observed statistical disparities are due to discrimination and not to some other non-discriminatory cause or causes.[63] Testimony about discrimination by prime contractors, unions, bonding companies, suppliers and lenders has been found relevant to the creation of barriers both to minority subcontractors' business formation and to their success on governmental projects.[64] 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."[65] "[W]e do not set out a categorical rule that every case must rise or fall entirely on the sufficiency of the numbers. To the contrary, anecdotal evidence might make the pivotal difference in some cases; indeed, in an exceptional case, we do not rule out the possibility that evidence not reinforced by statistical evidence, as such, will be enough."[66]

There is no requirement that anecdotal testimony be verified. "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."[67] This "failure" of the legislative body to somehow verify testimony had been a favorite shibboleth of plaintiffs.[68]

C. Narrowly Tailoring a MBE Program

The following factors must be considered in determining whether a race-based remedy is narrowly tailored to achieve its purpose:

- The efficacy of race-neutral remedies at overcoming identified discrimination;
- The relationship of numerical benchmarks for government spending to the availability of MBEs and to subcontracting goal setting procedures;
- The flexibility of the program requirements, including the provision for good faith efforts to meet goals and contract specific goal setting procedures;
- The congruence between the remedies adopted and the beneficiaries of those remedies;

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

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

[65] *Concrete Works II*, 36 F.3d at 1520, 1530.

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

[67] *Id*. at 989.

[68] *See, e.g., Builders Association v. Cook*, 123 F.Supp.2d at 1090.

- Any adverse impact of the relief on third parties; and
- The duration of the program.[69]

1. Race- and gender-neutral remedies

Race- and gender-neutral approaches have become a necessary component of a defensible and effective MBE program.[70] Such measures include unbundling of contracts into smaller units, providing technical support, and addressing issues of financing, bonding and insurance important to all small and emerging businesses.[71] Difficulty in accessing the bidding system, restrictive bid specifications, excessive experience requirements, and overly burdensome insurance and/or bonding requirements, for example, might be corrected by Maryland without resort to using race or gender in decision making. Further, governments have a duty to ferret out and punish discrimination against minorities and women by their contractors, staff, lenders, bonding companies or others.[72] At a minimum, entities must track the utilization of MBE firms as a measure of their success in the bidding process, including as subcontractors.[73]

However, strict scrutiny does not require that every race-neutral approach must be implemented and then proven to be ineffective before race-conscious remedies may be utilized.[74] While an entity must give good faith consideration to race-neutral alternatives, "strict scrutiny does not require exhaustion of every possible such alternative …. [s]ome degree of practicality is subsumed in the exhaustion requirement…. Localities are not required to pursue irrational, unworkable, ineffective or legally unavailable approaches."[75]

2. Goal setting

Numerical goals or benchmarks for MBE participation must be substantially related to their availability in the relevant market.[76] One unanswered question is whether goals or benchmarks for overall State contracting may be set higher than estimates of actual current availability. To freeze the goals at current head counts would set the results of discrimination — depressed MBE availability — as the marker of the elimination of discrimination. It therefore should be

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[69] *United States v. Paradise*, 480 U.S. 149, 171 (1987); *see also Sherbrooke III*, 345 F.3d at 971; *Drabik*, 214 F.3d at 738.

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

[71] *See* 49 CFR § 26.51.

[72] *Croson*, 488 U.S. at 502; *Webster*, 51 F.Supp.2d at 1380.

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

[74] *Grutter v. Bollinger*, 123 S.Ct. 2325, 2344-2345 (2003).

[75] *Cf. AGC of California,* 950 F.2d at 1417; *Cone Corp*., 908 F.2d at 916.

[76] *Webster*, 51 F.Supp.2d at 1379, 1381 (statistically insignificant disparities are insufficient to support an unexplained goal of 35 percent M/WBE participation in County contracts); *see also Associated Utility Contractors*, 83 F.Supp.2d at 621.

reasonable for the government to seek to attempt to level the racial playing field by setting targets somewhat higher than current headcount. For example, 49 CFR Part 26 requires grant recipients to determine the availability of DBEs in their marketplaces absent the presence of discrimination.[77] In upholding the DBE regulations, the Tenth Circuit stated that

> because Congress has evidence that the effects of past discrimination have excluded minorities from the construction industry and that the number of available minority subcontractors reflects that discrimination, the existing percentage of minority-owned businesses is not necessarily an absolute cap on the percentage that a remedial program might legitimately seek to achieve. Absolute proportionality to overall demographics is an unreasonable goal. However, *Croson* does not prohibit setting an aspirational goal above the current percentage of minority-owned businesses that is substantially below the percentage of minority persons in the population as a whole. This aspirational goal is reasonably construed as narrowly tailored to remedy past discrimination that has resulted in homogenous ownership within the industry. It is reasonable to conclude that allocating more than 95% of all federal contracts to enterprises owned by non-minority persons, or more than 90% of federal transportation contracts to enterprises owned by non-minority males, is in and of itself a form of passive participation in discrimination that Congress is entitled to seek to avoid. *See Croson*, 488 U.S. at 492 (Op. of O'Connor, J.).[78]

At least one court has recognized that goal setting is not an absolute science. In holding the DBE regulations to be narrowly tailored, the Eighth Circuit noted that "[t]hough the underlying estimates may be inexact, the exercise requires the State to focus on establishing realistic goals for DBE participation in the relevant contracting markets. This stands in stark contrast to the program struck down in *Croson.*[79]On the other hand, sheer speculation cannot form the basis for an enforceable measure.[80]

Goals can be set at various levels of particularity and participation. The entity may set an overall, aspirational goal for its annual, aggregate spending. Specific projects must be subject to subcontracting goals based upon availability of MBEs to perform the anticipated scopes of subcontracting. Not only is this legally mandated,[81] but also this approach reduces the need to conduct good faith efforts reviews as well as the temptation to create "front" companies and sham participation to meet unreasonable contract goals.

3. Flexibility

It is imperative that remedies not operate as fixed quotas. A Minority Business Enterprise program must provide for contract awards to bidders who fail to met the subcontracting goals but make good faith efforts to do so. Further, bidders who meet the goals cannot be favored over

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[77] 49 CFR § 26.45.

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

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

[80] *Id*. (complete absence of evidence for 12-15 percent DBE goal); *see also BAGC v. Chicago*, 298 F.Supp.2d at 740 (City's MBE and WBE goals were "formulistic" percentages not related to the availability of firms).

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

those who made good faith efforts. In *Croson*, the Court refers approvingly to the contract-by-contract waivers used in the USDOT's DBE program.[82] This feature has been central to the holding that the DBE program meets the narrow tailoring requirement.[83]

4. Over-inclusiveness and under-inclusiveness of remedies

The over- or under-inclusiveness of those persons to be included in the program is an additional consideration, and goes to whether the remedies truly target the evil identified.[84] The "fit" between the problem and the remedy manifests in three ways: which groups to include, how to define those groups, and which persons will be eligible to be included within those groups.

First, which groups to include must be based upon the evidence.[85] The "random inclusion" of ethnic or racial groups that may never have experienced discrimination in the entity's marketplace may indicate impermissible "racial politics."[86] Similarly, the Seventh Circuit, in striking down Cook County's program, remarked that a "state or local government that has discriminated just against blacks may not by way of remedy discriminate in favor of blacks and Asian-Americans and women."[87] However, at least one court has held that so long as there is some quantum of evidence of discrimination for each group, that is sufficient. The Tenth Circuit held that *Croson* does not require that each group included in the ordinance suffer equally from discrimination.[88]

The level of specificity at which to define beneficiaries is the next question. Approaches range from a single MBE or DBE goal that includes all racial and ethnic minorities and White women,[89] to separate goals for each minority group and women.[90] Ohio's Program was specifically faulted for lumping together all "minorities," with the court questioning the legitimacy of forcing Black contractors to share relief with recent Asian immigrants.[91]

Third, program remedies should be limited to those firms which have suffered actual harm. The DBE Program's rebuttable presumptions of social and economic disadvantage have been central to the courts' holdings that it is narrowly tailored. "While TEA21 creates a rebuttable presumption that members of certain racial minorities fall within that class, the presumption is

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[82] 488 U.S. at 508; *see also Adarand VII*, 228 F.3d at 1181.

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

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

[85] *Philadelphia II*, 6 F.3d at 1007 (strict scrutiny requires data for each minority group; data was insufficient to include Hispanics, Asians or Pacific Islanders or Native Americans); *cf. Northeastern Florida Chapter of the AGC v. Jacksonville*, 508 U.S. 656, 113 S.Ct. 2297 (1993) (new ordinance narrowed to Blacks and women).

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

[87] *BAGC v. Cook County*, 256 F.3d at 646.

[88] *Concrete Work IV*, 321 F.3d at 976.

[89] *See* 49 CFR §26.45(h) (overall goal must not be subdivided into group-specific goals).

[90] *See Dade County II*, 122 F.3d at 901 (separate goals for Blacks and Hispanics).

[91] *Drabik*, 214 F.3d at 739.

rebuttable, wealthy minority owners and wealthy minority-owned firms are excluded, and certification is available to persons who are not presumptively disadvantaged but can demonstrate actual social and economic disadvantage. Thus, race is made relevant in the program, but it is not a determinative factor."[92] Moreover, anyone can challenge the disadvantage of any firm.[93]

5. Sharing of the burden by third parties

Failure to make "neutral" changes to contracting and procurement policies and procedures that disadvantage MBEs and other small businesses may result in a finding that the program unduly burdens non-MBEs.[94] However, "innocent" parties can be made to share some of the burden of the remedy for eradicating racial discrimination.[95] "Implementation of the race-conscious contracting goals for which TEA-21 provides will inevitably result in bids submitted by non-DBE firms being rejected in favor of higher bids from DBEs. Although this places a very real burden on non-DBE firms, this fact alone does not invalidate TEA-21. If it did, all affirmative action programs would be unconstitutional because of the burden upon non-minorities."[96]

6. Duration and review of programs

"Narrow tailoring also implies some sensitivity to the possibility that a program might someday have satisfied its purposes."[97] One of the factors leading to the court's holding that the City of Chicago's M/WBE Program was no longer narrowly tailored was the lack of a sunset provision.[98] As recently reiterated by the Eleventh Circuit Court of Appeals, the "unlimited duration of the [District's] racial goals also demonstrates a lack of narrow tailoring.… While the District's effort to avoid unintentional discrimination should certainly be ongoing, its reliance on

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[92] *Sherbrooke*, 345 F.3d at 973; *see also Grutter*, 123 S.Ct at 2345-46; *Gratz v. Bollinger*, 4539 U.S. 244, 123 S.Ct 2411, 2429 (2003); *Adarand VII*, 228 F.3d at 1183-1184 (personal net worth limit is element of narrow tailoring); *cf. Associated General Contractors v. City of New Haven*, 791 F.Supp. 941, 948 (D. Conn. 1992) (definition of "disadvantage" was vague and unrelated to goal).

[93] 49 CFR §26.87.

[94] *See Engineering Contractors I*, 943 F.Supp. at 1581-1582 (County chose not to change its procurement system).

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

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

[97] *Drabik*, 214 F.3d at 738.

[98] *BAGC* v. *Chicago*, 298 F.Supp.2d at 739; *see also Webster*, 51 F. Supp. 2d at 1382 (one of Fulton County's telling disqualifiers was that it had been implementing a "quota" program since 1979 with no contemplation of program expiration).

racial classifications should not."[99] Similarly, the USDOT DBE Program's periodic review by Congress has been repeatedly held to provide adequate durational limits.[100]

[99] *Virdi*, at *18.

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

III. Defining the Relevant Markets

A. Overview of State Contracting and Procurement Laws and Policies

Maryland has a comprehensive statute for the procurement of construction[101], architectural and engineering services[102], commodities,[103] supplies,[104] and services.[105] Maryland Code Annotated,

[101] "Construction" means the process of building, altering, repairing, improving, or demolishing any structure, building, or other improvement to real property. Construction includes any major work necessary to repair, prevent damage to, or sustain existing components of an improvement to real property. COMAR 21.01.02.01B(23)(a)–(b).

[102] "Architectural services" means professional or creative work that is performed in connection with the design and supervision of construction or landscaping, and that requires architectural education, training, and experience. Architectural services includes consultation, research, investigation, evaluation, planning, architectural design and preparation of related documents, and coordination of services furnished by structural, civil, mechanical, and electrical engineers and other consultants. COMAR 21.01.02.01B(6)(a)–(b). "Engineering services" means professional or creative work that is performed in connection with utilities, structures, buildings, machines, equipment, and processes, and that requires engineering education, training, and experience in the application of special knowledge of the mathematical, physical, and engineering sciences. Engineering services includes consultation, investigation, evaluation, planning, design, and inspection of construction for the purpose of interpreting and assuring compliance with specifications and design within the scope of inspection services. COMAR 21.01.02.01B(37)(a)–(b).

[103] "Commodity" is defined as an item of purchase that may include office goods and materials, food, printing, building materials and other items needed to support normal operations. "Commodity" differs from "supply" in that "commodity" does not include leases of real property and insurance. COMAR 21.01.02.01B(19).

[104] "Supplies" means all tangible personal property, including equipment, leases of equipment, insurance, including necessarily associated services, and printing. COMAR 21.01.02.01B(86)(a).

[105] "Services" means the rendering of time, effort, or work, rather than the furnishing of a specific physical product other than reports incidental to the required performance. It includes, but is not limited to, the professional, personal, and/or contractual services provided by architects, engineers, attorneys, accountants, physicians, consultants, appraisers, land surveyors, and where the service is associated with the provision of expertise or labor, or both. Under COMAR, "Services" does not include services included within the definitions of maintenance, construction-related services, architectural services, engineering services, or energy performance contract services. COMAR 21.01.01.01B(79)(a)–(b). "Maintenance" means any work necessary for the continued operation or upkeep of a facility, structure, building, grounds, or building system, including built-in equipment or an in-ground system, that is not included within the definition of construction. COMAR 21.01.02.01B(53). "Construction-related services" means a service that is necessary for construction and maintenance of a public improvement project. Construction-related services includes feasibility studies, surveying, construction management, construction inspection, programming, energy audits, interior design, and telecommunications systems. COMAR 21.01.02.01B(24)(a)–(b). "Energy performance contract" means an agreement for the provision of energy service, including electricity, heating, ventilation, cooling, steam, or hot water, in which a person agrees to design, install, finance through direct vendor financing and not by way of a municipal lease, maintain, or manage energy systems or equipment to improve the energy efficiency of a building or facility in exchange for a portion of the energy savings. COMAR 21.01.02.01B(36–1).

State Finance and Procurement Article, Division II.[106] This legislation is implemented by Title 21 of the Code of Maryland Regulations (COMAR). The statute identifies eight procurement methods:[107]

Competitive sealed bidding. Generally, contracts costing more than $25,000 must be awarded by competitive sealed bidding unless the procurement officer determines that: (a) specifications cannot be prepared that would permit awarding the contract on the lowest-bid basis; (b) there is only one available source; (c) an emergency exists that necessitates another procurement method; or (d) public interest justifies use of another procurement method.

Competitive sealed proposals. When specifications cannot be prepared that would permit awarding the contract on the lowest bid basis, a competitive sealed proposal process may be used. This is the preferred method for awarding procurement contracts for human, social, cultural and educational services, and real property leases.

Negotiated award after unsatisfactory competitive sealed bidding. Negotiated awards can be made if, after bids have been opened, (a) all bids are rejected; (b) the bids exceed the funds available for the purchase; (c) the procurement officer determines that all the prices received are unreasonable as to one or more of the bid requirements and that no additional funds are available to permit an award to the responsible bidder submitting the most favorable bid; or (d) that a re-solicitation under revised specifications or quantities under competitive sealed bidding would be fiscally disadvantageous or otherwise not in the best interests of the State.

Noncompetitive negotiations in the case of sole-source procurement. Sole-source procurement is permissible only when a good or service is available from only a single vendor. Circumstances justifying a sole-source procurement include: (a) only one source exists that meets the requirement; (b) compatibility of equipment, accessories, or replacement parts is the paramount consideration; (c) a sole vendor's item is needed for trial use or testing; (d) a sole vendor's item is to be procured for resale; or (e) certain public utility services are to be procured and only one source exists.

Emergency procurements. Emergency procurement of supplies, services, maintenance, commodities, construction, or construction-related services costing more than $25,000 are to be used in those limited circumstances for those types of items and quantities necessary to avoid or reduce serious damage to public health, safety, and welfare.

Intergovernmental Cooperative Purchasing Agreements. This approach is subject to some limitations, but in general allows use of a contractor selected under a procurement conducted by another government as long as procurement was competitively procured and the contract is identified as being available for use by other governments.

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[106] Subject to certain exceptions, procurement by USM is not governed by Division II. Md. State Fin. & Proc. Ann. Code, § 11-203(e)(2). However, USM is subject to the Division II provisions in Title 14, Subtitle 3 for minority business participation. Md. State Fin. & Proc. Ann. Code, § 11-203(e)(5)(i)5.

[107] While not a method *per se*, the State is also allowed to consider unsolicited offers.

Small procurements. Contracts valued at less than $25,000 may be procured through informal procurement methods. Small procurements are classified into Category I Small Procurements ($2,500 or less), Category II (greater than $2,500 but less than $10,000), and Category III (greater than $10,000 but less than $25,000). For Category II and III procurements, price or rate quotations should be obtained from at least two vendors. Each procurement agency must also solicit bids from a sufficient number of certified MBEs as is necessary to result in MBE responses to the solicitation. (COMAR 21.05.07.06(1-2))

Expedited procurements. This approach is limited to the Maryland Port Administration (MPA) or the Maryland Aviation Administration (MAA), both of which are part of the Maryland Department of Transportation (MDOT). It enables these two administrations to expedite the procurement process without resorting to emergency procurement. The Expedited Procurement Request is presented to the State Board of Public Works (BPW) for approval. After approval the administration may begin work, but it must submit an Expedited Procurement Report after approval and execution of the contract. Expedited procurements can be made on a contract by contract basis or on a project by project basis, the difference being that multiple contracts may be awarded under a single project.

Preference providers. It must also be noted that preference providers of certain goods and services, specifically those of State Use Industries, Blind Industries, and Certified Sheltered Workshops, receive priority over open competition.

Notices for Invitation for Bids, Requests for Proposals, and Solicitations for Expressions of Interest for procurements expected to exceed $25,000 must be published in the *Maryland Contract Weekly* and *eMaryland Marketplace* (unless it is reasonably expected that the contract will be performed entirely outside of the State or the District of Columbia) at least 20 days before bids are due.[108] Three days public notice is required for solicitations expected to be greater than $10,000 but less than $25,000.[109] For procurements over $25,000 notice is to be published in the *Maryland Contract Weekly* and *eMaryland Marketplace,* and in an appropriate newspaper, periodical, or trade journal. For Categories I and II small procurements, solicitations may be oral, written, or published. For Category III procurements, agencies must use written and published solicitations. If published, solicitations must appear on bid boards or in newspapers of general circulation at least three working days before bids are due. Pre-bid or pre-proposal conferences may be held to explain the procurement requirements but must not be made mandatory. Except for small procurements, notice of the award must be published in the *Maryland Contract Weekly* and *eMaryland Marketplace* within 30 days after the execution and approval of the contract.

1. Construction

State agency construction procurement includes both state and federally-funded purchases. The Department of General Services (DGS), the University System of Maryland System (USM), and the Department of Public Safety and Correctional Services (DPSCS) receive the majority of their

[108] The publication of the *Maryland Contract Weekly* is scheduled to cease July 1, 2006.

[109] COMAR 21.05.07.01B(6), 21.05.07.04C, 21.05.07.06B(3).

funding from the State. Also included in this category is the Maryland Port Administration (MPA), part of MDOT. Other agencies, primarily within MDOT—the State Highway Administration (SHA), Mass Transit Administration (MTA), and MAA—receive a combination of state and federal funds for capital construction projects.[110] State construction contracts funded in whole or in part by the U.S. Department of Transportation are also governed by the DBE Program in 49 CFR Part 26.

In general, BPW approves State construction contracts over $200,000, except contracts for roads, bridges and highways. MDOT, DPSCS, DGS, USM, and the Maryland Stadium Authority (MSA) are the major state agencies authorized to contract for State construction. MDOT procures all contracts relating to the construction of state roads, bridges and highways, and transportation related construction.

Competitive sealed bids are used to procure almost all construction services. The responsible bidder that submits the lowest responsive bid is awarded the contract. A bid is responsive if it conforms in all material respects to the Invitations for Bid. A bidder is deemed responsible if it demonstrates the capability, integrity and reliability to perform the services required.

The ability of a bidder to obtain bid, performance and payment bonds and commercial general liability and workers compensation insurance are key criteria for construction contracts over $100,000. Bid bonds must equal at least 5 percent of the bid, and 100 percent performance and payment bonds are required for all construction contracts costing in excess of $100,000. The head of a procurement agency has some discretion to reduce the amount of the performance bond if it is less costly or more advantageous to the State, and to reduce the amount of the payment bond to not less than 50 percent of the contract price if it is in the State's best interest based on the value and number of subcontracts to be awarded by the prime contractor and the value of the contract. COMAR 21.06.07. However, in practice, procurement officials indicated that the standard amount of the bond is generally not waived.

2. Services

State agency services procurement includes both state and federally-funded purchases. Services range from architectural, engineering, and consultant services to maintenance services. Because of differences based upon the user's needs, the authority to procure selected services has been delegated to particular departments or agencies. In addition, methods of procurement and factors relating to an award can vary significantly by the type of service.

[110] In this study, "MDOT" includes the Maryland Transportation Authority (MdTA), the Maryland Transit Administration (MTA), the Maryland Port Administration (MPA), the State Highway Administration (SHA), the Motor Vehicle Administration (MVA), and the Maryland Aviation Administration (MAA).

a. Architectural and Engineering Services

Only MDOT, DGS, and DPSCS have been delegated the authority to procure A/E services.[111] MSA, as an independent entity, has full authority to procure its own A/E services. DPSCS's authority, however, is limited to contracts of $200,000 or less and is subject to approval by DGS. COMAR 21.02.01.04H(3).

Maryland Department of Transportation A/E Selection Procedures

A/E procurement requests generally originate in the agency or department requesting the service. Requests from transportation units are submitted by the agency head to the Secretary of Transportation. When the request is approved, the certification is transmitted to TPSSB. MDOT, acting through the Consultant Services Division at SHA, and the MDOT units then work together to develop the scope of services and draw up the Solicitation for Expressions of Interest.

Once the Solicitation for Expressions of Interest has been approved, the MDOT unit, again acting through the Consultant Services Division, publicizes the Solicitation of Interest in the *Maryland Contract Weekly* and the *Daily Record*. MDOT A/E procurement managers tend not to use formal bidders lists. Responses to MDOT's Solicitations of Interest are evaluated by the Consultant Screening Committee. A reduced candidate list is developed by the Committee and approved by the agency head. In addition, SHA proposals are evaluated by the Consultant Services Division.

The Architectural and Engineering Consultant Selection Internal Guidelines are used to evaluate Expression of Interest responses. Generally, candidates are short-listed based on general competence; past performance on State work or similar work; compatibility of firm size with the project size; key staff; and capacity to accomplish the proposed work in the required time. Requests for Proposals are sent to those firms placed on the reduced candidate list, composed of two or more firms.

The Consultant Screening Committee rates the firms' qualifications and technical proposals and determines a total score for each. Insurance, particularly professional liability insurance, is required for all projects. Required levels of insurance depend on the particular project. After approval by the head of MDOT unit, the agency then enters into price negotiations with the highest ranked firm. If the agency negotiates a price with the top rated and ranked firm, a recommendation is made to the TPSSB to select or reject the recommended consultant, which

[111] The procurement of architectural and engineering services is governed by the State Finance & Procurement Article, Title 13, Subtitle 3 and by COMAR, Title 21, subtitle 12. MDOT has issued Architectural and Engineering Consultant Selection Internal Guidelines to help with selection of consultants involving A/E services. DGS publishes a guide for A/E selection as well. The MDOT guidelines are "composed of three sections: (a) A/E services above $100,000 processed through the Transportation Professional Services Selection Board (TPSSB); (b) A/E services amounting to $100,000 or less not processed through the Transportation Professional Services Selection Board and (c) functions and composition of various Consulting Screening Committees and Negotiating Teams of the Department." The MDOT guide contains step-by-step procedures and forms, as well as detailed criteria and definitions.

then submits its recommendation to BPW. If negotiations are unsuccessful, the agency usually begins negotiations with the second rated and ranked firm.

Firms are notified of the technical ranking and, upon request, an informational meeting is held with firms who are not top-ranked. Non-qualifying candidates are given the opportunity to discuss the non-qualification with a representative of the Consultant Screening Committee.

Department of General Services A/E Selection Procedures

DGS is generally responsible for procuring A/E services for State agencies, except for MDOT, MSA, USM, and DPSCS in the limited circumstances previously described.[112] Requests from other State agencies or departments are submitted by the respective agency head to the Secretary of General Services and GPSSB. DGS then assists with the preparation of the scope of work for the Solicitation of Interest/Requests for Proposal reviews, evaluates Expressions of Interest and proposals, and makes a recommendation to BPW. BPW then reviews DGS' recommendation and then makes the award. In its procurement for DPSCS, DGS makes a selection and then turns the project over to the user agency after BPW approval. The user departments then bid and award the construction phase of the project.[113] In its procurement for other State agencies, DGS procures both the A/E and construction services required.

Under the DGS process, each architectural or engineering firm responding to the Solicitation of Interest must have a U.S. Government Standard Form 254 on file with the Department. The GPSSB administrator prepares a list of all those who responded to the Solicitation of Interest and who have a Form 254 on file with DGS. Each of these firms is then sent a request for a Form 255, the guidelines for the submission of qualifications and technical proposals, a copy of the criteria for ranking submissions and a request for the identity of the prime participants on the project.

A list of those responding to the request for qualifications and technical proposals is prepared and sent to the Using Agency and the Qualification Committee. The Qualification Committee evaluates and ranks the respondents. GPSSB solicits a price proposal from the number-one-ranked firm, provided that firm has received a ranking of at least 90 percent of a maximum score as set forth in the Request for Proposals. As with MDOT, any firm not ranked number one is entitled to a meeting with the Qualification Committee to discuss its ranking and, if dissatisfied with such a meeting, to air any grievances before GPSSB.

The price proposal is evaluated by a Negotiation Committee, which attempts to negotiate a satisfactory contract with the candidate firm. If they reach a satisfactory agreement, the

[112] There are certain other exceptions for agencies exempt from the procurement law.

[113] For projects in which DGS has been involved at the A/E stage, it also ensures that "construction plans and specifications … conform to … sound building practices and codes" and a team of appropriate professionals reviews schematics and design development, as well as documents submitted at the 50 percent, 95 percent and 100 percent construction phases.

Committee submits its recommendation with supporting documentation to GPSSB for action.[114] GPSSB reviews the recommendation and renders its decision to accept or reject the recommendation. If accepted, GPSSB submits the recommendation to BPW for contract award.

b. Human, Cultural, Social and Educational Services

A number of agencies, including the Department of Health and Mental Hygiene (DHMH), Department of Juvenile Services (DJS)[115] and Department of Human Resources (DHR) have the authority to procure human, social, cultural, and educational services.[116] BPW must review and approve any human, social, cultural, and educational award costing more than $200,000 before the contract is executed, unless the contract results from an emergency procurement. The Department of Budget and Management (DBM) must review and approve all human, social, cultural, and educational services contracts costing $200,000 or less before the contract is executed, unless it is an emergency procurement or a small procurement (i.e., procurements costing less than $25,000). COMAR 21.02.03. This same review and approval process applies to all services contracts under $200,000.

The competitive sealed proposals procurement method is the preferred method for procuring human, social, cultural, and educational services. The sole-source procurement method is used where the required services are available from only a single vendor. The non-competitive negotiation procurement method may be used to procure human, social, and educational services, but cannot be used to procure cultural services.

Non-competitive awards are often used to procure human, social, and educational services to obtain: (1) an employer in a program of on-the-job training for employment and training purposes; (2) group foster care services for children or adults under a negotiated rate system adopted by regulation; (3) or certain residential or community rehabilitation services or therapeutic group home services for children and adolescents. A procurement officer, with the approval of the agency head, determines that two or more sources for the services are available but that, because of the absence of effective competition, it is unreasonable to expect those

[114] If the Negotiation Committee cannot negotiate a satisfactory agreement, it terminates negotiations with the candidate firm and negotiates with the next-most eligible candidate firm in the same manner.

[115] DJS was known as the Department of Juvenile Justice (DJJ) from 1995-2003.

[116] "Human services" means services procured by the Departments of Health and Mental Hygiene, Human Resources, Labor, Licensing, and Regulation, Juvenile Services, or the Office on Aging in order to provide support, care, or shelter directly to third-party clients under a contract the primary purpose of which is the direct provision of these services. COMAR 21.01.02.01B(47). "Cultural services" means services that are provided directly to third-party clients or to the public under a contract the primary purpose of which is the direct provision of cultural services. COMAR 21.01.02.01B(31). "Educational services" means services procured by the Departments of Health and Mental Hygiene, Human Resources, Labor, Licensing, and Regulation, Juvenile Justice, the Office for Individuals with Disabilities, or the Office on Aging in order to provide training directly to third-party clients under a contract the primary purpose of which is the direct provision of educational services. COMAR 21.01.02.01B(35). "Social services" means services procured by the Departments of Health and Mental Hygiene, Human Resources, Labor, Licensing, and Regulation, Juvenile Services, the Office for Individuals with Disabilities, or the Office on Aging in order to provide support, care, or shelter directly to third-party clients under a contract the primary purpose of which is the direct provision of social services. COMAR 21.01.02.01B(82).

sources to respond to an invitation for bids. Solicitations of Interest are sent to known potential providers. In addition, public notice is published in a newspaper of general circulation in the State (if the services are to be provided in more than one area of the State) or the area where the services are to be provided (if the services are to be provided in one area of the State) at least 10 days before Expression of Interests are due. If the contract may exceed $25,000, the request for general Expressions of Interest must be published in the *Maryland Contract Weekly*. As a need for the service arises, the procurement officer may conduct discussions with one or more responsible service providers that previously submitted an Expression of Interest. If the procurement agency's head determines, on the basis of negotiations or past experience with the provider, that the award will be in the State's best interest, the provider will be awarded a contract.

Contractors providing human and social services must be able to meet any applicable program standards that DHMH has adopted before they are allowed to provide any services. Selection criteria include, as applicable, minimum qualifications of providers, minimum qualifications of program staff, minimum facility standards, past performance, and general program and fiscal accountability standards.[117]

c. Other Services

Other services include a wide variety of services ranging from consulting and legal services to maintenance services and data processing. The authority to procure selected services (e.g., legal, financial, telecommunications) has been centralized in a few State agencies. As with other procurement categories, DGS acts as the central procurement agent for the purchase of guaranteed energy performance, real estate leasing, and appraisal services.[118] The State Treasurer's Office procures banking, investment, insurance, insurance-related, and other financial services contracts.[119] The Office of the Attorney General is responsible for procuring the State's outside legal services.[120] DBM acts as the central procurement agent for Information Technology and all other services contracts besides A&E.[121] The types of services purchased by other State agencies or departments vary with the particular needs of the agency or department involved and their level of delegated procurement authority.

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[117] COMAR 21.14.01.05(c).

[118] There are a few exceptions: DGS does not procure listed services for USM, nor does it procure telecommunications services for the Public Broadcasting Commission, and MDOT procures its own appraisal services.

[119] COMAR 21.02.01.04E.

[120] The State's constitution gives the Office of the Attorney General the power to procure all legal services required by the State. Such procurements are not subject to COMAR or to the MBE law. Nevertheless, the Office of the Attorney General follows COMAR in practice and pursues MBE participation accordingly. Nearly one third of the law firms who have had contracts with the Office of the Attorney General are MBE firms. The Office of the Attorney General's MBE efforts are the result of the commitment expressed by the Attorney General to MBE participation in State legal procurement opportunities.

[121] COMAR 21.02.01.04A.

Services for which specifications can be prepared (e.g., maintenance services, data processing services, repair services) and that permit awarding the contract on the lowest-bid basis are let out using Invitations for Bids. MAA, for example, which uses primarily maintenance services, lets out approximately 70 percent of all its service contracts as Invitations for Bids. Services for which specifications cannot be prepared (e.g. consultant services, information technology services) are procured through a Request for Proposals process. Sole source procurements are used in cases where it has been established that the service is unique and can be provided by only one vendor or service provider. This situation occurs most often with respect to maintenance and repair services and replacement parts for previously purchased equipment. At least one additional level of internal approval is needed for a sole source procurement to be processed. Sole source services procurements over $100,000 must be reported to BPW. For other types of sole source procurements the threshold is $50,000.

The Request for Proposal (RFP) process is specified by regulation and, therefore, development of the scope of work and establishment of MBE goals are handled within the agency and require the approval of the agency head. This preliminary work is followed by advertisements and mailings announcing the RFP, usually a pre-proposal conference, committee evaluation and ranking of proposals based on established criteria, and finally the award of the contract to the offeror whose proposal is determined to be most advantageous to the State, considering price and the evaluation factors set forth in the RFP.

3. Commodities, Equipment and Supplies

State agency procurement of goods includes both state and federally-funded purchases. With several important exceptions, DGS is authorized to award purchase contracts for commodities and equipment for other State agencies. Agencies may not purchase from an alternate source an item which is available through a DGS scheduled purchase program or a DGS term requirement/indefinite quantity contract. DGS' scheduled purchase items and contract items supersede any exempt or delegated procurement. Exceptions include: automated information-processing equipment, motor vehicles (the purchase of which requires the prior approval of DBM), and purchases on behalf of MTA of rolling stock and other property particular to the operation of transit or railroad facilities.[122] Certain purchases by MPA, the Maryland State Police, and the Department of Natural Resources are also excluded. DGS has delegated to all agencies the purchasing authority for approximately 22 general, non-classified commodities. Other exceptions are provided by regulation.

DGS sets the standards, develops procedures and decides on the level of delegated procurement for each agency. There is a blanket $1,000 delegation, while some agencies have $2,500 to $5,000 delegations. In some areas where it does not make sense for DGS to handle procurements, higher delegations are given.

DGS maintains a computerized bidders list for commodities. A firm may also register on *eMaryland Marketplace*. To be included on the list, a firm needs to complete an application

[122] Maryland Code Annotated Transportation Article, section 7-403.

listing pertinent information such as company name, address, phone number, federal ID number, gross sales, registration with the State Department of Assessments and Taxation, number of employees, type of organization, majority ownership, locations firm can supply, contact person, and products firm can provide. An MBE may not self-certify, but if a firm has identified itself as minority-owned on DGS's bidders list, it is strongly encouraged by staff and the department literature to pursue certification through MDOT.

In accordance with Maryland procurement law and regulations, under a competitive sealed bid procurement, the lowest responsive bid received from a responsible bidder wins the award. To be responsive, a bid must conform in all material respects to the Request for Quotation or Invitation for Bid. To be deemed responsible, the firm must demonstrate the capability, integrity and reliability to deliver the goods required. For commodities, the lowest-bid requirement may be qualified by a Small Business Program authorizing a 5 percent price preference for small businesses. As with other procurements, sole source procurements are restricted to circumstances where the goods sought are available from only one source.

B. Preparing the Master Construction Contract/Subcontract Database

The *Croson* court indicated that the U.S. Congress' *national* findings of minority business discrimination in construction and related industries were not specific enough, standing alone, to support a MBE program in the City of Richmond. According to the Court, "[t]he probative value of these findings for demonstrating the existence of discrimination in Richmond is extremely limited."[123] To support its conclusion, the Court noted that the federal DBE program, by including waivers and other provisions whereby DBE affirmative action requirements could be relaxed under certain conditions, "explicitly recognized that the scope of the problem would vary from market area to market area."[124]

The first step, therefore, in our evaluation of MBE availability and participation for the State of Maryland must be to define the relevant market area for its relevant contracting and procurement activities. Markets have both a product and a geographic dimension, both of which are considered.[125] For this Study, we define Maryland's market area based on its own historical contracting and subcontracting records. We define the geographic market dimension by calculating from zip code data where the majority of Maryland's contractors and subcontractors are located, and we define the product market dimension by estimating which Standard Industrial Classification (SIC) codes best describe each identifiable contractor, subcontractor, subconsultant, or supplier in those records. In both cases, the definitions are weighted according to how many dollars were spent in with firms from each zip code or SIC code so that geographic areas and industries that receive relatively more contracting dollars receive relatively more

[123] *Croson*, 488 U.S. at 504.

[124] *Id*. Since *Croson* concerned a challenge to local program while *Fullilove* concerned a challenge to a federal program, the *Croson* ruling did not directly affect the federal government's array of MBE programs. In the summer of 1995, a 5-4 Supreme Court majority in *Adarand* extended strict scrutiny to the federal government as well, thus formally overturning the *Fullilove* decision.

[125] *See*, for example, Areeda, Phillip, and Louis Kaplow, *Antitrust Analysis: Problems, Text, Cases*, Boston: Little, Brown and Company, 4th Edition, 1988.

weight in the estimation of MBE availability. Once the geographic and industry parameters of Maryland'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 Maryland's specific market area and contracting circumstances.

There are more than 70 distinct state agencies comprising Maryland state government. NERA made an empirical determination of the amount of relevant contract and procurement spending attributable to each state agency in order to select agencies for inclusion in the Study.

Using the State's chart of accounts, we conducted an analysis of Comptroller Object Codes in order to identify those accounts containing relevant contracting and procurement expenditures in the relevant procurement categories. For this Study, the procurement categories included were: (1) Construction, (2) Architecture, Engineering, and other Construction-Related Services (AE-CRS), (3) Commodities, Supplies, and Equipment (CSE), (4) Maintenance, (5) Information Technology (IT), and (6) Services.

The State then provided NERA with an electronic file consisting of all payments made in the relevant object codes. This extract included agency code, fiscal year, object code, and a year-to-date spending amount. Contracts and purchases were deemed relevant to the study if they exceeded $25,000 and were awarded and substantially completed between July 1, 1999 and June 30, 2004 (FY2000–FY2004).

In conjunction with NERA, the State then identified a subset of 28 Maryland state agencies for inclusion in the Study. Collectively, these agencies account for approximately 90 percent of all relevant State contracting and procurement expenditures during the study period. The included agencies appear in Table 3.1.[126] NERA worked with MDOT Project Managers and with Maryland procurement and MBE program personnel at each of the included agencies to identify and acquire relevant prime contract and purchase order records for all relevant contracts and purchases within the FY2000–FY2004 study period.

For each prime contract and purchase order during the study period, we worked with state personnel to obtain data including the awarding agency, delegation status, procurement method, procurement type, project description, prime contractor name and address, prime contractor MBE status, prime contractor identification number, prime contract identification number, award date, completion date, and contract amount. In this manner, we ultimately identified more than 21,000 prime contracts and/or purchase orders from 28 distinct state agencies totaling $16.97 billion over the FY2000–FY2004 period.

Unfortunately, the State's current ability to track related subcontractor, subconsultant, and supplier activity (collectively "subcontractor" or "subcontract" activity) remains limited. Although significant efforts appear to have been made at some state agencies to collect and maintain this data when it pertains to MBEs, no similar effort appears to have been made with

[126] Several additional agencies were included in the study for informational purposes only, including the Comptroller, the Board of Public Works, the Department of Labor, Licensing, and Regulation, and the Department of Business and Economic Development. Each of these agencies provided important secondary data to the study team.

respect to non-MBEs.[127] Non-MBE subcontracting records are equally as important as MBE subcontracting records for purposes of evaluating contracting affirmative action at the level of detail specified by *Croson*. This is because narrow tailoring requires the allocation of contracting and procurement dollars by industry category and it has been demonstrated that expenditures with MBE subcontractors are likely to be distributed differently across industry categories than expenditures with non-MBE subcontractors.

In order to overcome these limitations of the State's contracting and procurement data, we embarked upon a joint effort with the State to reconstruct five years of relevant subcontract data. After collecting, cleaning, and processing our universe of prime contracts and purchase, we drew a random statistical sample from which to gather all associated first-tier subcontract data. Sampling was proportional to contract size in dollars and the sample frame was stratified according to procurement category and fiscal year.[128] NERA then retained Bert Smith & Company (BSC), one of the Maryland area's largest, oldest, and most well-respected Certified Public Accounting firms, to work jointly with State personnel to collect the necessary subcontract data from the prime contractors in the sample.[129]

NERA and the State worked jointly with BSC to develop a data collection instrument and methodology. Each prime contractor or vendor in the sample received a registered letter from the State describing the Study and the scope of BSC's retention and requesting their assistance with the data collection effort. Included with each letter were the necessary forms for providing the requested subcontract data. For each first-tier subcontract associated with any given prime contract, we requested information including subcontractor name, address, telephone number, subcontract award amount, change order amount, total amount paid, type of work performed, and MBE status.[130] BSC conducted this data collection effort between August and December of 2005.

The sample provided to BSC contained an effective total of 2,488 prime contracts, primarily in the Construction, AE-CRS, Maintenance, and Services.[131] BSC successfully collected the requisite information for approximately 56 percent of the sample, or 1,404 prime contracts.[132] An

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[127] Moreover, even in those cases where MBE subcontracting records were maintained, the amount of detail that was retained electronically varied widely from agency to agency; and in some cases were records had been maintained, we were told they were discarded after three years in accordance with existing State laws governing records retention.

[128] The largest contracts in each stratum were sampled with certainty and the remainder were sampled with replacement.

[129] Since there was very little evidence of routine subcontracting activity for expenditures in the CSE and IT procurement categories, a separate sample of prime contracts only was created for these two categories and later combined with the data collected by BSC.

[130] In the case of IACPSC, which is charged with facilitating construction of public schools and related facilities, much of the prime contract data was retained by the public school district for which a given project was conducted. In these cases, BSC worked directly with the district to obtain the requisite subcontract information.

[131] "Effective total" since some contracts were counted more than once under our contract sampling method.

[132] A number of contracts were ultimately discarded after BSC's data collection was completed because they were determined to be out of the study's scope. For example, contracts with other public agencies (except public school districts on IACPSC-funded school construction projects) were excluded, as were contracts with non-profit

additional sample of 1,739 prime contracts from the CSE and IT categories was also prepared and included.

All data resulting from our data collection efforts was then keypunched, collated, cross-referenced, and consolidated to form the Master Contract/Subcontract Database for this Study. After all contractor and subcontractor names were internally reconciled and match-merged, we cross-referenced them with the employer records from the Maryland Department of Labor, Licensing, and Regulation (DLLR), Dun & Bradstreet, American Business Information, Hoover's Company Records, and other sources in order to assign SIC code(s) to each.[133] SIC codes were assigned at the four-digit level—the most detailed level available. We also used these sources to assign city, state and zip code information in those cases where it was not already available from internal Maryland data.

The final Master Contract/Subcontract Database included 3,056 prime contracts and 10,158 associated subcontracts, with a total overall dollar value of $8.57 billion. Tables 3.2, 3.3, and 3.4 summarize the contract and subcontract dollars accounted for in the Master Contract/Subcontract database assembled for this Study, covering contracts and subcontracts awarded and completed during the FY2000–FY2004 time period.

Tables 3.2 shows a total of $8.57 billion in relevant contract and subcontract spending during the study period. Of this:

- Construction accounted for $4.41 billion, or about 51 percent of the total;
- Services accounted for $2.06 billion, or about 24 percent of the total;
- CSE accounted for $1.01 million, or about 12 percent of the total;
- AE-CRS accounted for $499.8 million, or about 6 percent of the total;
- IT accounted for $323.2 million, or about 4 percent of the total;
- Maintenance accounted for $272.1 million, or about 3 percent of the total.

The 725 Construction prime contracts we examined had 8,214 associated subcontracts— an average of 11 subcontracts per prime contract. Subcontracting accounted for 59 percent of all Construction contract dollars on average. The 196 AE-CRS prime contracts we examined had 925 associated subcontracts—an average of 5 subcontracts per prime contract. Subcontracting in AE-CRS accounted for about 28 percent of all AE-CRS contract dollars during the study period. Subcontracting activity in the other procurement categories was far less prevalent. In CSE and

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institutions. A small number of contracts for out of scope items such as leasing of land, state employee travel expenses, and payments to regulated utilities, were also excluded. A total 87 prime contracts were removed from the database for one or more of these reasons.

[133] Other sources include project names, project titles, and contractor industry descriptions, where available, in Maryland's internal contracting records.

IT, virtually no subcontracting is observed. Maintenance averaged 2 subcontracts per prime contract and subcontract dollars averaged about 15 percent of all Maintenance dollars. Services averaged about 4 subcontracts per prime contract and subcontract dollars averaged less than 4 percent of all Services dollars.

Table 3.3 shows the total number of prime contracts in our sample awarded during each year of the study period and the total annual dollar value of those awards. Both the absolute dollar amount of contracting and the average contract amount have trended downward since a peak in 2001.

Table 3.4 shows the total number of prime contracts and total dollars amounts awarded during the study period by each of the 28 agencies in the study scope. The State Highway Administration with almost $1.6 billion worth of contracts in the sample, is the single largest agency, followed closely by the Department of Budget and Management and the Interagency Committee for Public School Construction with $1.4 billion and $1.2 billion, respectively. Among the remaining agencies the largest are the Maryland Transit Administration, the University of Maryland at College Park, and the Maryland Aviation Administration—each with in excess of $500 million worth of contracts in the sample. Among the smallest agencies are certain of the individual institutions of higher education comprising the University System of Maryland. Collectively, however, the USM institutions rank among the largest of state agencies — with a total of more than $1.1 billion in contracts during the study period.

C. Product Market Definition

Using the major procurement categories assigned by the State to each prime contract and the primary SIC 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 procurement category, as measured by totals dollars awarded. These industries are shown below in Tables 3.5 through 3.10.[134]

The relevant SIC codes and their associated dollar weights within each procurement category appear below in Tables 3.5 through 3.10, respectively. It is clear from these six tables that, although numerous industries play a role in Maryland's contracting and procurement activities, actual contracting and subcontracting opportunities are not distributed evenly among them. The distribution of contract expenditures is, in fact, highly skewed.

In Construction, for example, we see from Table 3.5 that one major industry group alone (SIC 17) accounts for more than two-fifth's of total dollars and three industry groups account for more than four-fifths of total dollars, with the remaining one-fifth distributed among many different industry groups. In AE-CRS (Table 3.5), we see an even more concentrated pattern — one industry (SIC 87) accounts for more than 85 percent of total expenditures. Similar patterns of industry concentration are observed in the remaining procurement categories as well (Tables 3.6 to 3.9).

[134] In some cases state agency records did not identify the procurement category. We attempted to assign these contracts to their proper procurement category based on the project description and/or the primary industry of the prime contractor.

Each major industry group identified in Tables 3.5 through 3.10 consists on several more detailed industries. In total, Maryland contracting and procurement expenditures occur in 230 distinct industry categories. However, 70 industries collectively account for 95 percent of all expenditures during the study period. These 70 detailed industries are shown below in Table 3.10. The resulting percentage weights from this final product market table are used below in Chapter IV to calculate overall statewide average MBE availability figures.[135]

In Table 3.11 as well, the skewed distribution of expenditures across industries is evident. The top four industries together account for one-third of all contract dollars, the top nine industries together account for approximately one-half of all dollars, and the top 18 industries together account for two-thirds of all dollars.

D. Geographic Market Definition

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

Contractors located in the State of Maryland account for the vast majority of contracting and procurement expenditures during the study period. As shown in Table 3.12, the in-state share of expenditures is highest in AE-CRS and Maintenance (both in excess of 85%) and lowest in CSE (45 percent). Overall, the in-state share of contracting and procurement dollars is 69 percent.

If the geographic scope is expanded slightly beyond the State's borders to encompass, the State of Delaware and the Washington, DC Metropolitan Statistical Area (which includes the District of Columbia as well as parts of Maryland, Virginia, and West Virginia), the overall share of contract dollars accounted for rises significantly. In this case, the in-region share of expenditures is 85 percent overall. The in-region share is highest in Services (98 percent), AE-CRS (94 percent), Maintenance (91 percent), and Construction (87 percent). In IT the in-region share is 67 percent and in CSE, 47 percent.

For purposes of this Study therefore we define the primary geographic market area to be the State of Maryland, the State of Delaware, and the Washington DC Metropolitan Statistical Area.

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

E. Tables

Table 3.1. Maryland State Agencies Included in the Scope of the Study

AGENCY	
Maryland Department of Transportation (MDOT):	University System of Maryland (USM), cont'd:
State Highway Administration (SHA)	Frostburg State University (FSU)
Maryland Aviation Administration (MAA)	Salisbury University (SU)
Maryland Transit Administration (MTA)	Towson University (TU)
Maryland Port Administration (MPA)	University of Maryland Univ. College (UMUC)
Motor Vehicle Administration (MVA)	
The Secretary's Office (TSO)	Department of Budget and Management (DBM)
Maryland Transportation Authority (MdTA)	Department of General Services (DGS)
University System of Maryland (USM):	Department of Health & Mental Hygiene (DHMH)
University of Maryland at College Park (UMCP)	Department of Human Resources (DHR)
University of Baltimore (UB)	Interagency Ctte. on Public School Const. (IACPSC)
University of Maryland, Baltimore (UMB)	Department of Juvenile Services (DJS)
University of Maryland, Balt. County (UMBC)	Morgan State University (MSU)
Bowie State University (BSU)	Dept. of Public Safety & Correctional Svcs. (DPSCS)
Coppin State University (CSU)	Maryland State Lottery Agency (MSLA)
University of Maryland Eastern Shore (UMES)	Maryland Stadium Authority (MSA)

Table 3.2. Summary of Master Contract/Subcontract Database: Prime Contracts and Subcontracts by Procurement Category

CONTRACT CATEGORY	NUMBER OF CONTRACTS	DOLLARS AWARDED
CONSTRUCTION		*$4,411,550,975*
Prime Contracts	725	$1,791,363,226
Subcontracts	8,214	$2,620,187,749
ARCHICTECURE, ENGINEERING, AND CRS		*$499,798,243*
Prime Contracts	196	$360,704,177
Subcontracts	925	$139,094,066
COMMODITIES, SUPPLIES, & EQUIPMENT		*$1,008,519,276*
Prime Contracts	1,447	$1,008,379,025
Subcontracts	2	$140,251
INFORMATION TECHNOLOGY		*$323,249,710*
Prime Contracts	356	$320,125,431
Subcontracts	17	$3,124,279
MAINTENANCE		*$272,100,761*
Prime Contracts	171	$231,911,246
Subcontracts	403	$40,189,515
SERVICES		*$2,055,644,094*
Prime Contracts	161	$1,981,274,413
Subcontracts	597	$74,369,681
GRAND TOTAL		*$8,570,863,059*
Prime Contracts	3,056	$5,693,757,518
Subcontracts	10,158	$2,877,105,541

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

Table 3.3. Summary of Master Contract/Subcontract Database: Prime Contracts by Year of Award

YEAR OF AWARD	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED
2000	461	$1,596,940,110
2001	603	$2,413,140,356
2002	727	$2,225,879,805
2003	677	$1,427,855,785
2004	588	$907,047,004
TOTAL	*3,056*	*$8,570,863,059*

Source: NERA calculations from Master Contract/Subcontract Database.

Table 3.4. Summary of Master Contract/Subcontract Database: Prime Contracts by Agency

AGENCY	NUMBER OF PRIME CONTRACTS	DOLLARS AWARDED
State Highway Administration	398	$1,580,316,276
Department of Budget and Management	25	$1,419,590,058
Interagency Committee on Public School Construction	266	$1,230,802,324
Maryland Transit Administration	314	$693,543,211
University of Maryland at College Park	413	$626,205,449
Maryland Aviation Administration	112	$529,582,223
Maryland Transportation Authority	54	$462,176,966
Department of General Services	445	$440,494,519
Maryland Port Administration	74	$424,141,958
University of Maryland, Baltimore	98	$350,943,545
Maryland State Lottery Agency	5	$150,288,203
Motor Vehicle Administration	43	$139,564,622
Department of Public Safety and Correctional Services	207	$114,338,838
Maryland Department of Transportation-The Secretary's Office	104	$81,895,650
Maryland Stadium Authority	24	$55,957,373
Morgan State University	118	$50,922,687
Department of Health & Mental Hygiene	46	$44,984,008
University of Maryland, Baltimore County	60	$39,952,931
University of Maryland University College	75	$31,198,796
Department of Juvenile Services	11	$24,345,745
Department of Human Resources	23	$23,121,417
Bowie State University	40	$18,262,515
Towson University	48	$17,370,841
Frostburg State University	15	$13,780,378
Coppin State University	8	$3,287,331
University of Baltimore	14	$1,650,091
Salisbury University	10	$1,102,788
University of Maryland Eastern Shore	6	$1,042,316
TOTAL	*3,056*	*$8,570,863,059*

Source: NERA calculations from Master Contract/Subcontract Database.

Table 3.5. Distribution of Contract and Subcontract Dollars by Major Industry Group: Construction

SIC Code	SIC Description	Percentage	Cumulative Percentage
17	Special trade contractors	41.01	41.01
16	Heavy construction, except building	25.84	66.84
15	General building contractors	14.58	81.42
50	Wholesale trade--durable goods	6.56	87.98
87	Engineering and management services	2.55	90.53
73	Business services	1.82	92.35
34	Fabricated metal products	1.57	93.92
35	Industrial machinery and equipment	1.53	95.45
32	Stone, clay, glass, and concrete product	1.03	96.48
76	Miscellaneous repair services	0.55	97.03
07	Agricultural services	0.53	97.57
37	Transportation equipment	0.43	98.00
36	Electric and other electronic equipment	0.36	98.36
42	Trucking and warehousing	0.32	98.68
65	Real estate	0.24	98.93
39	Miscellaneous manufacturing industries	0.19	99.12
	Balance of industries	0.88	100.00
	TOTAL - $4,411,550,975		

Source: NERA calculations from Master Contract/Subcontract Database.

Table 3.6. Distribution of Contract and Subcontract Dollars by Major Industry Group: AE-CRS

SIC Code	SIC Description	Percentage	Cumulative Percentage
87	Engineering and management services	85.04	85.04
16	Heavy construction, except building	6.00	91.03
17	Special trade contractors	1.78	92.82
73	Business services	1.55	94.36
65	Real estate	1.49	95.86
07	Agricultural services	0.98	96.84
15	General building contractors	0.69	97.52
34	Fabricated metal products	0.64	98.17
36	Electric and other electronic equipment	0.53	98.70
38	Instruments and related products	0.45	99.15
	Balance of Industries	0.85	100.00
	TOTAL - $499,798,243		

Source: NERA calculations from Master Contract/Subcontract Database.

Table 3.7. Distribution of Contract and Subcontract Dollars by Major Industry Group: CSE

SIC Code	SIC Description	Percentage	Cumulative Percentage
51	Wholesale trade--nondurable goods	30.64	30.64
50	Wholesale trade--durable goods	29.89	60.53
37	Transportation equipment	10.95	71.48
73	Business services	5.47	76.94
27	Printing and publishing	4.93	81.87
28	Chemicals and allied products	4.23	86.10
55	Automotive dealers and service stations	3.47	89.57
59	Miscellaneous retail	1.59	91.16
36	Electric and other electronic equipment	1.57	92.72
58	Eating and drinking places	1.26	93.98
48	Communications	0.87	94.85
38	Instruments and related products	0.76	95.61
17	Special trade contractors	0.65	96.26
32	Stone, clay, glass, and concrete product	0.63	96.90
39	Miscellaneous manufacturing industries	0.61	97.50
75	Automotive repair, services, and parking	0.53	98.03
41	Local and interurban passenger transit	0.48	98.52
49	Electric, gas, and sanitary services	0.31	98.83
56	Apparel and accessory stores	0.27	99.10
	Balance of Industries	0.90	100.00
	TOTAL - $1,008,519,276		

Source: NERA calculations from Master Contract/Subcontract Database.

Table 3.8. Distribution of Contract and Subcontract Dollars by Major Industry Group: IT

SIC Code	SIC Description	Percentage	Cumulative Percentage
73	Business services	84.93	84.93
50	Wholesale trade--durable goods	9.13	94.07
87	Engineering and management services	3.81	97.88
36	Electric and other electronic equipment	0.94	98.82
48	Communications	0.72	99.54
17	Special trade contractors	0.21	99.75
	Balance of Industries	0.25	100.00
	TOTAL - $323,249,710		

Source: NERA calculations from Master Contract/Subcontract Database.

Table 3.9. Distribution of Contract and Subcontract Dollars by Major Industry Group: Maintenance

SIC Code	SIC Description	Percentage	Cumulative Percentage
16	Heavy construction, except building	37.13	37.13
17	Special trade contractors	24.42	61.55
73	Business services	17.41	78.95
47	Transportation services	3.36	82.31
87	Engineering and management services	2.95	85.26
42	Trucking and warehousing	2.92	88.18
49	Electric, gas, and sanitary services	2.11	90.30
15	General building contractors	1.94	92.23
07	Agricultural services	1.89	94.12
50	Wholesale trade--durable goods	1.37	95.49
36	Electric and other electronic equipment	1.29	96.79
29	Petroleum and coal products	1.13	97.91
35	Industrial machinery and equipment	0.69	98.60
59	Miscellaneous retail	0.40	99.00
	Balance of Industries	1.00	100.00
	TOTAL - $272,100,761	1.00	100.00

Source: NERA calculations from Master Contract/Subcontract Database.

Table 3.10. Distribution of Contract and Subcontract Dollars by Major Industry Group: Services

SIC Code	SIC Description	Percentage	Cumulative Percentage
63	Insurance carriers	43.65	43.65
80	Health services	16.61	60.26
44	Water transportation	13.21	73.47
73	Business services	9.33	82.80
50	Wholesale trade--durable goods	4.74	87.54
41	Local and interurban passenger transit	3.59	91.12
87	Engineering and management services	3.48	94.60
58	Eating and drinking places	1.39	96.00
83	Social services	0.64	96.63
42	Trucking and warehousing	0.62	97.26
65	Real estate	0.60	97.86
49	Electric, gas, and sanitary services	0.51	98.36
76	Miscellaneous repair services	0.44	98.81
27	Printing and publishing	0.27	99.08
	Balance of Industries	0.91	100.00
	TOTAL - $2,055,644,094		

Source: NERA calculations from Master Contract/Subcontract Database.

Table 3.11. Distribution of Contract and Subcontract Dollars by Detailed Industry: All Procurement Categories Combined

SIC Code	SIC Description	Percentage	Cumulative Percentage
1611	Highway and Street Construction	11.82	11.82
6324	Hospital and Medical Service Plans	10.46	22.29
1542	Nonresidential Construction, n.e.c.	5.87	28.16
1711	Plumbing, Heating, and Air Conditioning	5.25	33.41
8711	Engineering Services	4.39	37.80
8011	Offices and Clinics of Doctors of Medicine	3.98	41.78
1731	Electrical Work	3.90	45.68
4491	Marine Cargo Handling	3.17	48.85
1771	Concrete Work	3.11	51.96
7373	Computer Integrated Systems Design	2.71	54.67
1741	Masonry and Other Stonework	2.30	56.97
1541	Industrial Buildings and Warehouses	1.80	58.77
5169	Chemicals and Allied Products, n.e.c.	1.52	60.29
1622	Bridge, Tunnel, and Elevated Highway	1.52	61.80
5051	Metals Service Centers and Offices	1.51	63.32
7374	Computer Processing and Data Preparation and Processing Service	1.26	64.58
1794	Excavation Work	1.20	65.78
5099	Durable Goods, n.e.c.	1.17	66.95
5172	Petroleum and Petroleum Products Wholesalers, Except Bulk Stations and Terminals	1.09	68.03
1791	Structural Steel Erection	1.01	69.04
1799	Special Trade Contractors, n.e.c.	0.97	70.01
5012	Automobiles and Other Motor Vehicles	0.97	70.98
1761	Roofing, Siding, and Sheet Metal Work	0.96	71.94
1623	Water, Sewer, and Utility Lines	0.91	72.84
1742	Plastering, Dry Wall, and Insulation	0.87	73.72
8748	Business Consulting, n.e.c.	0.85	74.57
3743	Railroad Equipment	0.81	75.38
7311	Advertising Agencies	0.79	76.17
1721	Painting	0.77	76.93
8712	Architectural Services	0.74	77.67

SIC Code	SIC Description	Percentage	Cumulative Percentage
3711	Motor Vehicles and Car Bodies	0.72	78.39
8742	Management Consulting Services	0.71	79.11
4141	Local Bus Charter Service	0.63	79.74
3531	Construction Machinery	0.62	80.36
5141	Groceries, General Line	0.62	80.98
2752	Commercial Printing, Lithographic	0.61	81.60
5045	Computers and Computer Peripheral Equipment and Software	0.61	82.21
1629	Heavy Construction, n.e.c.	0.59	82.80
3441	Fabricated Structural Metal	0.58	83.38
7389	Business Services, n.e.c.	0.54	83.92
1751	Carpentry Work	0.54	84.46
5044	Office Equipment	0.53	84.99
5084	Industrial Machinery and Equipment	0.52	85.51
2834	Pharmaceutical Preparations	0.50	86.01
5049	Professional Equipment and Supplies, n.e.c.	0.49	86.50
5812	Eating Places	0.48	86.98
7363	Help Supply Services	0.48	87.46
5046	Commercial Equipment, n.e.c.	0.48	87.94
7371	Computer Programming Services	0.46	88.40
3273	Ready-Mixed Concrete	0.44	88.83
8741	Management Services	0.44	89.27
1793	Glass and Glazing Work	0.41	89.68
5511	New and Used Car Dealers	0.41	90.08
7349	Building Cleaning and Maintenance Services, n.e.c.	0.40	90.49
6512	Nonresidential Building Operators	0.36	90.85
5047	Medical, Dental, and Hospital Equipment and Supplies	0.36	91.20
5031	Lumber, Plywood, Millwork, and Wood Panels	0.34	91.55
4111	Local and Suburban Transit	0.32	91.86
7699	Repair Shops and Related Services, n.e.c.	0.30	92.17
5088	Transportation Equipment and Supplies, Except Motor Vehicles	0.29	92.46
5075	Warm Air Heating and Air-Conditioning Equipment and Supplies	0.29	92.75
7379	Computer Related Services, n.e.c.	0.27	93.02
1752	Floor Laying and Floor Work, n.e.c.	0.27	93.29

SIC Code	SIC Description	Percentage	Cumulative Percentage
3669	Communications Equipment, n.e.c.	0.26	93.55
4212	Local Trucking Without Storage	0.26	93.81
0782	Lawn and Garden Services	0.25	94.06
5085	Industrial Supplies	0.25	94.31
7353	Heavy Construction Equipment Rental and Leasing	0.24	94.55
1796	Installing Building Equipment, n.e.c.	0.23	94.78
4953	Refuse Systems	0.22	95.00
	Balance of Industries	5.00	100.00
	TOTAL - $8,570,863,060		

Source: NERA calculations from Master Contract/Subcontract Database.

Table 3.12. Distribution of Maryland Contract Dollars by Contract Category

Location	Con-struc-tion (%)	AE-CRS (%)	CSE (%)	IT (%)	Main-tenance (%)	Services (%)	Overall (%)
Inside Maryland	77.4	88.0	44.5	64.8	86.0	58.7	69.4
Outside Maryland	222.6	12.0	55.5	35.2	14.0	41.3	30.6
Inside MD-DC-DE-VA	87.4	93.5	46.6	67.0	90.6	98.4	84.9
Outside MD-DC-DE-VA	12.6	6.5	53.4	33.0	9.4	1.6	15.1

Source: NERA calculations from Maryland Master Contract/Subcontract Database.

IV. MBE Availability in the State of Maryland's Marketplace

A. Identifying Businesses in the Relevant Markets

MBE availability (unweighted) is defined as the number of MBEs divided by the total number of businesses in the State of Maryland's contracting market area—what we will refer to as the Baseline Business Population.[136] Determining the total number of businesses in the relevant markets, however, is more straightforward than determining the number of minority- or women-owned businesses in those markets. The latter task has three main parts: (1) identify all listed MBEs in the relevant market; (2) verify the ownership status of listed MBEs; and (3) estimate the number of unlisted MBEs in the relevant market. This section describes how these tasks were accomplished for the State of Maryland.

1. Estimate the Total Number of Businesses in the Market

We used Dun & Bradstreet's *MarketPlace* database to determine the total number of businesses operating in the relevant geographic and product markets (these markets were discussed in the previous section). *MarketPlace* is a comprehensive database of U. S. businesses. This database, which contains over 13 million records, is updated continuously, and Dun & Bradstreet issues a revised version each quarter. For this study, we used data for the third quarter of 2005. Each record in *MarketPlace* represents a business and includes the company name, address, telephone number, primary four-digit SIC code, secondary SIC code(s) (if any), business type, DUNS Number (a unique number assigned to each business by Dun & Bradstreet) and other descriptive information. Dun & Bradstreet gathers and verifies information from many different sources. These sources include 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 *MarketPlace* database to identify the total number of businesses in each four-digit SIC code to which we had anticipated assigning a product market weight. Table 4.1 shows the number of businesses identified in each SIC code within the Construction procurement category, along with the associated industry weight. Comparable data for AE-CRS, CSE, IT, Maintenance, and Services, appears in Tables 4.2-4.6, respectively.

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

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

2. Identify Listed MBEs

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

First, NERA completed an intensive regional search for information on minority-owned and woman-owned businesses in Maryland and surrounding areas. Beyond the information already in *MarketPlace*, NERA collected lists of MBEs from MDOT as well as other public and private entities in and surrounding the State of Maryland. Specifically, directories were included from:[137] MDOT, State of Maryland R*STAR Database, the federal government's Central Contractor Registration database,[138] Delaware DOT, Pennsylvania DOT Bureau of Equal Opportunity, Virginia DOT, New York DOT, New Jersey DOT, City of Baltimore Minority and Women's Business Opportunity Office, City of Philadelphia Minority Business Enterprise Council, Washington Metropolitan Area Transit Authority, Anne Arundel County Economic Development Corporation and County Office of Central Services, Howard County Purchasing Department, Metropolitan Washington Airport Authority, Baltimore Hispanic Chamber of Commerce, Business Resource Services, Small Business Association Dynamic Small Business Search, Diversity Information Resources, National Association of Women Business Owners-Maryland, World Wide Minority Business Network (MBNet.com), Baltimore Black Pages, Montgomery County Procurement Department, Maryland National Capital Park and Planning Commission (M-NCPPC), and the NAACP Baltimore City Branch.[139]

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[137] 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 included the Southeastern Pennsylvania Transportation Authority, Montgomery County, Women Entrepreneurs of Baltimore, Baltimore County Office of Fair Practices and Community Affairs, Howard County Economic Development Authority, Baltimore-Washington International Airport, Maryland Aviation Administration, Maryland Mass Transit Administration-Baltimore, Maryland Governor's Office of Minority Affairs, Council for Economic and Business Opportunity, Baltimore County Office of Fair Practices and Community Affairs, Annapolis and Anne Arundel County Chamber of Commerce, Allegheny County and County Port Authority-Pennsylvania, Washington Suburban Sanitary Commission, Prince George's County, University of Baltimore, Washington County, and Baltimore County Public Schools.

[138] The Central Contractor Registration (CCR) is the primary vendor database for the U.S. Federal Government. The CCR collects, validates, stores and disseminates data in support of agency acquisition missions. As of December 2002, the CCR system has eliminated the requirement that small businesses register separately within the Small Business Administration's PRO-Net database.

[139] A number of public and private organizations we contacted were unable or unwilling to provide relevant lists or directories. These included: American Subcontractors Association of Baltimore, Associated General Contractors of America-Maryland Chapter, Baltimore Orioles Diverse Business Partners Program, Baltimore, Chesapeake, Metro Washington, Cumberland Valley, and Eastern Shore Chapters of the Associated Builders and Contractors Incorporated, Baltimore-Washington Corridor Chamber of Commerce, Building Congress and Exchange of Metropolitan Baltimore, African American Coalition of Howard County, Baltimore Chapter of the National Association of Minority Contractors, Coalition of Minority Business Enterprises, DC Chapter-National Association of Women in Construction, Greater Washington Ibero Chamber of Commerce, Hispanic Chamber of Commerce of Montgomery County, Korean MBE Association, Maryland Hispanic Chamber of Commerce, Maryland Minority Business Alliance, Maryland Minority Business Association Incorporated, Maryland/DC Minority Supplier Development Council, Minority Business and Professionals Network, Montgomery County African American Chamber of Commerce, Prince George's County Black Chamber of Commerce, Prince George's County Hispanic Chamber of Commerce, Western Maryland Hispanic Chamber of Commerce, Women

We will refer to the MBE businesses identified in this manner as "listed" MBEs. Tables 4.7-4.12 provide the total number of listed MBEs by SIC code—in Construction, AE-CRS, CSE, It, Maintenance, and Services, respectively.

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

The percentages in the three previous tables are not suitable as availability measures for two reasons. First, it is likely that some proportion of the MBEs listed in the tables are not actually minority-owned or woman-owned. Second, it is likely that there are additional "unlisted" MBEs among all the businesses included in Tables 4.1-4.6. Such businesses do not appear in any of the directories we gathered and are therefore not included as MBEs in Tables 4.7-4.12. Additional steps are required to test these two conditions and to arrive at a more accurate representation of MBE availability within the Baseline Business Population. We discuss these steps in Sections 3.A and 3.B below.

3. Verify Listed MBEs and Estimate Unlisted MBEs

It is likely that information on MBEs from *MarketPlace* and other MBE directories is not correct in all instances. Phenomena such as ownership changes, associate or mentor status, recording errors, or even outright misrepresentation could lead to businesses being listed as MBEs in a particular directory even though they are actually owned by White 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 MBE businesses are necessarily listed—either in *MarketPlace* or in any of the other directories we collected. Such phenomena as geographic relocation, ownership changes, directory compilation errors, and limitations in MBE outreach could all lead to MBEs 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 attempted to correct for the effect of these biases using statistical sampling procedures. We surveyed a large stratified random sample of 5,000 establishments drawn from the Baseline

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Business Owners of Montgomery County, Women Construction Owners and Executives, Baltimore City Public School System, Carroll County, Carroll County Chamber of Commerce, Charles County, DC Sports and Entertainment Commission, District of Columbia Public Schools, Downtown Partnership of Baltimore, Empowerment Baltimore, Frederick County, Greater Baltimore Committee, Harford County, Harford County Chamber of Commerce, Harford County Economic Development Office, Host Marriott, Howard County Chamber of Commerce, Maryland Chamber of Commerce, Maryland Department of Business and Economic Development, Port Authority of New York/New Jersey, Prince George's Chamber of Commerce Small and Minority Business Committee, Prince George's County Minority Business Commission, Queen Anne's County, Queen Anne's County Chamber of Commerce, City of Richmond, Virginia, and the Washington DC Office of Local Business Development.

Business Population and measured how often they were misclassified (or unclassified) by race and/or sex.[140]

Strata were defined according to SIC code groups and listed MBE status.[141] The survey was conducted by telephone during October and November 2005. 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 5,000 firms in our sample, 2,750 were listed MBEs and 2,250 were unclassified by race or sex. However, 979 establishments were excluded as "unable to contact." Exclusions resulted primarily from wrong telephone numbers and disconnected telephone numbers. Of the remaining 4,021 firms, 2,221 were listed MBEs and the remaining 1,800 establishments were unclassified.

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

a. Survey of Listed MBEs

We selected a stratified random sample of 2,750 listed MBEs to verify the race and gender status of their owner(s). Of these, 529 (19.2%) were excluded as "unable to contact." Of the 2,221 remaining establishments, we obtained complete interviews from 1,548, for a response rate of 69.7 percent.

Of the 1,548 establishments interviewed, 300 (19.4%) were owned by White males. The amount of misclassification was substantial in every SIC stratum, and was highest in stratum 1 (SIC 15), as shown in Table 4.13. Misclassification varied by putative race and sex, and was highest among apparent White female firms and among apparent minority firms of unknown race, as shown in Table 4.14.[142]

The race and gender status of the listed MBEs responding to the survey was changed, if necessary, according to the survey results. For example, if a business originally listed as a White female MBE was actually owned by a White male, then that business was counted as a White male for purposes of calculating MBE availability. But what about the remaining putative White female-owned establishments that we did not interview? For these businesses, we must estimate

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

[141] Five separate industry strata were created—three for construction, one for architecture and engineering, and one other goods and services. All five strata were then split according to listed MBE status to create a total of 10 strata. Generally, listed MBEs were sampled at a higher rate than unclassified establishments.

[142] By "putative," we mean the race and sex that we initially assigned to each firm based on the information provided by Dun & Bradstreet or by our master MBE directory.

their MBE status since we did not directly obtain it (because we did not interview them). We base our estimates on the amount of misclassification we observed among the White female-owned firms that we succeeded in interviewing. In this example, our interviews show that 64.9 percent of these firms are actually White female-owned, 22.4 percent are actually White male-owned, and 12.7 percent are actually minority-owned. Therefore, we assign each of the remaining putative White female firms a 64.9 percent probability of actually being White female-owned, a 22.4 percent probability of actually being White male-owned, and an 12.7 percent probability of being minority-owned. We repeated this procedure within each sample stratum and for all putative race and sex categories.

b. Survey of Unclassified Businesses

In a manner exactly analogous to our survey of listed MBEs, in the second part of our survey we examined unclassified businesses, *i.e.* any business that was not originally identified as a MBE, either in *MarketPlace* or in one or more of the other directories.

We selected a stratified random sample of 2,250 unclassified businesses from the Baseline Business Population to verify the race and gender status of their owner(s). Of these, 450 (20.0%) were excluded as "unable to contact." Of the 1,800 remaining establishments, we obtained 1,176 complete interviews, for a response rate of 65.3 percent.

Of the 1,176 establishments interviewed, 986 (83.8%) were owned by White males, 91 (7.7%) by White females, and 99 (8.5%) by minorities. A similar phenomenon was observed within each industry stratum, as shown in Table 4.15.

As with the survey of listed MBEs, the race and gender status of unclassified businesses was changed, if necessary, according to the survey results. For example, if an interviewed business that was originally unclassified indicated that it was actually owned by a White male, then that business was counted as a White male for purposes of the MBE availability calculation. If it indicated it was White female-owned, it was counted as White female, and so on. For unclassified businesses that were not interviewed, we assigned probability values (probability actually White male-owned, probability actually White female-owned, probability actually Black-owned, etc.) based on the interview responses. We again carried out the probability assignment procedure within each stratum.

Clearly, a very large majority of unclassified businesses (almost 84 percent overall) in the Baseline Business Population are White male-owned. Nevertheless, almost 16 percent were *not* White male-owned. Of the latter, the largest group was owned by White females, with descending size shares accounted for by Blacks, Hispanics, Asians, and Native Americans. Table 4.16 shows the actual survey results by race and sex.

B. Estimates of MBE Availability by Detailed Race, Sex, and Industry

Tables 4.17-4.23 present detailed estimates of MBE availability by race, sex, MBE status, procurement category, and detailed industry. These estimates have been statistically corrected to adjust for misclassification and non-classification bias in the Baseline Business Population as described in the previous section. Summary level estimates are weighted averages with weights based on industry-level contracting and procurement expenditures, as described in Chapter III, Section C.

Table 4.17 provides estimated MBE availability for all industries in the Construction procurement category with significant amounts of state spending during the study period. Overall, MBE availability in Construction is estimated at 24.00 percent. By industry, MBE availability ranges from a low of 19.08 percent in Miscellaneous Heavy Construction (SIC 1629) to highs of 40.71 in Miscellaneous Business Consulting (SIC 8748) and in Computer Processing and Data Processing Services (SIC 7374).

Table 4.18 provides estimated MBE availability for all industries in the AE-CRS procurement category with significant amounts of state spending during the study period. Overall, MBE availability in AE-CRS is estimated at 28.46 percent. By industry, MBE availability ranges from a low of 19.08 percent in Miscellaneous Heavy Construction (SIC 1629) to a high of 42.01 in Management Consulting Services (SIC 8742).

Table 4.19 provides estimated MBE availability for all industries in the CSE procurement category with significant amounts of state spending during the study period. Overall, MBE availability in CSE is estimated at 35.24 percent. By industry, MBE availability ranges from a low of 20.68 percent in Plumbing, Heating, & Air Conditioning Contractors (SIC 1711) to a high of 45.67 in Miscellaneous Computer-Related Services (SIC 7379).

Table 4.20 provides estimated MBE availability for all industries in the IT procurement category with significant amounts of state spending during the study period. Overall, MBE availability in IT is estimated at 43.42 percent. By industry, MBE availability ranges from a low of 24.51 percent in Engineering Services (SIC 8711) to a high of 45.67 in Miscellaneous Computer-Related Services (SIC 7379).

Table 4.21 provides estimated MBE availability for all industries in the Maintenance procurement category with significant amounts of state spending during the study period. Overall, MBE availability in Maintenance is estimated at 30.06 percent. By industry, MBE availability ranges from a low of 19.08 percent in Miscellaneous Heavy Construction (SIC 1629) to a high of 43.58 in Building Cleaning and Maintenance Services (SIC 7349).

Table 4.22 provides estimated MBE availability for all industries in the Services procurement category with significant amounts of state spending during the study period. Overall, MBE availability in Services is estimated at 34.42 percent. By industry, MBE availability ranges from a low of 24.51 percent in Engineering Services (SIC 8711) to a high of 42.01 in Management Consulting Services (SIC 8742).

Finally, Table 4.23 provides overall availability estimates across all procurement categories. Overall, MBE availability in the State of Maryland's relevant marketplace is 29.61 percent. Non-MBE availability is 70.39 percent.

Among MBEs, availability of Black-owned businesses is 6.49 percent, availability of Hispanic-owned businesses is 3.17 percent, availability of Asian-owned businesses is 4.76 percent, availability of Native American-owned businesses is 0.63 percent, and availability of White female-owned businesses is 14.56 percent.

C. Tables

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

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
1611	Highway and Street Construction	644	20.47	20.47
1542	Nonresidential Construction, n.e.c.	2,216	11.09	31.56
1711	Plumbing, Heating, and Air Conditioning	4,633	9.84	41.40
1731	Electrical Work	3,305	6.91	48.32
1771	Concrete Work	1,068	5.94	54.25
1741	Masonry and Other Stonework	1,064	4.47	58.72
1541	Industrial Buildings and Warehouses	307	3.48	62.20
5051	Metals Service Centers and Offices	208	2.94	65.14
1622	Bridge, Tunnel, and Elevated Highway	24	2.69	67.84
1794	Excavation Work	980	2.22	70.06
1791	Structural Steel Erection	114	1.91	71.97
1799	Special Trade Contractors, n.e.c.	3,523	1.83	73.80
1761	Roofing, Siding, and Sheet Metal Work	1,552	1.80	75.60
1623	Water, Sewer, and Utility Lines	291	1.74	77.33
1742	Plastering, Dry Wall, and Insulation	872	1.62	78.95
1721	Painting	2,748	1.25	80.20
3531	Construction Machinery	45	1.16	81.36
7374	Computer Processing and Data Preparation and Processing Service	1,628	1.07	82.43
3441	Fabricated Structural Metal	119	1.05	83.48
1751	Carpentry Work	1,348	1.05	84.53
1629	Heavy Construction, n.e.c.	372	0.94	85.46
5046	Commercial Equipment, n.e.c.	246	0.90	86.36
3273	Ready-Mixed Concrete	70	0.84	87.20
1793	Glass and Glazing Work	181	0.77	87.97
8711	Engineering Services	3,582	0.66	88.63
8741	Management Services	2,201	0.65	89.28
8748	Business Consulting, n.e.c.	10,449	0.65	89.93
5031	Lumber, Plywood, Millwork, and Wood Panels	493	0.64	90.57
7699	Repair Shops and Related Services, n.e.c.	5,068	0.55	91.12

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
1752	Floor Laying and Floor Work, n.e.c.	797	0.52	91.63
5075	Warm Air Heating and Air-Conditioning Equipment and Supplies	239	0.51	92.14
7389	Business Services, n.e.c.	17,566	0.50	92.64
5084	Industrial Machinery and Equipment	830	0.44	93.08
3711	Motor Vehicles and Car Bodies	37	0.41	93.49
0782	Lawn and Garden Services	2,792	0.40	93.89
3569	General Industrial Machinery, n.e.c.	29	0.36	94.25
3446	Architectural Metal Work	85	0.34	94.60
1743	Terrazzo, Tile, Marble, and Mosaic Work	394	0.32	94.91
4212	Local Trucking Without Storage	2,420	0.30	95.21
	Balance of Industries (100 industries)	97,805	4.79	100.00
	TOTAL	172,345		

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

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
8711	Engineering Services	3,582	65.47	65.47
8712	Architectural Services	1,357	10.83	76.30
1611	Highway and Street Construction	644	5.33	81.64
8742	Management Consulting Services	11,506	4.37	86.01
8748	Business Consulting, n.e.c.	10,449	2.98	88.99
6512	Nonresidential Building Operators	1,841	1.49	90.48
1711	Plumbing, Heating, and Air Conditioning	4,633	1.13	91.61
8713	Surveying Services	296	1.01	92.62
0781	Landscape Counseling and Planning	1,275	0.71	93.34
1629	Heavy Construction, n.e.c.	372	0.66	94.00
1542	Nonresidential Construction, n.e.c.	2,216	0.65	94.66
3441	Fabricated Structural Metal	119	0.64	95.30
	Balance of Industries (43 industries)	85,964	4.70	100.00
	TOTAL	124,254		

Table 4.3. CSE—Number of Businesses and Industry Weight, by SIC Code

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
5169	Chemicals and Allied Products, n.e.c.	333	12.81	12.81
5172	Petroleum and Petroleum Products Wholesalers, Except Bulk Stations and Terminals	212	9.22	22.03
5012	Automobiles and Other Motor Vehicles	233	8.04	30.07
3743	Railroad Equipment	15	6.62	36.69
5141	Groceries, General Line	269	5.26	41.94
2752	Commercial Printing, Lithographic	1,104	4.88	46.82
3711	Motor Vehicles and Car Bodies	37	4.33	51.15
2834	Pharmaceutical Preparations	117	4.23	55.38
5044	Office Equipment	262	4.09	59.47
5511	New and Used Car Dealers	856	3.44	62.91
5049	Professional Equipment and Supplies, n.e.c.	216	3.00	65.91
5047	Medical, Dental, and Hospital Equipment and Supplies	587	2.93	68.84
5088	Transportation Equipment and Supplies, Except Motor Vehicles	204	2.49	71.33
5084	Industrial Machinery and Equipment	830	2.32	73.66
5045	Computers and Computer Peripheral Equipment and Software	811	2.29	75.94
7353	Heavy Construction Equipment Rental and Leasing	172	1.88	77.82
5942	Book Stores	883	1.44	79.27
3669	Communications Equipment, n.e.c.	51	1.38	80.65
5113	Industrial and Personal Service Paper	142	1.29	81.94
5082	Construction and Mining (Except Petroleum) Machinery and Equipment	238	1.27	83.21
5085	Industrial Supplies	361	1.26	84.47
5812	Eating Places	9,408	1.26	85.73
5112	Stationery and Office Supplies	304	0.94	86.67
7371	Computer Programming Services	3,379	0.93	87.60
4813	Telephone Communications, Except Radiotelephone	1,216	0.83	88.43
5063	Electrical Apparatus and Equipment, Wiring Supplies, and Construction Materials	649	0.80	89.23
7373	Computer Integrated Systems Design	1,941	0.71	89.94
7372	Prepackaged Software	1,065	0.69	90.63
5111	Printing and Writing Paper	42	0.65	91.28

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
3829	Measuring and Controlling Devices, n.e.c.	56	0.63	91.91
3993	Signs and Advertising Displays	617	0.61	92.51
5065	Electronic Parts and Equipment, n.e.c.	623	0.53	93.04
4141	Local Bus Charter Service	69	0.45	93.49
7538	General Automotive Repair Shops	3,868	0.41	93.90
3272	Concrete Products, n.e.c.	79	0.40	94.30
7379	Computer Related Services, n.e.c.	4,954	0.39	94.69
1711	Plumbing, Heating, and Air Conditioning	4,633	0.35	95.04
	Balance of Industries (50 industries)	60,641	4.96	100.00
	TOTAL	101,477		

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

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
7373	Computer Integrated Systems Design	1,941	69.19	69.19
7371	Computer Programming Services	3,379	7.67	76.87
5045	Computers and Computer Peripheral Equipment and Software	811	7.49	84.36
7374	Computer Processing and Data Preparation and Processing Service	1,628	3.18	87.54
7379	Computer Related Services, n.e.c.	4,954	3.00	90.55
8742	Management Consulting Services	11,506	2.54	93.09
7372	Prepackaged Software	1,065	1.74	94.82
8711	Engineering Services	3,582	0.96	95.78
	Balance of Industries (18 industries)	40,879	4.22	100.00
	TOTAL	69,745		

Table 4.5. Maintenance—Number of Businesses and Industry Weight, by SIC Code

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
1611	Highway and Street Construction	644	30.58	30.58
7349	Building Cleaning and Maintenance Services, n.e.c.	3,256	9.89	40.48
1731	Electrical Work	3,305	9.25	49.73
7381	Detective, Guard, and Armored Car Services	962	4.69	54.42
1622	Bridge, Tunnel, and Elevated Highway	24	4.07	58.50
1721	Painting	2,748	3.69	62.19
4789	Transportation Services, n.e.c.	496	3.36	65.55
4212	Local Trucking Without Storage	2,420	2.88	68.42
1711	Plumbing, Heating, and Air Conditioning	4,633	2.48	70.91
1796	Installing Building Equipment, n.e.c.	85	2.48	73.38
1629	Heavy Construction, n.e.c.	372	2.29	75.67
7363	Help Supply Services	1,229	2.19	77.86
4953	Refuse Systems	520	2.11	79.97
1542	Nonresidential Construction, n.e.c.	2,216	1.87	81.84
1794	Excavation Work	980	1.73	83.57
8741	Management Services	2,201	1.28	84.85
1742	Plastering, Dry Wall, and Insulation	872	1.22	86.07
2951	Paving Mixtures and Blocks	53	1.13	87.20
3669	Communications Equipment, n.e.c.	51	1.06	88.25
0782	Lawn and Garden Services	2,792	1.02	89.27
8748	Business Consulting, n.e.c.	10,449	0.94	90.21
0783	Ornamental Shrub and Tree Services	471	0.87	91.08
1791	Structural Steel Erection	114	0.87	91.95
1771	Concrete Work	1,068	0.85	92.80
1799	Special Trade Contractors, n.e.c.	3,523	0.78	93.57
1761	Roofing, Siding, and Sheet Metal Work	1,552	0.76	94.34
3531	Construction Machinery	45	0.68	95.02
	Balance of Industries (51 industries)	65,451	4.98	100.00
	TOTAL	112,487		

Table 4.6. Services—Number of Businesses and Industry Weight, by SIC Code

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
6324	Hospital and Medical Service Plans	102	43.63	43.63
8011	Offices and Clinics of Doctors of Medicine	11,627	16.59	60.21
4491	Marine Cargo Handling	26	13.21	73.42
5099	Durable Goods, n.e.c.	714	4.52	77.94
7311	Advertising Agencies	874	3.07	81.01
4141	Local Bus Charter Service	69	2.40	83.41
7374	Computer Processing and Data Preparation and Processing Service	1,628	2.38	85.80
7363	Help Supply Services	1,229	1.63	87.43
5812	Eating Places	9,408	1.38	88.81
8748	Business Consulting, n.e.c.	10,449	1.26	90.07
4111	Local and Suburban Transit	137	1.17	91.24
7389	Business Services, n.e.c.	17,566	1.03	92.27
8742	Management Consulting Services	11,506	0.98	93.25
8711	Engineering Services	3,582	0.72	93.96
6512	Nonresidential Building Operators	1,841	0.60	94.56
4953	Refuse Systems	520	0.51	95.07
	Balance of Industries (70 industries)	100,141	4.93	100.00
	TOTAL	171,419		

Table 4.7. Construction—Listed MBEs and Industry Weight, by SIC Code

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
1611	Highway and Street Construction	78	20.47	20.47
1542	Nonresidential Construction, n.e.c.	302	11.09	31.56
1711	Plumbing, Heating, and Air Conditioning	305	9.84	41.40
1731	Electrical Work	331	6.91	48.32
1771	Concrete Work	131	5.94	54.25
1741	Masonry and Other Stonework	87	4.47	58.72
1541	Industrial Buildings and Warehouses	33	3.48	62.20
5051	Metals Service Centers and Offices	19	2.94	65.14
1622	Bridge, Tunnel, and Elevated Highway	8	2.69	67.84
1794	Excavation Work	65	2.22	70.06
1791	Structural Steel Erection	24	1.91	71.97
1799	Special Trade Contractors, n.e.c.	278	1.83	73.80
1761	Roofing, Siding, and Sheet Metal Work	124	1.80	75.60
1623	Water, Sewer, and Utility Lines	29	1.74	77.33
1742	Plastering, Dry Wall, and Insulation	74	1.62	78.95
1721	Painting	330	1.25	80.20
3531	Construction Machinery	2	1.16	81.36
7374	Computer Processing and Data Preparation and Processing Service	378	1.07	82.43
3441	Fabricated Structural Metal	12	1.05	83.48
1751	Carpentry Work	90	1.05	84.53
1629	Heavy Construction, n.e.c.	35	0.94	85.46
5046	Commercial Equipment, n.e.c.	37	0.90	86.36
3273	Ready-Mixed Concrete	9	0.84	87.20
1793	Glass and Glazing Work	26	0.77	87.97
8711	Engineering Services	655	0.66	88.63
8741	Management Services	406	0.65	89.28
8748	Business Consulting, n.e.c.	2432	0.65	89.93
5031	Lumber, Plywood, Millwork, and Wood Panels	41	0.64	90.57
7699	Repair Shops and Related Services, n.e.c.	456	0.55	91.12
1752	Floor Laying and Floor Work, n.e.c.	88	0.52	91.63
5075	Warm Air Heating & Air-Condit. Eqpmt. & Supplies	16	0.51	92.14

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
7389	Business Services, n.e.c.	3640	0.50	92.64
5084	Industrial Machinery and Equipment	74	0.44	93.08
3711	Motor Vehicles and Car Bodies	2	0.41	93.49
0782	Lawn and Garden Services	202	0.40	93.89
3569	General Industrial Machinery, n.e.c.	2	0.36	94.25
3446	Architectural Metal Work	5	0.34	94.60
1743	Terrazzo, Tile, Marble, and Mosaic Work	19	0.32	94.91
4212	Local Trucking Without Storage	345	0.30	95.21
	Balance of Industries (100 industries)	16,163	4.79	100.00
	TOTAL	27,353		

Table 4.8. AE-CRS—Listed MBEs and Industry Weight, by SIC Code

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
8711	Engineering Services	655	65.47	65.47
8712	Architectural Services	230	10.83	76.30
1611	Highway and Street Construction	78	5.33	81.64
8742	Management Consulting Services	2,903	4.37	86.01
8748	Business Consulting, n.e.c.	2,432	2.98	88.99
6512	Nonresidential Building Operators	90	1.49	90.48
1711	Plumbing, Heating, and Air Conditioning	305	1.13	91.61
8713	Surveying Services	26	1.01	92.62
0781	Landscape Counseling and Planning	189	0.71	93.34
1629	Heavy Construction, n.e.c.	35	0.66	94.00
1542	Nonresidential Construction, n.e.c.	302	0.65	94.66
3441	Fabricated Structural Metal	12	0.64	95.30
	Balance of Industries (43 industries)	1,919	4.70	100.00
	TOTAL	21,343		

Table 4.9. CSE—Listed MBEs and Industry Weight, by SIC Code

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
5169	Chemicals and Allied Products, n.e.c.	49	12.81	12.81
5172	Petroleum and Petroleum Products Wholesalers, Except Bulk Stations and Terminals	11	9.22	22.03
5012	Automobiles and Other Motor Vehicles	18	8.04	30.07
3743	Railroad Equipment	2	6.62	36.69
5141	Groceries, General Line	29	5.26	41.94
2752	Commercial Printing, Lithographic	221	4.88	46.82
3711	Motor Vehicles and Car Bodies	2	4.33	51.15
2834	Pharmaceutical Preparations	11	4.23	55.38
5044	Office Equipment	51	4.09	59.47
5511	New and Used Car Dealers	41	3.44	62.91
5049	Professional Equipment and Supplies, n.e.c.	27	3.00	65.91
5047	Medical, Dental, and Hospital Equipment and Supplies	98	2.93	68.84
5088	Transportation Equipment and Supplies, Except Motor Vehicles	32	2.49	71.33
5084	Industrial Machinery and Equipment	74	2.32	73.66
5045	Computers and Computer Peripheral Equipment and Software	185	2.29	75.94
7353	Heavy Construction Equipment Rental and Leasing	11	1.88	77.82
5942	Book Stores	142	1.44	79.27
3669	Communications Equipment, n.e.c.	10	1.38	80.65
5113	Industrial and Personal Service Paper	17	1.29	81.94
5082	Construction and Mining (Except Petroleum) Machinery and Equipment	11	1.27	83.21
5085	Industrial Supplies	37	1.26	84.47
5812	Eating Places	1,396	1.26	85.73
5112	Stationery and Office Supplies	85	0.94	86.67
7371	Computer Programming Services	861	0.93	87.60
4813	Telephone Communications, Except Radiotelephone	175	0.83	88.43
5063	Electrical Apparatus and Equipment, Wiring Supplies, and Construction Materials	64	0.80	89.23
7373	Computer Integrated Systems Design	575	0.71	89.94
7372	Prepackaged Software	125	0.69	90.63
5111	Printing and Writing Paper	8	0.65	91.28

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
3829	Measuring and Controlling Devices, n.e.c.	7	0.63	91.91
3993	Signs and Advertising Displays	141	0.61	92.51
5065	Electronic Parts and Equipment, n.e.c.	93	0.53	93.04
4141	Local Bus Charter Service	15	0.45	93.49
7538	General Automotive Repair Shops	222	0.41	93.90
3272	Concrete Products, n.e.c.	8	0.40	94.30
7379	Computer Related Services, n.e.c.	1,561	0.39	94.69
1711	Plumbing, Heating, and Air Conditioning	305	0.35	95.04
	Balance of Industries (50 industries)	11,174	4.96	100.00
	TOTAL	17,894		

Table 4.10. IT—Listed MBEs and Industry Weight, by SIC Code

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
7373	Computer Integrated Systems Design	575	69.19	69.19
7371	Computer Programming Services	861	7.67	76.87
5045	Computers and Computer Peripheral Equipment and Software	185	7.49	84.36
7374	Computer Processing and Data Preparation and Processing Service	378	3.18	87.54
7379	Computer Related Services, n.e.c.	1,561	3.00	90.55
8742	Management Consulting Services	2,903	2.54	93.09
7372	Prepackaged Software	125	1.74	94.82
8711	Engineering Services	655	0.96	95.78
	Balance of Industries (18 industries)	7,663	4.22	100.00
	TOTAL	14,906		

Table 4.11. Maintenance—Listed MBEs and Industry Weight, by SIC Code

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
1611	Highway and Street Construction	78	30.58	30.58
7349	Building Cleaning and Maintenance Services, n.e.c.	914	9.89	40.48
1731	Electrical Work	331	9.25	49.73
7381	Detective, Guard, and Armored Car Services	169	4.69	54.42
1622	Bridge, Tunnel, and Elevated Highway	8	4.07	58.50
1721	Painting	330	3.69	62.19
4789	Transportation Services, n.e.c.	67	3.36	65.55
4212	Local Trucking Without Storage	345	2.88	68.42
1711	Plumbing, Heating, and Air Conditioning	305	2.48	70.91
1796	Installing Building Equipment, n.e.c.	10	2.48	73.38
1629	Heavy Construction, n.e.c.	35	2.29	75.67
7363	Help Supply Services	284	2.19	77.86
4953	Refuse Systems	61	2.11	79.97
1542	Nonresidential Construction, n.e.c.	302	1.87	81.84
1794	Excavation Work	65	1.73	83.57
8741	Management Services	406	1.28	84.85
1742	Plastering, Dry Wall, and Insulation	74	1.22	86.07
2951	Paving Mixtures and Blocks	4	1.13	87.20
3669	Communications Equipment, n.e.c.	10	1.06	88.25
0782	Lawn and Garden Services	202	1.02	89.27
8748	Business Consulting, n.e.c.	2,432	0.94	90.21
0783	Ornamental Shrub and Tree Services	38	0.87	91.08
1791	Structural Steel Erection	24	0.87	91.95
1771	Concrete Work	131	0.85	92.80
1799	Special Trade Contractors, n.e.c.	278	0.78	93.57
1761	Roofing, Siding, and Sheet Metal Work	124	0.76	94.34
3531	Construction Machinery	2	0.68	95.02
	Balance of Industries (51 industries)	11,727	4.98	100.00
	TOTAL	18,756		

Table 4.12. Services—Listed MBEs and Industry Weight, by SIC Code

SIC Code	SIC Description	Number of Estab-lishments	Industry Weight	Industry Weight (Cumu-lative)
6324	Hospital and Medical Service Plans	6	43.63	43.63
8011	Offices and Clinics of Doctors of Medicine	1,278	16.59	60.21
4491	Marine Cargo Handling	1	13.21	73.42
5099	Durable Goods, n.e.c.	128	4.52	77.94
7311	Advertising Agencies	203	3.07	81.01
4141	Local Bus Charter Service	15	2.40	83.41
7374	Computer Processing and Data Preparation and Processing Service	378	2.38	85.80
7363	Help Supply Services	284	1.63	87.43
5812	Eating Places	1,396	1.38	88.81
8748	Business Consulting, n.e.c.	2,432	1.26	90.07
4111	Local and Suburban Transit	17	1.17	91.24
7389	Business Services, n.e.c.	3,640	1.03	92.27
8742	Management Consulting Services	2,903	0.98	93.25
8711	Engineering Services	655	0.72	93.96
6512	Nonresidential Building Operators	90	0.60	94.56
4953	Refuse Systems	61	0.51	95.07
	Balance of Industries (70 industries)	15,117	4.93	100.00
	TOTAL	28,604		

Table 4.13. Listed MBE Survey—Amount of Misclassification, by SIC Code Grouping

Listed MBE By SIC Code Grouping	Misclassification (Percentage White Male)	Percentage Actually MBE-owned	Number of Businesses Interviewed
SIC 15	25.3	74.7	241
SIC 16	23.8	76.2	105
SIC 17	23.1	76.9	355
SIC 8711-8712	19.3	80.7	394
Balance of SIC Codes	15.9	84.1	453
All SIC Codes	20.4	79.6	1,548

Source: NERA telephone surveys conducted in October–November 2005.

Note: SIC 15 – Building Construction, SIC 16 – Heavy Construction, SIC 17 – Special Trades Construction, SIC 8711-8712 – Architecture and Engineering.

Table 4.14. Listed MBE Survey—Amount of Misclassification, by Putative MBE Type

Putative Race/Sex	Misclassif-ication (Percentage White Male)	Misclassification (Percentage Other MBE Type)	Percentage Correctly Classified	Number of Businesses Interviewed
Black (either sex)	13.7	4.4	81.9	293
Hispanic (either sex)	24.0	12.8	63.2	204
Asian (either sex)	15.5	3.1	81.4	226
Native American (either sex)	19.0	21.5	59.5	42
Unknown Minority (either sex)	28.5	71.5	N/A	144
White Female	22.4	11.6	66.0	639
All MBE Types	20.4	N/A	79.6	1,548

Source and Notes: See Table 4.13.

Table 4.15. Unclassified Businesses Survey —By SIC Code Grouping

Listed MBE By SIC Code Grouping	Percentage Actually White Male-owned	Percentage MBE	Number of Businesses Interviewed
SIC 15	87.8	12.2	238
SIC 16	86.5	13.5	245
SIC 17	83.1	16.9	225
SIC 8711-8712	88.1	11.9	244
Balance of SIC Codes	73.7	26.3	224
All SIC Codes	84.0	16.0	1,176

Source: NERA telephone surveys conducted in October–November 2005.

Table 4.16. Unclassified Businesses Survey—By Race and Sex

Verified Race/Sex	Number of Businesses Interviewed	Percentage of Total
White Male	988	84.0
White Female	93	7.9
Black	41	3.5
Hispanic	23	2.0
Asian	25	2.1
Native American	6	0.5
Statewide	1,176	100.0

Source and Notes: See Table 4.13.

Table 4.17. Detailed MBE Availability—Construction

Detailed Industry	Black	Hispanic	Asian	Native American	White Female	MBE	Non-MBE
Highway and Street Construction (SIC 1611)	6.14	3.58	0.92	0.75	9.57	20.95	79.05
Nonresidential Construction, n.e.c. (SIC 1542)	5.55	4.25	2.83	1.28	6.73	20.65	79.35
Plumbing, Heating, and Air Conditioning (SIC 1711)	5.49	2.02	0.99	0.13	12.05	20.68	79.32
Electrical Work (SIC 1731)	6.78	2.19	1.06	0.30	12.78	23.11	76.89
Concrete Work (SIC 1771)	5.40	4.92	1.15	0.16	12.10	23.73	76.27
Masonry and Other Stonework (SIC 1741)	5.58	3.54	0.86	0.15	11.66	21.78	78.22
Industrial Buildings and Warehouses (SIC 1541)	4.38	3.57	3.15	0.76	7.36	19.23	80.77
Metals Service Centers and Offices (SIC 5051)	5.58	2.79	6.34	1.05	15.98	31.75	68.25
Bridge, Tunnel, and Elevated Highway (SIC 1622)	9.79	9.00	4.61	0.44	11.87	35.71	64.29
Excavation Work (SIC 1794)	5.40	1.91	0.52	0.13	12.98	20.93	79.07
Structural Steel Erection (SIC 1791)	8.00	1.77	1.30	1.07	18.33	30.48	69.52
Special Trade Contractors, n.e.c. (SIC 1799)	5.67	2.40	0.88	0.10	12.79	21.83	78.17
Roofing, Siding, and Sheet Metal Work (SIC 1761)	4.99	2.38	1.64	0.22	12.51	21.74	78.26
Water, Sewer, and Utility Lines (SIC 1623)	6.43	1.18	0.85	1.22	10.85	20.53	79.47
Plastering, Dry Wall, and Insulation (SIC 1742)	5.58	2.86	0.82	0.15	12.41	21.81	78.19
Painting (SIC 1721)	5.28	3.71	1.18	0.23	13.73	24.13	75.87
Construction Machinery (SIC 3531)	4.98	2.71	5.25	0.83	14.67	28.45	71.55
Computer Processing and Data Preparation and Processing Service (SIC 7374)	8.76	3.47	6.92	0.75	20.81	40.71	59.29

Detailed Industry	Black	Hispanic	Asian	Native American	White Female	MBE	Non-MBE
Fabricated Structural Metal (SIC 3441)	5.13	3.46	6.74	0.80	16.42	32.54	67.46
Carpentry Work (SIC 1751)	5.25	2.26	1.55	0.17	11.66	20.88	79.12
Heavy Construction, n.e.c. (SIC 1629)	4.85	1.51	1.40	0.89	10.43	19.08	80.92
Commercial Equipment, n.e.c. (SIC 5046)	5.75	3.67	7.40	1.17	17.66	35.64	64.36
Ready-Mixed Concrete (SIC 3273)	6.28	3.79	6.29	0.78	16.90	34.04	65.96
Glass and Glazing Work (SIC 1793)	6.15	3.14	0.92	0.11	14.76	25.08	74.92
Engineering Services (SIC 8711)	4.45	2.51	7.86	0.33	9.36	24.51	75.49
Management Services (SIC 8741)	9.99	3.54	6.05	0.82	17.37	37.78	62.22
Business Consulting, n.e.c. (SIC 8748)	9.48	3.56	6.78	0.76	20.13	40.71	59.29
Lumber, Plywood, Millwork, and Wood Panels (SIC 5031)	5.98	3.19	5.89	0.82	15.55	31.42	68.58
Repair Shops and Related Services, n.e.c. (SIC 7699)	6.20	3.10	5.69	0.83	16.01	31.83	68.17
Floor Laying and Floor Work, n.e.c. (SIC 1752)	5.89	2.90	1.88	0.24	12.56	23.46	76.54
Warm Air Heating and Air-Conditioning Equipment and Supplies (SIC 5075)	4.99	2.77	6.68	1.04	14.92	30.41	69.59
Business Services, n.e.c. (SIC 7389)	7.64	3.44	6.31	0.76	20.89	39.04	60.96
Industrial Machinery and Equipment (SIC 5084)	5.94	3.36	6.31	0.93	15.00	31.54	68.46
Motor Vehicles and Car Bodies (SIC 3711)	4.89	2.71	7.28	0.84	13.75	29.48	70.52
Lawn and Garden Services (SIC 0782)	6.28	3.19	5.55	0.84	14.83	30.71	69.29
General Industrial Machinery, n.e.c. (SIC 3569)	5.01	5.05	5.31	0.83	14.23	30.44	69.56
Architectural Metal Work (SIC 3446)	6.77	2.70	6.07	0.84	13.49	29.87	70.13

Detailed Industry	Black	Hispanic	Asian	Native American	White Female	MBE	Non-MBE
Terrazzo, Tile, Marble, and Mosaic Work (SIC 1743)	4.89	2.87	0.55	0.03	11.41	19.76	80.24
Local Trucking Without Storage (SIC 4212)	9.91	3.29	5.22	0.81	15.90	35.14	64.86
TOTAL	6.09	2.95	2.21	0.49	12.26	24.00	76.00

Source: Dun & Bradstreet's *MarketPlace*; MBE business directory information compiled by NERA; Master Contract/Subcontract Database; and NERA telephone interviews conducted in October-November 2005.

Table 4.18. Detailed MBE Availability—AE-CRS

Detailed Industry	Black	Hispanic	Asian	Native American	White Female	MBE	Non-MBE
Engineering Services (SIC 8711)	4.45	2.51	7.86	0.33	9.36	24.51	75.49
Architectural Services (SIC 8712)	3.72	2.20	5.07	0.15	12.76	23.90	76.10
Highway and Street Construction (SIC 1611)	6.14	3.58	0.92	0.75	9.57	20.95	79.05
Management Consulting Services (SIC 8742)	10.45	3.75	6.51	0.83	20.46	42.01	57.99
Business Consulting, n.e.c. (SIC 8748)	9.48	3.56	6.78	0.76	20.13	40.71	59.29
Nonresidential Building Operators (SIC 6512)	5.48	2.99	5.51	0.85	14.44	29.27	70.73
Plumbing, Heating, and Air Conditioning (SIC 1711)	5.49	2.02	0.99	0.13	12.05	20.68	79.32
Surveying Services (SIC 8713)	6.09	3.02	5.79	0.81	16.04	31.75	68.25
Landscape Counseling and Planning (SIC 0781)	7.09	3.83	5.65	0.80	17.95	35.31	64.69
Heavy Construction, n.e.c. (SIC 1629)	4.85	1.51	1.40	0.89	10.43	19.08	80.92
Nonresidential Construction, n.e.c. (SIC 1542)	5.55	4.25	2.83	1.28	6.73	20.65	79.35
Fabricated Structural Metal (SIC 3441)	5.13	3.46	6.74	0.80	16.42	32.54	67.46
TOTAL	5.80	2.79	7.22	0.45	12.20	28.46	71.54

Source: Dun & Bradstreet's *MarketPlace*; MBE business directory information compiled by NERA; Master Contract/Subcontract Database; and NERA telephone interviews conducted in October-November 2005.

Table 4.19. Detailed MBE Availability—CSE

Detailed Industry	Black	Hispanic	Asian	Native American	White Female	MBE	Non-MBE
Chemicals and Allied Products, n.e.c. (SIC 5169)	6.78	3.34	7.03	0.76	17.29	35.20	64.80
Petroleum and Petroleum Products Wholesalers, Except Bulk Stations and Terminals (SIC 5172)	6.57	2.73	5.26	0.85	14.16	29.56	70.44
Automobiles and Other Motor Vehicles (SIC 5012)	5.91	2.81	5.32	0.82	16.21	31.08	68.92
Railroad Equipment (SIC 3743)	5.45	2.97	5.38	0.77	19.84	34.41	65.59
Groceries, General Line (SIC 5141)	6.34	3.04	6.62	0.79	16.02	32.82	67.18
Commercial Printing, Lithographic (SIC 2752)	6.87	3.51	7.14	0.80	20.09	38.42	61.58
Motor Vehicles and Car Bodies (SIC 3711)	4.89	2.71	7.28	0.84	13.75	29.48	70.52
Pharmaceutical Preparations (SIC 2834)	5.84	2.83	5.93	0.81	16.59	32.00	68.00
Office Equipment (SIC 5044)	9.20	3.85	6.73	0.72	17.62	38.12	61.88
New and Used Car Dealers (SIC 5511)	5.37	2.83	5.42	0.91	14.66	29.19	70.81
Professional Equipment and Supplies, n.e.c. (SIC 5049)	5.94	3.17	7.04	1.01	16.69	33.85	66.15
Medical, Dental, and Hospital Equipment and Supplies (SIC 5047)	9.17	3.69	6.37	0.74	16.71	36.68	63.32
Transportation Equipment and Supplies, Except Motor Vehicles (SIC 5088)	5.81	5.71	6.96	0.75	16.26	35.49	64.51
Industrial Machinery and Equipment (SIC 5084)	5.94	3.36	6.31	0.93	15.00	31.54	68.46
Computers and Computer Peripheral Equipment and Software (SIC 5045)	8.82	4.10	9.00	0.94	17.30	40.16	59.84
Heavy Construction Equipment Rental and Leasing (SIC 7353)	5.66	3.15	5.29	1.13	14.91	30.14	69.86
Book Stores (SIC 5942)	5.84	3.10	6.03	0.75	20.29	36.01	63.99
Communications Equipment, n.e.c. (SIC 3669)	7.70	2.66	12.58	0.72	14.46	38.12	61.88
Industrial and Personal Service Paper (SIC 5113)	5.72	2.91	6.99	0.79	17.24	33.66	66.34

Detailed Industry	Black	Hispanic	Asian	Native American	White Female	MBE	Non-MBE
Construction and Mining (Except Petroleum) Machinery and Equipment (SIC 5082)	5.97	2.70	6.19	0.85	13.44	29.14	70.86
Industrial Supplies (SIC 5085)	5.81	3.48	5.72	0.80	16.28	32.08	67.92
Eating Places (SIC 5812)	5.20	3.60	9.19	0.77	16.52	35.28	64.72
Stationery and Office Supplies (SIC 5112)	11.09	3.62	6.43	0.82	21.64	43.60	56.40
Computer Programming Services (SIC 7371)	9.65	3.75	11.12	0.84	16.46	41.83	58.17
Telephone Communications, Except Radiotelephone (SIC 4813)	8.48	3.54	6.63	0.85	15.55	35.05	64.95
Electrical Apparatus and Equipment, Wiring Supplies, and Construction Materials (SIC 5063)	6.96	2.99	5.50	0.80	16.04	32.28	67.72
Computer Integrated Systems Design (SIC 7373)	13.54	4.52	10.43	1.04	15.13	44.66	55.34
Prepackaged Software (SIC 7372)	6.31	3.12	8.14	0.88	14.83	33.28	66.72
Printing and Writing Paper (SIC 5111)	9.08	2.87	8.76	0.72	16.82	38.26	61.74
Measuring and Controlling Devices, n.e.c. (SIC 3829)	5.26	2.89	6.64	0.78	18.24	33.82	66.18
Signs and Advertising Displays (SIC 3993)	6.71	3.74	6.33	0.77	22.66	40.20	59.80
Electronic Parts and Equipment, n.e.c. (SIC 5065)	5.98	3.64	7.06	1.08	17.14	34.90	65.10
Local Bus Charter Service (SIC 4141)	8.90	4.00	5.97	2.15	19.06	40.07	59.93
General Automotive Repair Shops (SIC 7538)	5.15	3.20	6.40	0.88	14.12	29.75	70.25
Concrete Products, n.e.c. (SIC 3272)	5.21	2.86	6.27	0.80	17.27	32.41	67.59
Computer Related Services, n.e.c. (SIC 7379)	12.79	4.21	10.63	0.83	17.22	45.67	54.33
Plumbing, Heating, and Air Conditioning (SIC 1711)	5.49	2.02	0.99	0.13	12.05	20.68	79.32
TOTAL	6.91	3.43	7.49	0.81	16.60	35.24	64.76

Source: Dun & Bradstreet's *MarketPlace*; MBE business directory information compiled by NERA; Master Contract/Subcontract Database; and NERA telephone interviews conducted in October-November 2005.

Table 4.20. Detailed MBE Availability—IT

Detailed Industry	Black	Hispanic	Asian	Native American	White Female	MBE	Non-MBE
Computer Integrated Systems Design (SIC 7373)	13.54	4.52	10.43	1.04	15.13	44.66	55.34
Computer Programming Services (SIC 7371)	9.65	3.75	11.12	0.84	16.46	41.83	58.17
Computers and Computer Peripheral Equipment and Software (SIC 5045)	8.82	4.10	9.00	0.94	17.30	40.16	59.84
Computer Processing and Data Preparation and Processing Service (SIC 7374)	8.76	3.47	6.92	0.75	20.81	40.71	59.29
Computer Related Services, n.e.c. (SIC 7379)	12.79	4.21	10.63	0.83	17.22	45.67	54.33
Management Consulting Services (SIC 8742)	10.45	3.75	6.51	0.83	20.46	42.01	57.99
Prepackaged Software (SIC 7372)	6.31	3.12	8.14	0.88	14.83	33.28	66.72
Engineering Services (SIC 8711)	4.45	2.51	7.86	0.33	9.36	24.51	75.49
TOTAL	12.18	4.23	9.82	0.95	16.24	43.42	56.58

Source: Dun & Bradstreet's *MarketPlace*; MBE business directory information compiled by NERA; Master Contract/Subcontract Database; and NERA telephone interviews conducted in October-November 2005.

Table 4.21. Detailed MBE Availability—Maintenance

Detailed Industry	Black	Hispanic	Asian	Native American	White Female	MBE	Non-MBE
Highway and Street Construction (SIC 1611)	6.14	3.58	0.92	0.75	9.57	20.95	79.05
Building Cleaning and Maintenance Services, n.e.c. (SIC 7349)	11.95	4.69	6.18	0.70	20.05	43.58	56.42
Electrical Work (SIC 1731)	6.78	2.19	1.06	0.30	12.78	23.11	76.89
Detective, Guard, and Armored Car Services (SIC 7381)	11.15	3.62	5.34	0.84	16.09	37.06	62.94
Bridge, Tunnel, and Elevated Highway (SIC 1622)	9.79	9.00	4.61	0.44	11.87	35.71	64.29
Painting (SIC 1721)	5.28	3.71	1.18	0.23	13.73	24.13	75.87
Transportation Services, n.e.c. (SIC 4789)	10.71	2.83	5.16	0.77	15.24	34.71	65.29
Local Trucking Without Storage (SIC 4212)	9.91	3.29	5.22	0.81	15.90	35.14	64.86
Plumbing, Heating, and Air Conditioning (SIC 1711)	5.49	2.02	0.99	0.13	12.05	20.68	79.32
Installing Building Equipment, n.e.c. (SIC 1796)	9.02	1.70	0.56	0.15	12.62	24.05	75.95
Heavy Construction, n.e.c. (SIC 1629)	4.85	1.51	1.40	0.89	10.43	19.08	80.92
Help Supply Services (SIC 7363)	9.57	3.16	5.71	0.89	21.45	40.78	59.22
Refuse Systems (SIC 4953)	8.62	3.26	5.40	0.98	15.29	33.55	66.45
Nonresidential Construction, n.e.c. (SIC 1542)	5.55	4.25	2.83	1.28	6.73	20.65	79.35
Excavation Work (SIC 1794)	5.40	1.91	0.52	0.13	12.98	20.93	79.07
Management Services (SIC 8741)	9.99	3.54	6.05	0.82	17.37	37.78	62.22
Plastering, Dry Wall, and Insulation (SIC 1742)	5.58	2.86	0.82	0.15	12.41	21.81	78.19
Paving Mixtures and Blocks (SIC 2951)	5.22	2.84	5.37	0.83	16.66	30.91	69.09

Detailed Industry	Black	Hispanic	Asian	Native American	White Female	MBE	Non-MBE
Communications Equipment, n.e.c. (SIC 3669)	7.70	2.66	12.58	0.72	14.46	38.12	61.88
Lawn and Garden Services (SIC 0782)	6.28	3.19	5.55	0.84	14.83	30.71	69.29
Business Consulting, n.e.c. (SIC 8748)	9.48	3.56	6.78	0.76	20.13	40.71	59.29
Ornamental Shrub and Tree Services (SIC 0783)	5.67	3.10	5.32	0.82	16.26	31.17	68.83
Structural Steel Erection (SIC 1791)	8.00	1.77	1.30	1.07	18.33	30.48	69.52
Concrete Work (SIC 1771)	5.40	4.92	1.15	0.16	12.10	23.73	76.27
Special Trade Contractors, n.e.c. (SIC 1799)	5.67	2.40	0.88	0.10	12.79	21.83	78.17
Roofing, Siding, and Sheet Metal Work (SIC 1761)	4.99	2.38	1.64	0.22	12.51	21.74	78.26
Construction Machinery (SIC 3531)	4.98	2.71	5.25	0.83	14.67	28.45	71.55
TOTAL	8.11	3.34	3.24	0.56	14.81	30.06	69.94

Source: Dun & Bradstreet's *MarketPlace*; MBE business directory information compiled by NERA; Master Contract/Subcontract Database; and NERA telephone interviews conducted in October-November 2005.

Table 4.22. Detailed MBE Availability—Services

Detailed Industry	Black	Hispanic	Asian	Native American	White Female	MBE	Non-MBE
Hospital and Medical Service Plans (SIC 6324)	5.10	3.44	5.35	0.84	15.15	29.88	70.12
Offices and Clinics of Doctors of Medicine (SIC 8011)	5.53	3.35	6.24	0.82	17.07	33.00	67.00
Marine Cargo Handling (SIC 4491)	7.89	2.65	5.15	0.86	12.17	28.72	71.28
Durable Goods, n.e.c. (SIC 5099)	6.47	3.43	5.65	0.80	20.85	37.21	62.79
Advertising Agencies (SIC 7311)	6.89	3.50	5.85	0.68	23.58	40.50	59.50
Local Bus Charter Service (SIC 4141)	8.90	4.00	5.97	2.15	19.06	40.07	59.93
Computer Processing and Data Preparation and Processing Service (SIC 7374)	8.76	3.47	6.92	0.75	20.81	40.71	59.29
Help Supply Services (SIC 7363)	9.57	3.16	5.71	0.89	21.45	40.78	59.22
Eating Places (SIC 5812)	5.20	3.60	9.19	0.77	16.52	35.28	64.72
Business Consulting, n.e.c. (SIC 8748)	9.48	3.56	6.78	0.76	20.13	40.71	59.29
Local and Suburban Transit (SIC 4111)	10.67	2.70	5.01	0.78	15.12	34.29	65.71
Business Services, n.e.c. (SIC 7389)	7.64	3.44	6.31	0.76	20.89	39.04	60.96
Management Consulting Services (SIC 8742)	10.45	3.75	6.51	0.83	20.46	42.01	57.99
Engineering Services (SIC 8711)	4.45	2.51	7.86	0.33	9.36	24.51	75.49
Nonresidential Building Operators (SIC 6512)	5.48	2.99	5.51	0.85	14.44	29.27	70.73
Refuse Systems (SIC 4953)	8.62	3.26	5.40	0.98	15.29	33.55	66.45
TOTAL	6.15	3.39	6.42	0.80	17.66	34.42	65.58

Source: Dun & Bradstreet's *MarketPlace*; MBE business directory information compiled by NERA; Master Contract/Subcontract Database; and NERA telephone interviews conducted in October-November 2005.

Table 4.23. Overall Availability—All Procurement Categories Combined

Detailed Industry	Black	Hispanic	Asian	Native American	White Female	MBE	Non-MBE
CONSTRUCTION	6.09	2.95	2.21	0.49	12.26	24.00	76.00
ARCHITECTURE, ENGINEERING & CONSTRUCTION-RELATED SERVICES	5.80	2.79	7.22	0.45	12.20	28.46	71.54
COMMODITIES, SUPPLIES, & EQUIPMENT	6.91	3.43	7.49	0.81	16.60	35.24	64.76
INFORMATION TECHNOLOGY	12.18	4.23	9.82	0.95	16.24	43.42	56.58
MAINTENANCE	8.11	3.34	3.24	0.56	14.81	30.06	69.94
SERVICES	6.15	3.39	6.42	0.80	17.66	34.42	65.58
TOTAL	6.49	3.17	4.76	0.63	14.56	29.61	70.39

Source: Dun & Bradstreet's *MarketPlace*; MBE business directory information compiled by NERA; Master Contract/Subcontract Database; and NERA telephone interviews conducted in October-November 2005.

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

A. Review of Relevant Literature

We examine here disparities in business formation and earnings principally in the private sector, where contracting and procurement activities are generally *not* subject to MBE requirements. Statistical examination of disparities in the private sector of the relevant geographic marketplace is important for at least three reasons. First, to the extent that discriminatory practices by contractors, suppliers, insurers, lenders, customers, and others limit the ability of MBEs to compete, those practices are likely to impact the larger private sector as well as in the public sector. Second, examining the utilization of MBEs in the private sector provides an indicator of the extent to which MBEs are used in the absence of affirmative action 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 the local economy.

After years of comparative neglect, research on the economics of entrepreneurship—especially upon self-employment—is beginning to expand.[143] There is a good deal of agreement in the literature on the micro-economic correlates of self-employment. Aronson (1991) provides a good overview. In the U.S., it appears that self-employment rises with age, is higher among men than women and higher among Whites than Blacks. 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. Increases in educational attainment are generally found to lead to increases in the probability of being self-employed. The more children in the family, the higher 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; 2004)[144], immigration policy (Borjas and Bronars,

[143] Microeconometric work includes Fuchs (1982), Borjas and Bronars (1989), Evans and Jovanovic (1989), Evans and Leighton (1989), Fairlie (1999), Fairlie and Meyer (1996, 1998), Reardon (1998), Wainwright (2000) for the United States, Rees and Shah (1986), Pickles and O'Farrell (1987), Blanchflower and Oswald (1990, 1998), Blanchflower and Freeman (1994), Meager (1992), Taylor (1996), and Robson (1998a, 1998b) 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 (1982), Croate and Tennyson (1992), and Holmes and Schmitz (1990), plus a few papers that draw comparisons across countries *i.e.* Schuetze (1998) for Canada and the U.S., Blanchflower and Meyer (1994) for Australia and the U.S., Alba-Ramirez (1994) for Spain and the United States, and Acs and Evans (1994) for many countries.

[144] Fairlie and Meyer (1998) found that immigration had no statistically significant impact at all on black self-employment. In a subsequent paper Fairlie and Meyer (2004), found that self-employed immigrants did displace self-employed native non-Blacks. They found that immigration has a large negative effect on the probability of self-employment among native non-Blacks, although, surprisingly, they found that immigrants increase native self-employment earnings.

1989), and retirement policies (Quinn, 1980). Studies by Long (1982), and Blau (1987), and more recently by Schuetze (1998), have considered the role of taxes.[145] 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. Evans and Leighton (1989) found that White 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 (1999) 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.

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 Organisation for Economic Co-operation and Development (OECD) countries.[146] 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 puzzle. Why do so few individuals in the U.S. and OECD 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 inherit cash,

[145] In an interesting study pooling individual level data for the U.S. and Canada from the CPS 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.

[146] 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.

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.[147] Moreover, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Work by Holtz-Eakin, Joulfaian and Rosen (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.

The work of Black *et al.* (1996) for the United Kingdom discovers an apparently powerful role for house prices (through its impact on equity withdrawal) in affecting the supply of small new firms. Cowling and Mitchell (1997), find a similar result. Again this is suggestive of capital constraints. Finally, Lindh and Ohlsson (1994) 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 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

[147] 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.

existence of capital constraints. Transfers of firms within families will help to preserve the status quo and will work against the interests of Blacks in particular who do not have as strong a history of business ownership as indigenous whites. Analogously, Hout and Rosen (2000) found that the offspring of self-employed fathers are more likely than others to become self-employed and argued that the historically low rates of self-employment among Blacks and Latinos may contribute to their low contemporary rates.

A continuing puzzle in the literature has been why, nationally, the self-employment rate of Black males is one third of that of White 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 Black and White self-employment rate can be attributed to discrimination. Using PUMS data from the 1990 Census, Wainwright (2000) demonstrated that these disparities tend to persist even when factors such as geography, industry, occupation, age, education and assets are held constant.

Bates (1989) finds strong supporting evidence that racial differences in levels of financial capital have significant effects upon racial patterns in business failure rates. Fairlie (1999) also found that the Black exit rate from self-employment is twice as high as that of Whites. 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, where we take out the plugs and allow for the possibility that the outflow rates from the two baths are different. Bath A (the Black firms) has a much larger drain and hence the water flows out more quickly than it does from bath B (the White 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 White-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 White-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 Sex Disparities in Earnings

In this section, we examine earnings to determine whether minority and female entrepreneurs earn less from their businesses than do their White male counterparts. Other things equal, if minority and female business owners as a group cannot achieve comparable earnings from their businesses as similarly-situated non-minorities because of discrimination, then failure rates for MBEs will be higher and MBE formation rates will be lower than would be observed in a race-

and sex-neutral marketplace. 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 critical 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 that same industry (Blanchflower, 2000; 2004). Any employment discrimination that adversely impacts the ability of minorities or women to succeed in the labor force directly shrinks the available pool of potential MBEs. In almost every instance examined, a statistically significant adverse impact on earnings is observed in both the economy at large and in the construction and construction-related professional services sector.[148]

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

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

1. Methods

We used a statistical technique known as 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 sex differences remain. In a discrimination free marketplace, one would not expect to observe significant differences in earnings by race or sex among such similarly situated observations.

Regression also allows us to narrowly tailor our statistical tests to the State of Maryland and assess whether disparities in Maryland 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 State of Maryland. This model appears as Specification (1) in Tables 5.1 through 5.12. Next, we estimated Specification (2), which is the same model as (1) but with the addition of indicator variables that interact race, sex, and the State of Maryland. Specification (3) represents our

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

ultimate specification, which includes all the variables from the basic model as well as any of the interaction terms from Specification (2) that were statistically significant.[149]

Any negative and statistically significant differences by race or sex 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.[150]

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. Two primary data sources are available.

The first is the Five Percent Public Use Microdata Samples (PUMS) from the 2000 decennial census. The 2000 PUMS contains observations representing five percent of all U.S. housing units and the persons in them (approximately 14 million records). Released in late 2003, the PUMS provides the full range of population and housing information collected in the 2000 census. Business ownership status is identified in the 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.

The second source of data is the Current Population Survey (CPS). The CPS has been conducted monthly by the Census Bureau and the Bureau of Labor Statistics for over 40 years, and is a primary source of official government statistics on employment and unemployment. Currently, about 56,500 households are scientifically selected for the CPS on the basis of area of residence in order to represent the nation as a whole, individual states and the largest metropolitan areas. In addition to information on employment status, the CPS collects information on age, sex, race, marital status, educational attainment, earnings, occupation, industry, and other characteristics. These statistics serve to update the information collected every 10 years through the decennial census.[151]

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

[150] 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. In this and the two following Chapters we typically indicate three levels of statistical significance, corresponding to 10 percent, 5 percent, and 1 percent probabilities that results were the result of random chance below.

[151] Since 1979, about a quarter of the households in each monthly CPS survey have been asked to provide additional information, including usual weekly earnings and weekly hours of work. These households are said to be in "Outgoing Rotation Groups" (ORG) because of the way the CPS rotates households for interviews. Each household selected for the survey is interviewed once a month for four consecutive months, not interviewed for eight months, and interviewed again once a month for four more months. The households in the ORG are those that are in either the fourth or the eighth survey. The ORG files of the CPS include individual data for about 30,000 individuals each month, or over 350,000 per year. Data in which the State of Maryland is identifiable are available in a comparable form from 1979 through 2002. Data from the ORG files are used below in addition to the PUMS to examine earnings disparities among wage and salary workers. The ORG files however, do not

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

Tables 5.1 through 5.6 report results from our regression analyses of annual earnings among wage and salary workers. Tables 5.1 through 5.3 focus on the economy as a whole and Tables 5.4 through 5.6 on construction. Tables 5.1 and 5.4 are derived from the 2000 PUMS, Tables 5.2 and 5.5 are derived from the 1979–1991 CPS, and Tables 5.3 and 5.6 are derived from the 1992–2002 CPS. The numbers shown in each of these six tables indicate the percentage difference between the average wages of a given race/sex group and comparable White males.

a. Specification (1) - the Basic Model

For example, in Table 5.1 Specification (1) the estimated percentage difference in annual wages between Blacks (both sexes) and White males in 2000 was -29.6 percent. That is, average annual wages among Blacks were 29.6 percent lower than for White males who were otherwise similar in terms of geographic location, industry, age, and education. The number in parentheses below each percentage difference is the t-statistic, which indicates whether the estimated percentage difference is statistically significant or not. In Tables 5.1 through 5.6, a t-statistic of 1.99 or larger indicates statistical significance at a 95 percent confidence level or better.[152] In the example just used, the t-statistic of 182.27 indicates that the result is statistically significant.

Specification (1) in Tables 5.1-5.3 shows negative and statistically significant wage disparities for Blacks, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and White women consistent with the presence of discrimination in these markets. Observed disparities are large as well, ranging from a low of -16.7 percent for Hispanics in Table 5.2 to a high of -35.8 percent for White women in Table 5.1.

Specification (1) in Tables 5.4 through 5.6 shows similar results when the basic analysis is restricted to construction. In this sector, large, negative, and statistically significant wage disparities are observed for all minority groups and for White women. For Blacks, the large wage disparities observed in the construction sector are similar to those observed economy-wide. Large wage disparities in construction are also observed for Hispanics, Asians, and Native Americans; however, the differences are somewhat smaller than those observed in the economy as a whole. For White women, large disparities are observed both economy-wide and in construction—however, disparities in construction are larger.

A comparison of Tables 5.2 and 5.3 shows changes in observed wage disparities over time for the economy as a whole. Tables 5.5 and 5.6 do the same for construction. For the economy as a whole, as well as for the construction sector, disparities for Blacks became slightly smaller

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contain data on the earnings of the self-employed. Annual earnings, whether from wages or self-employment are available from the March CPS, however, also known as the Annual Demographic File. This latter file also contains the basic monthly demographic and labor force data. In the March CPS, data on employment, earnings, and income refer to the preceding year, although demographic data refer to the time of the survey. The March surveys are therefore included for the years 1980-2003. Because the information relates to the preceding year, the earnings data relate to the years 1979-2002. The sample consists of any individual who reports positive self-employment earnings in the year preceding the interview.

[152] From a two-tailed test.

between 1979–1991 and 1992–2002, but remain large (average wages more than 20 percent below comparable White males). For Hispanics, wage disparities increased substantially during the same period and average wages remain 18–21 percent lower than for comparable White males in construction and elsewhere. For White women, wage disparities grew substantially smaller between the two periods, both in construction and in the economy as a whole, although they remain large (average wages 18-25 percent below comparable White males).[153]

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

Next, we turn to Specifications (2) and (3) in Tables 5.1 through 5.6. In each of these Tables, Specification (2) is the basic regression model enhanced by the addition of a set of interaction terms that test whether minorities and women in the State of Maryland differ significantly from those elsewhere in the U.S. economy. Specification (2) in Table 5.1, for example, shows a -29.8 percent wage difference that estimates the direct effect of being Black in 2000, as well as a statistically significant 4.9 percent wage increment in that year that captures the indirect effect of residing in the State of Maryland and being Black. Therefore, the net wage disparity for Blacks in the State of Maryland is approximately -24.9 percent (-29.8 percent plus 4.9 percent).

Specification (3) simply repeats Specification (2), dropping any Maryland interaction terms that are not statistically significant. In Table 5.3, for example, the only interaction terms included in the final specification were for Blacks, Hispanics, and White women. The net result of Specification (3) in Tables 5.1, 5.2 and 5.3 is evidence of large, negative and statistically significant wage disparities for all minority groups and for White women. The same results hold in construction as well (Tables 5.4, 5.5, and 5.6).

Clearly, minorities and women earn substantially and significantly less from their labors than their White 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 MBEs 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 MBE availability levels than would be observed in a race- and sex-neutral marketplace.

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

We turn next to the analysis of race and sex disparities in business owner earnings. Tables 5.7 through 5.12 report results from regression analyses of earnings from self-employment. Tables 5.7 through 5.9 focus on the economy as a whole and Tables 5.10 through 5.12 on construction. Tables 5.7 and 5.10 are derived from the 2000 PUMS, Tables 5.8 and 5.11 are derived from the

[153] It is not possible to perform a similar comparison for Asians or Native Americans, as they were not identified separately in the CPS prior to 1992 and instead were classified together as "Other Race."

1979–1991 CPS, and Tables 5.9 and 5.12 are derived from the 1992–2002 CPS. The numbers shown in each of these six tables indicate the percentage difference between the average annual self-employment earnings of a given race/sex group and comparable White males.

a. Specification (1) - the Basic Model

Specification (1) in Tables 5.7 through 5.9 shows negative and statistically significant and large business owner earnings disparities for Blacks, Hispanics, Asians, Native Americans, persons reporting multiple races, and White women consistent with the presence of discrimination in these markets. The measured difference for Blacks ranges between 28 percent and 59 percent; for Hispanics, from 19 percent to 39 percent; for Asians, from 4 percent to 22 percent; and for Native Americans, from 38 percent to 51 percent. Large business owner earnings disparities are observed for White women as well: between 44 percent and 73 percent lower than for comparable White men.

Turning to the construction sector, Column (1) of Table 5.10 from the PUMS shows negative, large, and statistically significant business owner earnings disparities for Blacks (minus 29 percent) , Hispanics (minus 15 percent), Native Americans (minus 37 percent), and White female (minus 51 percent) in 2000. In Table 5.11, the CPS construction data for the 1979-1991 period shows negative, large, and statistically significant business owner earnings disparities for Blacks, Hispanics, and White females. The "Other Race" term, consisting primarily of Asians and Native Americans was also large, negative, and significant. In Table 5.12 the CPS construction data for 1992-2002 show large, negative, and statistically significant disparities for Blacks and White females. Coefficients for Hispanics, Asians, and Native Americans in Table 5.12 are also large and negative but are not significant.

Changes in observed business owner earnings disparities over time can be seen by comparing Tables 5.8 and 5.9 for the economy as a whole or Tables 5.11 and 5.12 for construction. For Blacks and Hispanics, in the economy as a whole, the large earnings disparities observed in the 1979–1991 period grew even larger during 1992-2002. For Blacks the differential grew from -50 percent to -59 percent. For Hispanics it grew from -28 percent to -39 percent. In the construction sector, the movement was in the opposite direction. Earnings differentials for Blacks fell from -43 percent in 1979-1991 to -33 percent in 1992-2002. For Hispanics, the figures are -25 percent and -14 percent, respectively.

For White women, earnings disparities in the economy as a whole are very large but appear to have lessened slightly over time, declining from an earnings differential of -73 percent in the 1979-1991 period to -62 percent in the 1992-2002 period. In the construction sector, however, the -84 percent earnings differential for White females is very large and has not lessened at all over time.

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

Next, we turn to Specifications (2) and (3) in Tables 5.7 through 5.12. Specification (2) is the basic regression model enhanced by a set of interaction terms to test whether minorities and

women in the State of Maryland differ significantly from persons elsewhere in the U.S. economy. Specification (3) drops any Maryland interaction terms that are not statistically significant.

For the economy as a whole in 2000 (Table 5.7), none of the Maryland interaction terms is statistically significant, indicating that estimates for Maryland are in agreement with results for the nation as a whole. The same is true in Table 5.8 for the 1979-1991 period (Table 5.8) and Table 5.9 for the 1992-2002 period. The final economy wide results are therefore contained in column (1) for Tables 5.7, 5.8, and 5.9.

For the construction sector (Tables 5.10, 5.11, and 5.12), none of the Maryland interaction terms was statistically significant. Therefore, the final specification for these three tables is as given in column (1) of each table.

As was the case for wage and salary earners, minority and female entrepreneurs earn substantially and significantly less from their efforts than similarly situated White male entrepreneurs. These disparities are a symptom of discrimination in commercial markets that directly and adversely affects MBEs. Other things equal, if minorities and women cannot earn remuneration from their entrepreneurial efforts comparable to that of White males, growth rates will slow, business failure rates will increase, and as demonstrated in the next section, business formation rates will decrease. Combined, these phenomena result in lower MBE availability levels than would be observed in a race- and sex-neutral marketplace.

C. Race and Sex Disparities in Business Formation

Finally, we turn to the analysis of race and sex disparities in business formation.[154] In this section, we compare self-employment rates by race and sex to determine whether minorities or women are as likely to enter the ranks of entrepreneurs as similarly-situated White males. We find that they are not as likely to do so and that minority business formation rates would likely be substantially and significantly higher if markets operated in a race- and sex-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 men who were once employed as foremen for other contractors, fewer by those who were employed instead as laborers. Similarly, discrimination in commercial capital and credit markets, as well as asset and wealth distribution, prevents

[154] We use the phrases “business formation rates” and “self-employment rates” interchangeably in this Study.

minorities and women from acquiring the financial credit and capital that are so often prerequisite to starting or expanding a business. Other things 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 MBEs, symptoms of which are evidenced in Section B.4 above and elsewhere, operates to increase input prices and lower output prices for MBEs. This discrimination leads to higher rates of failure for some minority and women firms, lower rates of profitability and growth for others, and prevents some minorities and women from ever starting businesses.[155] All of these phenomena, other things equal, would contribute directly to lower observed rates of minority and female self-employment.

1. Methods and Data

To see if minorities or White women are as likely to be business owners as are comparable White 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 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.[156] 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 2000 PUMS, the 1979-1991 CPS, and the 1992-2002 CPS.

2. Findings: Race and Sex Disparities in Business Formation

As a point of reference for what follows, Tables 5.13 and 5.14 provide a summary of business ownership rates in 2000 by race and sex. A striking feature of both tables is how much higher business ownership rates in the United States are for White males than for other groups. Table 5.13, for example, shows a 7 percentage point difference between the overall self-employment rate of Blacks and White Males in the State of Maryland (12.2 - 5.2 = 7.0), and Table 5.14 shows a somewhat smaller 6.4 percentage point difference in the construction sector self-employment

[155] See also the materials cited at fn. 148 *supra*.

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

rate for this group. As shown in the final column of Table 5.14, this 7 percentage point gap translates into a Black business formation rate in Maryland construction that is 36 percent lower than the White male business formation rate (*i.e.*, (11.3 – 17.7)/17.7 ≈ -0.36).

For Hispanics nationally, the overall business formation rate is 6.3 points lower than the White male rate. In Maryland, the gap is somewhat smaller at 5.0 points—leaving the Hispanic business formation rate in Maryland over 40 percent lower than the rate for comparable White males. In Maryland construction, the Hispanic rate is almost 60 percent lower.

For Asians nationally, the overall business formation rate is 3.3 points lower than the White male rate. In Maryland, the gap is smaller at 1.0 points—leaving the Asian business formation rate in Maryland about 8 percent lower than the rate for comparable White males. In Maryland construction, the Asian rate is 5 percent lower.

For Native Americans nationally, the overall business formation rate is 5.4 points lower than the White male rate. In Maryland, the gap is somewhat larger at 7.1 points—leaving the Native American business formation rate in Maryland almost 60 percent lower than the rate for comparable White males. In Maryland construction, the Native American rate is also almost 60 percent lower.

For White women nationally, the overall business formation rate is 5.2 points lower than the White male rate. In Maryland, the gap is smaller at 3.4 points. This leaves the White female business formation rate in Maryland almost 30 percent lower than the rate for comparable White males. In Maryland construction, the White female rate is almost 50 percent lower.

There is no doubt that part of the group differences expressed in Tables 5.13 and 5.14 are associated with differences in the distribution of individual characteristics and preferences between minorities, women, and White males. It is well known that personal earnings tend to increase with age, for example. It is also true that the propensity toward self-employment increases with age.[157] Since most minority populations in the U.S. have a lower median age than the non-Hispanic White population, we must examine whether the disparities in business ownership evidenced in Tables 5.13 and 5.14 are largely—or even entirely—due to differences in the age distribution of minorities compared to non-minorities or other factors such as education, geographic location, or industry preferences.

The remainder of this section presents a series of regression analyses designed to address whether large, negative and statistically significant race and sex disparities are found among otherwise similarly-situated individuals. Tables 5.15 through 5.20 report results from regression analyses of the decision to start a business. Tables 5.15 through 5.17 focus on the economy as a whole and Tables 5.18 through 5.20 focus on construction. As in previous sections, the first in each triad of Tables is derived from the 2000 PUMS, the second from the 1979–1991 CPS, and the third from the 1992–2002 CPS. The numbers shown in each of these tables indicate the percentage point difference between the probability of self-employment for a given race/sex group and for comparable White males.

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

a. Specification (1) - the Basic Model

Specification (1) in Tables 5.15 through 5.17 shows negative, statistically significant and large business formation disparities for Blacks, Hispanics, Asians, Native Americans, and White women consistent with the presence of discrimination in these markets. Specification (1) in Tables 5.18 through 5.20 shows large, negative, and statistically significant business formation disparities for every group in the construction sector as well.

Once again, Tables 5.16 and 5.17 for the economy as a whole, and Tables 5.19 and 5.20 for the construction sector describes changes in observed business formation disparities over time. For the economy as a whole as well as for the construction sector, disparities for Blacks and Hispanics have actually worsened in recent years, while those for Asians and Native Americans appear not to have changed much.[158] In the construction sector, disparities for White women have lessened substantially in the construction sector, although they remain large. Disparities for White women in the economy as a whole, in contrast, barely changed between the two periods.

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

Several of the Maryland interaction terms included in Specification (2) were significant. The final results are in Specification (3) for Tables 5.15-5.19, and in Specification (1) for Table 5.20. To summarize for the economy-wide results (Tables 5.15-5.17):

- The remaining disparity for Blacks ranges between -1.4 and -3.5 percentage points (between 11-29 percent lower than the corresponding White male business formation rate).[159]

- For Hispanics, the remaining disparity ranges from -1.1 to -4.1 percentage points (between 9-34 percent lower than the White male business formation rate).

- For Asians, the remaining disparity ranges from +1.0 to -1.5 percentage points (from 8 percent higher to 12 percent lower than the White male business formation rate).

- For Native Americans, the remaining disparity ranges from -3.0 to -3.4 percentage points (between 25-28 percent lower than the White male business formation rate).

- For White women, the remaining disparity ranges from -1.1 to -1.5 percentage points (between 9-12 percent lower than the White male business formation rate).

To summarize for the construction sector results (Tables 5.18-5.20):

[158] The "Other Races" category in the 1979-1991 CPS includes Asians and Native Americans.

[159] Because the overall White male self-employment rate for Maryland is 12.2 percent (Table 5.13), the rate for comparable Blacks is approximately 30–35 percent lower than expected (i.e. $2.1 \div 12.2 \approx 0.17$; $4.8 \div 12.2 \approx 0.39$).

- For Blacks, the remaining disparity ranges between -5.2 and -11.0 percentage points (between 29-62 percent lower than the corresponding White male business formation rate).

- For Hispanics, the remaining disparity ranges between -6.4 and -9.1 percentage points (between 36-51 percent lower than the White male business formation rate).

- For Asians, the remaining disparity ranges between +2.2 and -7.5 percentage points (from 12 percent higher to 42 percent lower than the White male business formation rate).

- For Native Americans, the remaining disparity ranges between -8.0 and -8.9 percentage points (between 45-50 percent lower than the White male business formation rate).

- For White women, the remaining disparity ranges between -4.8 and -9.9 percentage points (between 27-56 percent lower than the White male business formation rate).

c. Conclusions

This section has demonstrated that observed MBE availability levels in the State of Maryland are substantially and statistically significantly lower than those that would be expected to be observed if commercial markets operated in a race- and sex-neutral manner. This suggests that 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. These groups also suffer substantial and significant earnings disadvantages relative to comparable White males whether they work as employees or as entrepreneurs.

D. Potential Business Formation Rates — Implications for Current MBE Availability

The Probit regression results for the Maryland construction sector from Table 5.18 are combined with weighted average self-employment rates by race and sex from the 2000 PUMS (Table 5.14) to determine the expected difference between baseline availability and expected availability in a race-neutral marketplace. These figures appear in column (2) of Table 5.21.

Overall, the self-employment rate for minorities and women in the construction sector is 10.0 percent. According to the regression specification underlying Table 5.18, column 3, that rate would be 18.6 percent, or 86 percent higher, in a race and sex neutral marketplace. Put differently, the disparity ratio of the actual business formation rate to the potential business formation rate is 0.54. Disparity ratios are large, adverse, and statistically significant for all groups examined. The largest disparity observed is for Native Americans (0.47), followed in descending order by that for Hispanics (0.48), White women (0.53), Blacks (0.54), and Asians (0.74). Given the large disparities observed throughout Table 5.21, goal-setters should to

consider adjusting baseline estimates of MBE availability upward to account for the continuing effects of discrimination.[160]

E. Evidence from The Survey of Minority-Owned and Women-Owned Business Enterprises

As a further check on the statistical findings in this Chapter we present evidence from a Census Bureau data collection effort dedicated to MBEs. The Census Bureau's *Survey of Business Owners and Self-Employed Persons* (SBO), formerly known as the *Surveys of Minority- and Women-Owned Business Enterprises* (SMWOBE), collects and disseminates data on the number, sales, employment, and payrolls of businesses owned by women and members of racial and ethnic minority groups. This survey has been conducted every five years since 1972 as part of the *Economic Censuses* program. Preliminary data from the 2002 SBO have just recently become available.[161]

Unlike most other business statistics, including the other components of the *Economic Censuses*, the unit of analysis in the SBO is the firm, rather than the establishment. 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.[162]

The SBO covers women and four groups of minorities—Blacks, Hispanics, Asians and Pacific Islanders, and Native Americans (including American Indians, Eskimos, and Aleuts). The 2002 SBO also includes comparative information for non-minority-owned, non-women-owned firms.

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 from nonemployer firms, and for the former also includes estimates of aggregate annual employment and payroll.

Although the SBO is more limited in the scope of industrial and geographic detail it provides compared to the PUMS or the CPS, it nevertheless 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. In the remainder of this section we present preliminary 2002 SBO statistics for the United States as a whole as well as for the State of Maryland and calculate disparity ratios from

[160] For example, CFR § 26.45(d)(1)(ii), governing federal-aid transportation contracts, requires that a recipient estimate the availability of Disadvantaged Business Enterprises (almost entirely minority- and women-owned firms) but for the effects of discrimination.

[161] Complete results will not be available until late 2006.

[162] Prior to 2002, "C" corporations were not included in the SMWOBE universe because of 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/csd/sbo/intro2002SBO.htm.

them. We find that results in the SBO regarding disparities are consistent with our findings above using the PUMS and the CPS.

Panel A in Tables 5.22 and 5.23 summarizes the preliminary 2002 SBO results for the United States and the State of Maryland, respectively. Panel A of Table 5.22, for example, shows in column (1) that there were 22.5 million firms in the U.S with, in column (2), overall sales and receipts of 8.844 trillion dollars. Of these 22.5 million firms, column (3) shows that 5.2 million had one or more employees. Column (4) shows a total of 55.8 million employees on the payroll of these 5.2 million firms, and finally column (5) shows total annual payroll expenses for these firms of $1.639 trillion.[163] The remaining rows in Panel A provide comparable statistics for women-owned and minority-owned firms. For example, Table 5.22 shows that there were 1.2 million Black-owned firms counted in 2002, and that these 1.2 million firms registered $92.7 billion in sales and receipts. It also shows that 94,862 of these Black-owned firms had one or more employees, and employed a total of 770,746 workers in 2002 with an annual payroll total of $18.1 billion.

Panel A of Table 5.23 provides comparable information for the State of Maryland.[164] In 2002 the Census Bureau counted 137,442 female-owned firms in Maryland[165], 69,428 Black-owned firms, 26,315 Asian-owned firms, 15,364 Hispanic-owned firms, and 3,634 Native American-owned firms.

Panel B in each Table converts the figures in Panel A to percentage distributions within each column. For example, Column (1) in Panel B of Table 5.23 shows that Black-owned firms were 16.1 percent of all firms in Maryland in 2002, and that female-owned firms were 31.9 percent of all firms in the State. Additionally, 6.1 percent of firms in the State were Asian-owned, 3.6 percent of firms were Hispanic-owned, and 0.9 percent Native American-owned. Column (2) in Panel B provides the same percentage distribution for total sales and receipts. Table 5.23, for example, shows that although Black-owned firms were 16.1 percent of all firms in the State, they accounted for only 3.1 percent of total sales and revenues in the State. Similar results are obtained when the sample is restricted to firms with one or more paid employees. Column (3) in Table 5.23 shows that Black-owned employer firms accounted for 4.6 percent of all firms and 2.5 percent of all sales and receipts. Large disparities are observed not only for Blacks, but also for female-owned firms, Asian-owned firms, Hispanic-owned firms, and Native American-owned firms, in the United States as a whole as well as specifically in Maryland, and among all firms as well as among employer-only firms. These disparity ratios are presented in Panel C of each Table. Disparity ratios of 80 percent or less indicate disparate impact consistent with business discrimination against minority-owned and female-owned firms. In Maryland, disparity ratios fall beneath the 80 percent threshold in all instances. The most severe disparities are observed among Black-owned and Native American-owned firms.

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[163] These figures exclude publicly-owned firms, foreign-owned firms, and not-for-profit firms.

[164] We also examined State-level data for the District of Columbia and Delaware, not presented here, and obtained similar results.

[165] Additionally 43,644 equally male/female-owned firms were counted.

One additional feature of Tables 5.22 and 5.23 is of interest. A comparison of the Panel B percentage distributions in Columns (5) and (6) versus Column (4) reveals that minority-owned and female-owned firms use significantly more employees per dollar of sales and have significantly higher payrolls per dollar of sales than do non-minority and male-owned firms. One explanation for this observation is that minority- and female-owned firms respond to marketplace discrimination by, among other things, employing additional inputs in the production process in the form of more labor (per unit of sales) and higher labor compensation (per unit of sales). This perfectly rational response to discrimination on the part of minority- and female-owned firms, ironically reinforces their competitive disadvantage in the public and private marketplace where lowest cost is often the determining factor in the award of contracting and procurement opportunities.

F. Tables

Table 5.1. Annual Wage Earnings Regressions, All Industries, 2000

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.296	-0.298	-0.298
	(182.27)	(178.22)	(178.29)
Hispanic	-0.215	-0.216	-0.216
	(132.3)	(131.71)	(131.84)
Asian/Pacific Islanders	-0.291	-0.291	-0.291
	(133.57)	(130.38)	(133.4)
Native American	-0.325	-0.326	-0.326
	(67.24)	(66.96)	(67.29)
Other Race	-0.282	-0.282	-0.282
	(86.47)	(84.81)	(86.41)
White Female	-0.358	-0.358	-0.358
	(388.23)	(384.48)	(384.86)
Age	0.178	0.178	0.178
	(654.77)	(654.77)	(654.77)
Age^2	-0.002	-0.002	-0.002
	(565.33)	(565.33)	(565.34)
Maryland	0.109	0.083	0.081
	(0.00)	(0.00)	(0.00)
Maryland*Black		0.049	0.050
		(5.79)	(6.14)
Maryland*Hispanic		0.055	0.056
		(4.51)	(4.70)
Maryland* Asian/Pacific Islanders		-0.010	
		(0.77)	
Maryland* Native American		0.035	
		(0.63)	
Maryland*Other Race		-0.013	
		(0.63)	
Maryland*White Female		0.034	0.035
		(5.08)	(5.55)
Education(16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry(88 categories)	Yes	Yes	Yes
N	3510329	3510329	3510329
R^2	.442	.442	.442
F	17353	116726	17034

Source: NERA calculations from the 2000 Decennial Census Five Percent Public Use Microdata Samples.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number is the percentage difference in annual wages between a given group and White men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence.

Table 5.2. Annual Wage Earnings Regressions, All Industries, 1979-1991

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.218	-0.218	-0.218
	(204.44)	(198.27)	(198.27)
Hispanic	-0.167	-0.168	-0.168
	(123.13)	(122.82)	(122.82)
Other Race	-0.194	-0.193	-0.193
	(109.4)	(107.16)	(107.16)
White Female	-0.238	-0.239	-0.239
	(370.69)	(368.33)	(368.33)
Age	0.057	0.057	0.057
	(352.11)	(352.11)	(352.11)
Age^2	-0.001	-0.001	-0.001
	(286.4)	(286.4)	(286.4)
Maryland	-0.033	-0.048	-0.048
	(1.95)	(2.89)	(2.89)
Maryland*Black		0.016	0.016
		(3.21)	(3.21)
Maryland*Hispanic		0.050	0.050
		(4.10)	(4.10)
Maryland*Other Race		-0.045	-0.045
		(3.88)	(3.88)
Maryland*White Female		0.039	0.039
		(8.21)	(8.21)
Time (13 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	1868379	1868379	1868379
R^2	.505	.505	.505
F	16263	15727	15727

Source: NERA calculations from the Merged Outgoing Rotation Groups of the 1979-1991 Current Population Survey microdata samples.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64; observations with imputed earnings are excluded where identified; (2) Reported number is the percentage difference in annual wages between a given group and White men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

Table 5.3. Annual Wage Earnings Regressions, All Industries, 1992-2002

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.213	-0.214	-0.214
	(129.67)	(125.99)	(126.03)
Hispanic	-0.206	-0.207	-0.207
	(118.93)	(118.27)	(118.34)
Asian	-0.195	-0.194	-0.195
	(79.48)	(77.85)	(79.37)
Native American	-0.171	-0.172	-0.171
	(38.14)	(38.04)	(38.18)
White Female	-0.178	-0.179	-0.179
	(174.62)	(173.64)	(173.76)
Age	0.053	0.053	0.053
	(202.57)	(202.57)	(202.57)
Age^2	-0.001	-0.001	-0.001
	(167.11)	(167.11)	(167.11)
Maryland	0.005	-0.010	-0.012
	(0.91)	(1.36)	(1.74)
Maryland*Black		0.019	0.021
		(2.36)	(2.67)
Maryland*Hispanic		0.029	0.031
		(2.22)	(2.39)
Maryland*Asian		-0.016	
		(1.08)	
Maryland*Native American		0.016	
		(0.30)	
Maryland*White Female		0.033	0.035
		(4.36)	(4.75)
Time (11 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	933024	933024	933024
R^2	.467	.467	.467
F	6436	6193	6288

Source: NERA calculations from the Merged Outgoing Rotation Groups of the 1992-2002 Current Population Survey microdata samples.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64; observations with imputed earnings are excluded where identified; (2) Reported number is the percentage difference in annual wages between a given group and White men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

Table 5.4. Annual Wage Earnings Regressions, Construction and Related Industries, 2000

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.326	-0.329	-0.326
	(48.72)	(47.05)	(48.64)
Hispanic	-0.160	-0.161	-0.160
	(31.14)	(30.78)	(31.13)
Asian/Pacific Islanders	-0.197	-0.195	-0.196
	(17.55)	(16.75)	(17.52)
Native American	-0.294	-0.296	-0.294
	(21.68)	(21.73)	(21.69)
Other Race	-0.212	-0.211	-0.212
	(17.96)	(17.52)	(17.96)
White Female	-0.400	-0.401	-0.401
	(103.21)	(101.73)	(101.77)
Age	0.158	0.158	0.158
	(169.38)	(169.38)	(169.39)
Age^2	-0.002	-0.002	-0.002
	(144.07)	(144.06)	(144.08)
Maryland	0.528	0.505	0.514
	(13.38)	(12.63)	(13.03)
Maryland*Black		0.051	
		(1.70)	
Maryland*Hispanic		0.014	
		(0.54)	
Maryland* Asian/Pacific Islanders		-0.031	
		(0.63)	
Maryland* Native American		0.248	
		(1.50)	
Maryland*Other Race		-0.052	
		(0.73)	
Maryland*White Female		0.073	0.067
		(2.86)	(2.69)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	280323	280323	280323
R^2	.277	.277	.277
F	1467	1356	1447

Source: See Table 37.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64 employed in the construction or construction-related professional services industries; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number is the percentage difference in annual wages between a given group and White men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence.

Table 5.5. Annual Wage Earnings Regressions, Construction and Related Industries, 1979-1991

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.201	-0.203	-0.203
	(44.3)	(42.69)	(42.68)
Hispanic	-0.135	-0.136	-0.136
	(27.25)	(27.31)	(27.30)
Other Race	-0.091	-0.092	-0.091
	(11.81)	(11.81)	(11.81)
White Female	-0.308	-0.311	-0.311
	(95.1)	(94.37)	(94.36)
Age	0.073	0.073	0.073
	(112.55)	(112.51)	(112.52)
Age^2	-0.001	-0.001	-0.001
	(89.83)	(89.79)	(89.79)
Maryland	0.016	-0.009	-0.008
	(0.24)	(0.14)	(0.12)
Maryland*Black		0.048	0.047
		(2.78)	(2.71)
Maryland*Hispanic		0.073	0.072
		(2.00)	(1.96)
Maryland*Other Race		0.049	
		(0.97)	
Maryland*White Female		0.105	0.103
		(4.77)	(4.72)
Time (13 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	123230	123230	123230
R^2	.400	.400	.400
F	1174	1111	1126

Source: See Table 38.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64 employed in the construction or construction-related professional services industries; observations with imputed earnings are excluded where identified; (2) Reported number is the percentage difference in annual wages between a given group and White men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

Table 5.6. Annual Wage Earnings Regressions, Construction and Related Industries, 1992-2002

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.197	-0.197	-0.196
	(25.94)	(24.65)	(25.81)
Hispanic	-0.177	-0.178	-0.177
	(29.95)	(29.78)	(29.95)
Asian	-0.118	-0.119	-0.117
	(9.19)	(9.06)	(9.16)
Native American	-0.103	-0.102	-0.103
	(7.22)	(7.14)	(7.23)
White Female	-0.245	-0.247	-0.247
	(49.04)	(48.9)	(48.9)
Age	0.062	0.062	0.062
	(61.14)	(61.15)	(61.15)
Age^2	-0.001	-0.001	-0.001
	(48.01)	(48.02)	(48.02)
Maryland	-0.183	-0.199	-0.191
	(9.87)	(9.84)	(10.22)
Maryland*Black		0.019	
		(0.66)	
Maryland*Hispanic		0.036	
		(1.05)	
Maryland*Asian		0.039	
		(0.62)	
Maryland*Native American		-0.049	
		(0.40)	
Maryland*White Female		0.115	0.106
		(3.17)	(2.99)
Time (11 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	60581	60581	60581
R^2	.374	.374	.374
F	446	420	441

Source: See Table 39.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64 employed in the construction or construction-related professional services industries; observations with imputed earnings are excluded where identified; (2) Reported number is the percentage difference in annual wages between a given group and White men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

Table 5.7. Annual Business Owner Earnings Regressions, All Industries, 2000

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.279	-0.272	-0.279
	(22.16)	(20.79)	(22.16)
Hispanic	-0.188	-0.189	-0.188
	(17.20)	(17.07)	(17.20)
Asian/Pacific Islanders	-0.038	-0.041	-0.038
	(2.51)	(2.65)	(2.51)
Native American	-0.380	-0.382	-0.380
	(13.45)	(13.47)	(13.45)
Other Race	-0.262	-0.267	-0.262
	(13.51)	(13.53)	(13.51)
White Female	-0.437	-0.438	-0.437
	(83.93)	(83.15)	(83.93)
Age	0.165	0.165	0.165
	(91.67)	(91.66)	(91.67)
Age^2	-0.002	-0.002	-0.002
	(81.87)	(81.87)	(81.87)
Maryland	0.453	0.435	0.453
	(6.93)	(6.36)	(6.93)
Maryland*Black		-0.092	
		(1.70)	
Maryland*Hispanic		0.017	
		(0.22)	
Maryland* Asian/Pacific Islanders		0.070	
		(0.92)	
Maryland* Native American		0.307	
		(0.81)	
Maryland*Other Race		0.183	
		(1.38)	
Maryland*White Female		0.041	
		(1.10)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	350756	350756	350756
R^2	.170	.170	.170
F	451	434	451

Source: NERA calculations from the 2000 Decennial Census Five Percent Public Use Microdata Samples.

Notes: (1) Universe is all persons in the private sector with positive business income between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number is the percentage difference in annual business earnings between a given group and White men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence.

Table 5.8. Annual Business Owner Earnings Regressions, All Industries, 1979-1991

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.500	-0.502	-0.500
	(15.64)	(15.47)	(15.64)
Hispanic	-0.278	-0.276	-0.278
	(9.46)	(9.34)	(9.46)
Other Race	-0.328	-0.324	-0.328
	(8.29)	(8.10)	(8.29)
White Female	-0.729	-0.730	-0.729
	(68.07)	(67.83)	(68.07)
Age	0.205	0.205	0.205
	(41.42)	(41.41)	(41.42)
Age^2	-0.002	-0.002	-0.002
	(36.50)	(36.48)	(36.50)
Maryland	-0.080	-0.104	-0.080
	(0.74)	(0.86)	(0.74)
Maryland*Black		0.115	
		(0.42)	
Maryland*Hispanic		-0.375	
		(1.13)	
Maryland*Other Race		-0.358	
		(1.10)	
Maryland*White Female		0.168	
		(1.00)	
Time (13 categories)	Yes	Yes	Yes
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	82094	82094	82094
R^2	.177	.177	.177
F	153	148	151

Source: NERA calculations from the Annual Demographic (March) File of the 1979-1991 Current Population Survey microdata samples.

Notes: (1) Universe is all persons in the private sector with positive business income between age 16 and 64; observations with imputed earnings are excluded where identified; (2) Reported number is the percentage difference in annual business earnings between a given group and White men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

Table 5.9. Annual Business Owner Earnings Regressions, All Industries, 1992-2002

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.591	-0.587	-0.591
	(14.85)	(14.46)	(14.85)
Hispanic	-0.390	-0.386	-0.390
	(9.80)	(9.64)	(9.80)
Asian	-0.221	-0.210	-0.221
	(3.41)	(3.20)	(3.41)
Native American	-0.511	-0.510	-0.511
	(5.47)	(5.46)	(5.47)
White Female	-0.617	-0.617	-0.617
	(31.34)	(31.19)	(31.34)
Age	0.230	0.230	0.230
	(27.27)	(27.28)	(27.27)
Age^2	-0.002	-0.002	-0.002
	(23.80)	(23.81)	(23.80)
Maryland	-0.061	0.101	-0.061
	(0.36)	(0.44)	(0.36)
Maryland*Black		-0.295	
		(1.04)	
Maryland*Hispanic		-0.504	
		(1.33)	
Maryland*Asian		-0.584	
		(1.52)	
Maryland*Native American			
Maryland*White Female		-0.088	
		(0.34)	
Time (11 categories)	Yes	Yes	Yes
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	55639	55639	55639
R^2	.128	.129	.128
F	64	62	64

Source: NERA calculations from the Annual Demographic (March) File of the 1992-2002 Current Population Survey microdata samples.

Notes: (1) Universe is all persons in the private sector with positive business income between age 16 and 64; observations with imputed earnings are excluded where identified; (2) Reported number is the percentage difference in annual business earnings between a given group and White men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

Table 5.10. Business Owner Earnings Regressions, Construction and Related Industries, 2000

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.288	-0.287	-0.288
	(8.97)	(8.62)	(8.97)
Hispanic	-0.146	-0.144	-0.146
	(6.30)	(6.13)	(6.30)
Asian/Pacific Islanders	-0.060	-0.073	-0.060
	(1.18)	(1.41)	(1.18)
Native American	-0.367	-0.370	-0.367
	(6.79)	(6.83)	(6.79)
Other Race	-0.139	-0.139	-0.139
	(2.98)	(2.94)	(2.98)
White Female	-0.513	-0.514	-0.513
	(29.41)	(29.14)	(29.41)
Age	0.140	0.140	0.140
	(34.48)	(34.48)	(34.48)
Age^2	-0.001	-0.001	-0.001
	(32.15)	(32.15)	(32.15)
Maryland	0.180	0.173	0.180
	(1.36)	(1.28)	(1.36)
Maryland*Black		-0.014	
		(0.10)	
Maryland*Hispanic		-0.117	
		(0.80)	
Maryland* Asian/Pacific Islanders		0.252	
		(1.06)	
Maryland* Native American		0.935	
		(0.83)	
Maryland*Other Race		-0.048	
		(0.14)	
Maryland*White Female		0.098	
		(0.61)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	56589	56589	56589
R^2	.056	.056	.056
F	46	42	46

Source: See Table 5.7.

Notes: (1) Universe is all persons in the private sector with positive business income between age 16 and 64 in the construction or construction-related professional services industries; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number is the percentage difference in annual business earnings between a given group and White men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence.

Table 5.11. Business Owner Earnings Regressions, Construction and Related Industries, 1979-1991

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.428	-0.424	-0.428
	(5.73)	(5.57)	(5.73)
Hispanic	-0.252	-0.249	-0.252
	(3.96)	(3.91)	(3.96)
Other Race	-0.208	-0.208	-0.208
	(1.79)	(1.79)	(1.79)
White Female	-0.835	-0.837	-0.835
	(21.63)	(21.62)	(21.63)
Age	0.179	0.179	0.179
	(16.58)	(16.58)	(16.58)
Age^2	-0.002	-0.002	-0.002
	(15.29)	(15.3)	(15.29)
Maryland	-0.003	-0.009	-0.003
	(0.01)	(0.03)	(0.01)
Maryland*Black		-0.156	
		(0.32)	
Maryland*Hispanic		-0.679	
		(0.89)	
Maryland*Other Race			
Maryland*White Female		1.342	
		(1.22)	
Time (13 categories)	Yes	Yes	Yes
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	12577	12577	12577
R^2	.077	.078	.077
F	14.99	14.41	14.99

Source: See Table 5.8.

Notes: (1) Universe is all persons in the private sector with positive business income between age 16 and 64 in the construction or construction-related professional services industries; observations with imputed earnings are excluded where identified; (2) Reported number is the percentage difference in annual business earnings between a given group and White men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

Table 5.12. Business Owner Earnings Regressions, Construction and Related Industries, 1992-2002

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.323	-0.322	-0.323
	(2.40)	(2.36)	(2.40)
Hispanic	-0.145	-0.136	-0.145
	(1.38)	(1.28)	(1.38)
Asian	-0.180	-0.183	-0.180
	(0.84)	(0.85)	(0.84)
Native American	-0.208	-0.208	-0.208
	(0.76)	(0.76)	(0.76)
White Female	-0.839	-0.840	-0.839
	(15.73)	(15.74)	(15.73)
Age	0.190	0.189	0.190
	(8.71)	(8.67)	(8.71)
Age^2	-0.002	-0.002	-0.002
	(7.89)	(7.86)	(7.89)
Maryland	0.206	0.273	0.206
	(0.44)	(0.54)	(0.44)
Maryland*Black		-0.090	
		(0.09)	
Maryland*Hispanic		-0.871	
		(1.56)	
Maryland*Asian		0.329	
		(0.15)	
Maryland*Native American			
Maryland*White Female		2.233	
		(0.78)	
Time (11 categories)	Yes	Yes	Yes
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	8446	8446	8446
R^2	.064	.064	.064
F	6.97	6.69	6.97

Source: See Table 5.9.

Notes: (1) Universe is all persons in the private sector with positive business income between age 16 and 64 in the construction or construction-related professional services industries; observations with imputed earnings are excluded where identified; (2) Reported number is the percentage difference in annual business earnings between a given group and White men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

Table 5.13. Self-Employment Rates in 2000 for Selected Race and Sex Groups: All Industries; United States and the State of Maryland

Race/Sex	U.S. (%)	State of Maryland (%)	Percent Difference from White male
Black	4.8	5.2	-57.4%
Hispanic	6.8	7.2	-41.0%
Asian	9.8	11.2	-8.2%
Native American	7.7	5.1	-58.2%
Multiple Races	8.9	9.2	-24.6%
White female	7.9	8.8	-27.9%
White male	13.1	12.2	

Source: NERA calculations from the 2000 Decennial Census Five Percent Public Use Microdata Samples.

Table 5.14. Self-Employment Rates in 2000 for Selected Race and Sex Groups: Construction and Related Industries; United States and the State of Maryland

Race/Sex	U.S. (%)	State of Maryland (%)	Percent Difference from White male
Black	14.0	11.3	-36.2%
Hispanic	12.2	7.1	-59.9%
Asian	16.0	16.8	-5.1%
Native American	15.3	7.2	-59.3%
Multiple Races	19.6	15.9	-10.2%
White female	14.2	9.5	-46.3%
White male	24.3	17.7	

Source: NERA calculations from the 2000 Decennial Census Five Percent Public Use Microdata Samples.

Table 5.15. Business Formation Regressions, All Industries, 2000

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.045	-0.046	-0.046
	(99.51)	(97.31)	(97.31)
Hispanic	-0.035	-0.035	-0.035
	(80.80)	(80.88)	(80.89)
Asian/Pacific Islanders	-0.015	-0.016	-0.016
	(24.22)	(24.95)	(24.95)
Native American	-0.034	-0.034	-0.034
	(26.45)	(26.38)	(26.54)
Other Race	-0.018	-0.018	-0.018
	(19.15)	(19.38)	(19.15)
White Female	-0.029	-0.030	-0.029
	(101.52)	(101.77)	(101.52)
Age	0.010	0.010	0.010
	(143.28)	(143.28)	(143.28)
Age^2	-0.000	-0.000	-0.000
	(101.449)	(101.453)	(101.453)
Maryland	-0.024	-0.031	-0.031
	(10.35)	(13.27)	(13.29)
Maryland*Black		0.017	0.017
		(6.24)	(6.26)
Maryland*Hispanic		0.019	0.019
		(5.13)	(5.14)
Maryland* Asian/Pacific Islanders		0.026	0.026
		(7.16)	(7.18)
Maryland* Native American		-0.007	
		(0.45)	
Maryland*Other Race		0.021	0.021
		(3.29)	(3.30)
Maryland*White Female		0.018	0.018
		(9.73)	(9.76)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	4032101	4032101	4032101
Pseudo R^2	0.158	0.158	0.158
Chi^2	4.2e+05	4.2e+05	4.2e+05
Log Likelihood	-1120482	-1120414	-1120414

Source: NERA calculations from the 2000 Decennial Census Five Percent Public Use Microdata Samples.

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

Table 5.16. Business Formation Regressions, All Industries, 1979-1991

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.037	-0.037	-0.037
	(93.78)	(92.00)	(92.00)
Hispanic	-0.028	-0.028	-0.028
	(58.52)	(58.51)	(58.51)
Other Race	-0.016	-0.016	-0.016
	(25.84)	(25.75)	(25.75)
White Female	-0.027	-0.027	-0.027
	(100.93)	(100.78)	(100.78)
Age	0.011	0.011	0.011
	(178.8)	(178.78)	(178.78)
Age^2	-0.000	-0.000	-0.000
	(139.9)	(139.89)	(139.89)
Maryland	-0.008	-0.015	-0.015
	(1.25)	(2.38)	(2.38)
Maryland*Black		0.023	0.023
		(9.17)	(9.17)
Maryland*Hispanic		0.017	0.017
		(2.79)	(2.79)
Maryland*Other Race		0.010	0.010
		(2.00)	(2.00)
Maryland*White Female		0.012	0.012
		(5.86)	(5.86)
Time (6 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	2684590	2684590	2684590
Pseudo R^2	.245	.245	.245
Chi^2	4.4e+05	4.4e+05	4.4e+05
Log Likelihood	-671455	-671408	-671408

Source: NERA calculations from the Merged Outgoing Rotation Groups of the 1979-1991 Current Population Survey microdata samples.

Notes: (1) Universe is all private sector labor force participants between age 16 and 64; observations with imputed earnings are excluded where identified; (2) Reported number represents the percentage point probability difference in business ownership rates between a given group and White men, evaluated at the mean business ownership rate for the estimation sample; (3) Number in parentheses is the absolute value of the associated z-statistic. Using a two-tailed test, z-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

Table 5.17. Business Formation Regressions, All Industries, 1992-2002

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.048	-0.049	-0.049
	(78.78)	(76.85)	(76.85)
Hispanic	-0.041	-0.041	-0.041
	(61.81)	(61.53)	(61.81)
Asian	-0.015	-0.015	-0.015
	(16.51)	(16.28)	(16.42)
Native American	-0.030	-0.030	-0.030
	(19.25)	(19.15)	(19.27)
White Female	-0.026	-0.026	-0.026
	(62.44)	(62.51)	(62.5)
Age	0.013	0.013	0.013
	(125.43)	(125.43)	(125.43)
Age^2	-0.000	-0.000	-0.000
	(89.59)	(89.6)	(89.6)
Maryland	0.019	0.010	0.011
	(2.81)	(1.53)	(1.7)
Maryland*Black		0.016	0.014
		(4.33)	(4.17)
Maryland*Hispanic		0.009	
		(1.38)	
Maryland*Asian		0.004	
		(0.60)	
Maryland*Native American		-0.016	
		(0.75)	
Maryland*White Female		0.015	0.013
		(4.62)	(4.48)
Time (11 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	1924167	1924167	1924167
Pseudo R^2	.215	.215	.215
Chi^2	3.1e+05	3.1e+05	3.1e+05
Log Likelihood	-568265	-568250	-568251

Source: NERA calculations from the Merged Outgoing Rotation Groups of the 1992-2002 Current Population.

Notes: (1) Universe is all private sector labor force participants between age 16 and 64; observations with imputed earnings are excluded where identified; (2) Reported number represents the percentage point probability difference in business ownership rates between a given group and White men, evaluated at the mean business ownership rate for the estimation sample; (3) Number in parentheses is the absolute value of the associated z-statistic. Using a two-tailed test, z-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

Table 5.18. Business Formation Regressions, Construction and Related Industries, 2000

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.097	-0.098	-0.098
	(30.10)	(29.60)	(29.60)
Hispanic	-0.076	-0.076	-0.076
	(30.98)	(30.54)	(31.00)
Asian/Pacific Islanders	-0.057	-0.060	-0.060
	(10.44)	(10.82)	(10.82)
Native American	-0.080	-0.079	-0.080
	(12.08)	(12.03)	(12.10)
Other Race	-0.030	-0.031	-0.030
	(5.42)	(5.45)	(5.44)
White Female	-0.085	-0.085	-0.085
	(39.96)	(39.41)	(39.94)
Age	0.025	0.025	0.025
	(60.05)	(60.06)	(60.06)
Age^2	-0.000	-0.000	-0.000
	(44.02)	(44.03)	(44.02)
Maryland	-0.030	-0.034	-0.034
	(2.14)	(2.41)	(2.47)
Maryland*Black		0.036	0.036
		(2.22)	(2.27)
Maryland*Hispanic		-0.014	
		(0.91)	
Maryland* Asian/Pacific Islanders		0.081	0.082
		(3.03)	(3.06)
Maryland* Native American		-0.013	
		(0.16)	
Maryland*Other Race		0.020	
		(0.50)	
Maryland*White Female		0.006	
		(0.45)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	343116	343116	343116
Pseudo R^2	.076	.076	.076
Chi^2	26964	26964	26964
Log Likelihood	-165104	-165097	-165098

Source: See Table 5.15.

Notes: (1) Universe is all private sector labor force participants in the construction sector between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number represents the percentage point probability difference in business ownership rates between a given group and White men, evaluated at the mean business ownership rate for the estimation sample; (3) Number in parentheses is the absolute value of the associated z-statistic. Using a two-tailed test, z-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence.

Table 5.19. Business Formation Regressions, Construction and Related Industries, 1979-1991

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.083	-0.085	-0.085
	(24.71)	(24.19)	(24.18)
Hispanic	-0.064	-0.065	-0.064
	(16.63)	(16.66)	(16.64)
Other Race	-0.095	-0.096	-0.096
	(18.22)	(18.34)	(18.33)
White Female	-0.099	-0.099	-0.099
	(36.86)	(36.53)	(36.85)
Age	0.028	0.028	0.028
	(61.24)	(61.24)	(61.25)
Age^2	-0.000	-0.000	-0.000
	(49.48)	(49.48)	(49.48)
Maryland	-0.021	-0.032	-0.030
	(0.40)	(0.61)	(0.57)
Maryland*Black		0.036	0.033
		(2.45)	(2.29)
Maryland*Hispanic		0.043	
		(1.19)	
Maryland*Other Race		0.120	0.116
		(2.44)	(2.38)
Maryland*White Female		0.017	
		(0.75)	
Time (6 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	209444	209444	209444
Pseudo R^2	.082	.082	.082
Chi^2	16816	16823	16816
Log Likelihood	-93592	-93587	-93588

Source: See Table 5.16.

Notes: (1) Universe is all private sector labor force participants between age 16 and 64 in the construction or construction-related professional services industries; observations with imputed earnings are excluded where identified; (2) Reported number represents the percentage point probability difference in business ownership rates between a given group and White men, evaluated at the mean business ownership rate for the estimation sample; (3) Number in parentheses is the absolute value of the associated z-statistic. Using a two-tailed test, z-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

Table 5.20. Business Formation Regressions, Construction and Related Industries, 1992-2002

Independent Variables	Specification		
	(1)	(2)	(3)
Black	-0.110	-0.109	-0.110
	(23.94)	(22.80)	(23.94)
Hispanic	-0.091	-0.091	-0.091
	(21.00)	(20.66)	(21.00)
Asian	-0.075	-0.076	-0.075
	(8.96)	(8.88)	(8.96)
Native American	-0.089	-0.090	-0.089
	(10.11)	(10.15)	(10.11)
White Female	-0.048	-0.047	-0.048
	(13.71)	(13.34)	(13.71)
Age	0.033	0.033	0.033
	(48.77)	(48.77)	(48.77)
Age^2	-0.000	-0.000	-0.000
	(36.88)	(36.87)	(36.88)
Maryland	-0.051	-0.042	-0.051
	(1.36)	(1.10)	(1.36)
Maryland*Black		-0.021	
		(1.05)	
Maryland*Hispanic		-0.036	
		(1.19)	
Maryland*Asian		0.020	
		(0.40)	
Maryland*Native American		0.117	
		(1.11)	
Maryland*White Female		-0.043	
		(1.70)	
Time (11 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	153805	153805	153805
Pseudo R^2	.090	.090	.090
Chi^2	15294	15300	15294
Log Likelihood	-77526	-77523	-77525

Source: See Table 5.17.

Notes: (1) Universe is all private sector labor force participants between age 16 and 64 in the construction or construction-related professional services industries; observations with imputed earnings are excluded where identified; (2) Reported number represents the percentage point probability difference in business ownership rates between a given group and White men, evaluated at the mean business ownership rate for the estimation sample; (3) Number in parentheses is the absolute value of the associated z-statistic. Using a two-tailed test, z-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes Hispanics, Asian/Pacific Islanders, and American Indians/Alaska Natives; (5) Geography is defined based on place of residence.

Table 5.21. Actual and Potential Business Formation Rates—Maryland Construction Sector

Race/Sex	Business Formation Rate (%)	Potential Business Formation Rate (%)	Disparity Ratio
	(1)	(2)	(3)
Black	11.3	21.1	0.536
Hispanic	7.1	14.7	0.483
Asian/Pacific Islander	16.8	22.8	0.737
American Indian/Alaska Native	7.2	15.2	0.474
Multiple races reported	15.9	18.9	0.841
White female	9.5	18.0	0.528
All minority and female	10.0	18.6	0.538

Notes: Figures in column (1) are average self-employment rates weighted using PUMS population-based person weights. Figures in column (2) are derived from combining the figure in column (1) with the corresponding result from Table 5.18. Column (3) is simply column (1) divided by column (2).

Source: 2000: Five Percent PUMS. See Table 5.18.

Table 5.22. Disparity Ratios from Preliminary 2002 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						
United States	22,485,449	8,844,543,267	5,174,292	8,099,243,938	55,757,451	1,638,934,633
Female	6,492,795	950,600,079	917,946	813,188,494	7,224,246	175,863,498
Male	13,185,703	7,096,465,049	3,525,524	6,598,978,228	42,677,931	1,327,515,579
Equally male-/female-owned	2,691,722	731,051,431	717,825	626,831,909	5,658,953	129,616,475
Hispanic	1,574,159	226,468,398	199,725	183,964,615	1,546,092	37,062,622
Non-Hispanic	20,796,061	8,551,648,161	4,961,570	7,855,034,016	54,015,038	1,595,932,929
White	19,894,823	8,303,716,399	4,712,168	7,629,211,216	52,209,027	1,548,757,745
Black	1,197,988	92,681,562	94,862	69,779,134	770,746	18,065,552
American Indian and Alaska Native	206,125	26,395,707	25,101	21,272,903	187,407	4,753,375
Asian	1,105,329	343,321,501	319,911	307,555,836	2,293,694	58,624,239
Native Hawaiian and Other Pacific Islander	32,299	5,220,795	4,333	4,326,420	36,710	1,011,933
Panel B. Column Percentages						
United States	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	28.88%	10.75%	17.74%	10.04%	12.96%	10.73%
Male	58.64%	80.24%	68.14%	81.48%	76.54%	81.00%
Equally male-/female-owned	11.97%	8.27%	13.87%	7.74%	10.15%	7.91%
Hispanic	7.00%	2.56%	3.86%	2.27%	2.77%	2.26%
Non-Hispanic	92.49%	96.69%	95.89%	96.98%	96.88%	97.38%
White	88.48%	93.89%	91.07%	94.20%	93.64%	94.50%
Black	5.33%	1.05%	1.83%	0.86%	1.38%	1.10%
American Indian and Alaska Native	0.92%	0.30%	0.49%	0.26%	0.34%	0.29%
Asian	4.92%	3.88%	6.18%	3.80%	4.11%	3.58%
Native Hawaiian and Other Pacific Islander	0.14%	0.06%	0.08%	0.05%	0.07%	0.06%
Panel C. Disparity Ratios		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Female		37.22%		56.60%	73.03%	60.49%
Male		136.82%		119.58%	112.34%	118.88%
Equally male-/female-owned		69.05%		55.79%	73.16%	57.01%
Hispanic		36.58%		58.84%	71.84%	58.59%
Non-Hispanic		104.54%		101.14%	101.03%	101.55%
White		106.11%		103.43%	102.82%	103.77%
Black		19.67%		46.99%	75.40%	60.12%
American Indian and Alaska Native		32.56%		54.14%	69.29%	59.79%
Asian		78.97%		61.42%	66.54%	57.85%
Native Hawaiian and Other Pacific Islander		41.09%		63.79%	78.62%	73.73%

Source: Author's calculations using 2002 SBO, http://www.census.gov/csd/sbo/state/st00.HTM. Excludes publicly-owned, foreign-owned, and not-for-profit firms.

Table 5.23. Disparity Ratios from Preliminary 2002 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						
Maryland	431,363	154,432,213	95,189	140,865,134	1,023,066	32,441,216
Female	137,442	17,834,240	17,971	14,881,734	144,702	4,055,663
Male	248,111	123,776,719	66,225	114,909,590	783,564	26,164,501
Equally male-/female-owned	43,644	9,686,301	10,969	8,012,963	80,897	1,870,679
Hispanic	15,364	2,403,937	2,090	1,956,215	18,813	600,897
Non-Hispanic	413,833	148,893,323	93,076	135,848,071	990,350	31,489,946
White	332,471	138,803,060	82,541	127,459,147	912,741	29,261,318
Black	69,428	4,789,923	4,414	3,455,171	40,442	1,148,466
American Indian and Alaska Native	3,634	343,957	365	245,409	2,194	84,940
Asian	26,315	7,104,435	7,743	6,369,857	50,963	1,528,481
Native Hawaiian and Other Pacific Islander	N/A	52,208	55	50,442	552	14,527
Panel B. Column Percentages						
Maryland	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	31.86%	11.55%	18.88%	10.56%	14.14%	12.50%
Male	57.52%	80.15%	69.57%	81.57%	76.59%	80.65%
Equally male-/female-owned	10.12%	6.27%	11.52%	5.69%	7.91%	5.77%
Hispanic	3.56%	1.56%	2.20%	1.39%	1.84%	1.85%
Non-Hispanic	95.94%	96.41%	97.78%	96.44%	96.80%	97.07%
White	77.07%	89.88%	86.71%	90.48%	89.22%	90.20%
Black	16.10%	3.10%	4.64%	2.45%	3.95%	3.54%
American Indian and Alaska Native	0.84%	0.22%	0.38%	0.17%	0.21%	0.26%
Asian	6.10%	4.60%	8.13%	4.52%	4.98%	4.71%
Native Hawaiian and Other Pacific Islander	N/A	0.03%	0.06%	0.04%	0.05%	0.04%
Panel C. Disparity Ratios		(2) vs. (1)		(4) vs. (3)	(5) vs. (3)	(6) vs. (3)
Female		36.24%		55.96%	74.92%	66.22%
Male		139.35%		117.25%	110.09%	115.93%
Equally male-/female-owned		61.99%		49.36%	68.62%	50.04%
Hispanic		43.70%		63.25%	83.75%	84.36%
Non-Hispanic		100.50%		98.63%	99.00%	99.27%
White		116.61%		104.35%	102.89%	104.02%
Black		19.27%		52.90%	85.25%	76.34%
American Indian and Alaska Native		26.44%		45.43%	55.93%	68.28%
Asian		75.41%		55.59%	61.24%	57.92%
Native Hawaiian and Other Pacific Islander		N/A		61.97%	93.38%	77.50%

Source: Author's calculations using 2002 SBO, http://www.census.gov/csd/sbo/state/st00.HTM. Excludes publicly-owned, foreign-owned, and not-for-profit firms.

VI. Statistical Disparities in Capital Markets

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

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 and 1998.[166] 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. In addition we report the results of a complementary survey we conducted in Maryland and the surrounding area in 2005.

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 Black-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 Black-owned firms and other minority-owned firms are substantially and statistically significantly more likely to be denied credit than are White-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.
- When minority-owned firms did apply for a loan their loan requests were substantially more likely to be denied than non-minorities, even when differences like size and credit history are accounted for.
- When minority-owned firms *did* receive a loan they were obligated to pay higher interest rates on the loans than was true of comparable White-owned firms.
- Far more minority-owned firms report that credit market conditions are a serious concern than do White-owned firms.

[166] This survey is conducted every five years. Results from the 2003 survey data are expected to be released sometime in 2006.

- A greater share of minority-owned firms believes that the availability of credit is the most important issue likely to confront their firms in the upcoming year.

- There is no evidence that discrimination in the market for credit is significantly different in Maryland, in the South Atlantic census region, or in the construction industries than it is in the nation or the economy as a whole.

- There is no evidence that the level of discrimination in the market for credit has diminished during the 1990s or the 2000s. Evidence from 1998 and later is entirely consistent with that from 1993 and earlier.

The structure of this Chapter is as follows. First, we outline the main theories of discrimination and discuss how they might be tested. Second, we examine the evidence on the existence of capital/liquidity constraints facing individuals in the mortgage market, households in the non-mortgage loan market, and for small businesses in the commercial credit market. Third, we describe the data files used in the remainder of the Chapter and then examine in more detail problems faced by minority-owned firms in obtaining credit. Fourth, we provide a series of answers to criticisms. Finally, we present our conclusions.

A. Theoretical Framework and Review of the Literature

Most recent economic studies of discrimination draw on the analyses contained in Gary Becker's (1957) *The Economics of Discrimination*. Becker's main contribution was to translate the notion of discrimination into financial terms. Discrimination, in this view, results from the desire of owners, workers, or customers to avoid contact with certain groups. This being the case, transactions with the undesired groups would require more favorable terms than those that occur with a desired group. Assume that the primary objective of a financial institution is to maximize their expected profits. The expected return on a loan will depend on the interest rate charged and the likelihood that a borrower defaults. The financial institution would approve any loan for which the expected return on the loan exceeded the cost of the funds to the institution. Discrimination would then result in either (a) higher interest rates being charged to undesired groups having otherwise similar characteristics to the desired group or (b) requiring better characteristics (*i.e.* a lower expected default rate) from the undesired group at any given interest rate. In other words, applicants from the disadvantaged group might either be appraised more rigorously or they would be given less favorable terms on the loan.

A similar connection between the likelihood of loan approval and the race of the applicant might also be found if lenders employ statistical discrimination. In this case, lenders use personal characteristics—such as race or gender—to infer the likelihood of default on the loan. If experience has suggested that certain groups of individuals—defined by race or gender—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 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, Whites had 10 percent of their loans rejected whereas rejection rates were 28 percent for both Blacks 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, Blacks were still found to be 7 percentage points less likely to be granted the loan. A variety of criticisms have been launched at this study (see, for example, Horne, 1994; Day and Liebowitz, 1998; Harrison, 1998). Responses to these criticisms are found in Browne and Tootell (1995).

In addition to the type of statistical analysis done in the Munnell et al. (1996) study, two other approaches have been used to measure discrimination in mortgage markets. First, Federal Reserve regulators can examine a lending institution's files to try to identify any cases where a loan rejection looks suspicious. Second, audit studies have been used with paired "identical" applicants. Such studies have also found evidence of discrimination (*c.f.* Cloud and Galster, 1993) although the audit approach is not without its critics (Heckman, 1998).

Another relevant literature is concerned with the severity of liquidity constraints affecting consumers in non-mortgage credit markets. A consumer is said to be liquidity-constrained when lenders refuse to make the household a loan or offer the household less than they wished to borrow (Ferri and Simon, 1997). Many studies have suggested that roughly twenty percent of U.S. families are liquidity-constrained (cf. Hall and Mishkin, 1982; and Jappelli, 1990). As might be expected, liquidity-constrained households are typically younger, with less wealth and accumulated savings (Hayashi, 1985; and Jappelli, 1990). The research shows non-White 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.[167]

[167] Evans and Leighton (1989) and Evans and Jovanovic (1989) have argued formally that entrepreneurs face difficulties borrowing money. As in the discussion above, such individuals are labeled liquidity constrained by economists. Using data from the National Longitudinal Survey of Youth from 1966-1981 and the Current Population Surveys from 1968-1987, these authors found that, all else equal, people with greater family assets are more likely to switch to self-employment from employment. Blanchflower and Oswald (1998) studied the probability that an individual reports him or herself as self-employed. Consistent with the existence of capital constraints on potential entrepreneurs, their econometric estimates imply that the probability of being self-employed depends positively upon whether the individual ever received an inheritance or gift. Second, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem.

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 to the latter effect is provided in the economics literature on self-employment.[168]

In his 2003 expert report in Builders Association of Greater Chicago vs. the City of Chicago,[169] Timothy Bates argued eloquently that "from its origins, the black-business community has been constrained by limited access to credit, limited opportunities for education and training, and White stereotypes about suitable roles for minorities in society (Bates, 1989; Bates, 1993; Bates, 1973). Indeed, as Bates points out, Gunner Myrdal observed,

> "The Negro businessman … encounters greater difficulties than whites in securing credit. This is partly due to the marginal position of Negro business. It is also partly due to prejudicial opinions among whites concerning business ability and personal reliability of Negroes. In either case a vicious circle is in operation keeping Negro business down" (Myrdal, 1944, 308).

Bates goes on to argue that commercial banks lend most easily to White 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 Black 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 Black-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 (1998) uses data from the 1968-1989 Panel Study of Income Dynamics to examine why Black men are one-third as likely to be self-employed as White men. The author finds that the large discrepancy is due to a Black transition rate into self-employment that is approximately one half the White rate and a Black transition rate out of self-employment that is twice the White 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 7 times larger for Black self-employed than for White 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 Blacks and Whites explain only a part of the racial gap in the transition rate into self-employment. In addition, racial differences in specific

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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.

[168] *See* Chapter IV, above.

[169] 298 F.Supp.2d 725 (N.D.Ill. 2003).

variables, such as levels of assets and the likelihood of having a self-employed father provide important contributions to the gap. He concludes, however, "the remaining part of the gap is large and is due to racial differences in the coefficients. Unfortunately, we know much less about the causes of these differences. They may be partly caused by lending or consumer discrimination against blacks" (1998, p.14).

There is also research into racial differences in access to credit among small businesses. Cavalluzzo and Cavalluzzo (1998) use data from the 1988-1989 National Survey of Small Business Finances (NSSBF), conducted by the Board of Governors of the Federal Reserve System, to analyze differences in application rates, denial rates, and other outcomes by race 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 Whites and minority-owned firms that cannot be explained by a handful of firm characteristics. Unfortunately, the earlier NSSBF data did not over-sample minority-owned firms and included limited information on a firm's credit history and that of its owner, reducing the ability to provide a powerful test of the causal impact of race 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.

Our analysis also takes advantage, primarily, of the 1993 NSSBF data and the 1998 Survey of Small Business Finances (SSBF) data, which have a larger sample of minority-owned firms and better information on creditworthiness than did the earlier NSSBF data.[170] The 1993 and 1998 datasets also can be used to conduct an extensive set of specification checks designed to weigh the possibility that our results are subject to alternative interpretations.

B. Empirical Framework and Description of the Data

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 Black-owned firms compared to White-owned firms is consistent with discrimination, it is necessary to compare Black- and White-owned firms that have similar risks of default, that is, the fraction of the Black firms' loans that would be approved if they had the same creditworthiness as the White-owned firms. A standard approach to this problem is to statistically control for firms' characteristics relevant to the loan decision. If Black-owned firms with the same likelihood of default as White-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:

[170] Although the 1998 file has the benefit of being the most recent available, it has four disadvantages compared to the 1993 file. First, sample size is smaller (3,651 firms compared with 4,637 in 1993). Second, minority-owned firms were not over-sampled as in 1993. Third, the wording of the main question concerning loan denial was more inclusive in 1993 than it is in 1998; in 1998, it was restricted to new loans whereas in 1993 it covered all loans (*i.e.* new loans plus renewals, extensions, and/or modifications of existing loans). Therefore, disaggregation of results by geography is more restricted in 1998 due to the resulting smaller sample sizes. Despite these differences, however, the results from both data sets are entirely consistent with one another.

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

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 of the firm's ownership, and Φ is the cumulative normal probability distribution.[171] This econometric model can be thought of as a reduced form version of a structural model that incorporates firms' demand and financial institutions' supply of loan funds as a function of the interest rate and other factors.[172] Within the framework of this model, a positive estimate of β_3 is consistent with the presence of discrimination.[173]

The 1993 NSSBF data contain substantial information regarding credit availability on a nationally representative sample of small businesses with fewer than 500 employees. The survey was conducted during 1994-95 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 with less than 500 employees.[174] In this NSSBF file, minority-owned firms were over-sampled, but sampling weights are provided to generate nationally representative estimates. Of the firms surveyed, 12 percent are owned by Blacks, 6 percent are owned by Hispanics, and individuals of other races (primarily Asians, Native Americans, and mixed race) own 7 percent.

Table 6.1 presents weighted sample means from these data for *all* firms in the sample that applied for credit. The estimates indicate that Black-owned firms are more than twice as likely to have a loan application rejected as White-owned firms (65.9 percent versus 26.9 percent).[175] Other minority groups are denied at rates higher than Whites as well, but the magnitude of the Black-White differential is especially striking. Minority-owned firms, however, do have characteristics that are different from those of White-owned firms, and such differences may

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[171] Additional discussion of Probit regression appears in Chapter V, Section C.1.

[172] Maddala and Trost (1994) describe two variants of such a model, one in which the interest rate is exogenous and another in which the interest rate is endogenously determined, but is capped so that some firms' loan applications are approved and others are rejected. If the interest rate is exogenous, they show that a reduced form model which controls for the loan amount, such as we report below, uniquely identifies supply-side differences in the treatment of Black-owned firms. If the interest rate is endogenous, a reduced form approach requires an assumption that the determinants of demand for White and Black-owned firms are identical, other things being equal. The main alternative empirical strategy is to estimate a structural supply and demand model, in which proper identification generally is not feasible. Any characteristic of the borrower that affects his/her expected rate of return on the investment will affect his/her ability to repay and should be taken into consideration by the lender as well. For instance, in their structural model of mortgage decisions, Maddala and Trost (1994) impose questionable exclusion restrictions, like omitting marital status from the loan supply equation.

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

[174] The median size 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.

[175] Cavalluzzo and Cavalluzzo (1998) examined these outcomes using the 1987 NSSBF and similarly found that denial rates (weighted) are considerably higher for minorities. White-owned firms had a denial rate for loans of 22 percent compared with 56 percent for Blacks, 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.

contribute to the gap in loan denial rates. For instance, minority-owned firms were younger, smaller (whether measured in terms of sales or employment), and more likely to be located in urban areas, to be a sole-proprietorship, and to have an owner with fewer years of experience than their White counterparts. Black-owned firms, in particular, were also generally less creditworthy than firms owned by other racial groups as measured by whether: (a) the owner had been bankrupt over the preceding 7 years, (b) the owner had been delinquent for more than 60 days on personal obligations over the prior three years, (c) the owner had legal judgments against him or her over the previous three years, and (d) the firm had been delinquent for more than 60 days on business obligations over the preceding three years. Black-owned firms also sought smaller amounts of credit, requesting loans about 60 percent smaller than those levels of funding requested by White-owned firms.

The NSSBF database does not identify the specific city or town where the firm is located; instead, data are reported for the four basic census regions and nine basic census divisions. Table 6.2 presents evidence for the South Atlantic division which includes Maryland and the surrounding area.[176] Results are only presented separately for Whites, Blacks, and Hispanics as there were relatively few firms from this region in the sample that were owned by other racial groups. The South Atlantic sample includes 772 firms, of which the owners of 342 firms reported that they had applied for a loan over the preceding three-year period. The overall denial rates are almost identical to the national rate reported in Table 6.1: 29.2 percent for the South Atlantic compared with 28.8 percent nationwide. The difference in the denial rates between Black-owned and White-owned firms is larger in the South Atlantic (39.0 percent nationally and 43.5 percent in the South Atlantic). Black-owned firms in the South Atlantic also appear to be less creditworthy than White-owned firms to a somewhat lesser degree than observed nationally. In comparison with White-owned firms in the South Atlantic, however, Black-owned firms tended to be smaller, younger, and less creditworthy, and they had applied for smaller loans that were likely to be for working capital.

C. 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 highlight firms' perceptions regarding discrimination in obtaining credit. That Black-owned firms and other minorities report greater difficulty in obtaining credit than do White-owned firms, but report other types of problems no more frequently, suggests either that discrimination takes place or that perceptions of discrimination exist that are unwarranted. It therefore complements the econometric analysis provided subsequently, which can distinguish between these two hypotheses.

Table 6.3 summarizes, for the U.S. as a whole, responses to specific questions about problems that the firms confronted over the 12-month period before the date of response.[177] In the top

[176] The South Atlantic division covers Delaware, the District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia.

[177] Blanchflower, Levine, and Zimmerman (1998) present similar evidence to that reported here from an additional data set, the 1992 Characteristics of Business Owners Survey, which was conducted by the Bureau of the Census.

panel respondents were asked to what extent credit market conditions had been a problem. Blacks and Hispanics were much more likely to say that it had been a "serious" problem (31 percent and 23 percent, respectively) than Whites (13 percent) or those from other racial groups (13 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 by race are much less pronounced in these eight areas than they were in relation to credit market conditions.[178] The finding that Black-owned firms are largely indistinguishable from White-owned firms in reporting a variety of problems, except for the case of credit, indicates that minority-owned firms perceive credit availability to be a problem for them. Results are broadly similar in Table 6.4 for the South Atlantic division—Black-owned firms were almost three times more likely and Hispanic-owned firms more than twice as likely as White-owned firms to say that credit market conditions had been a serious problem in the preceding 12 months.

Table 6.5 reports the views of NSSBF respondents for the U.S. as a whole and Table 6.6 reports views for the South Atlantic division on the most important issue they believed that they expected over the next 12 months. Credit availability again appears to be an issue for Black-owned firms but less so for firms owned by Whites, Hispanics and other racial groups. White-owned firms were especially worried about health care costs.

Acute credit availability problems for minorities have been reported in surveys other than NSSBF. In the 1992 Characteristics of Business Owners (CBO) Survey conducted by the Bureau of the Census, for example, firms were asked to report the impact of various kinds of costs upon their profitability.[179] Black- and Hispanic-owned firms reported stronger negative impacts of credit market conditions and a lack of financial capital; there are no strong race or gender effects for the various other reasons given. The Survey also reported on reasons why a discontinued business was unsuccessful. Black-owned and to a lesser degree Hispanic-owned firms were much more likely to report that the reason was due to lack of access to business or personal loans or credit than was true for other races.[180]

A recent study published by the U.S. Chamber of Commerce (2005) confirms the findings in Blanchflower, Levine and Zimmerman (2003). The survey was conducted in March and April

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[178] We also estimated a series of ordered Logit equations to control for differences across firms in their creditworthiness, location, industry size, and the like. It is apparent from these regressions that Black-owned firms were more likely to report that credit market conditions were especially serious. Only in the case of the Family and Medical Leave Act were they significantly more likely to report this problem.

[179] http://www.census.gov/prod/3/97pubs/cbo-9201.pdf , Table 1, p.21.

[180] When asked if lack of financial capital was a serious problem affecting business profitability, 29 percent of firms owned by White males in the CBO survey answered in the affirmative compared with 46 percent owned by Blacks and 38 percent by Hispanics. For firms that were discontinued, 7 percent of firms owned by White males reported it was due to lack of access to business capital compared to 16 percent for firms owned by Blacks and 9 percent for Hispanics. A further 3 percent of White males said it was due to lack of personal capital compared to a further 8 percent for firms owned by Blacks and 6 percent for Hispanics. See Blanchflower, Levine and Zimmerman (1998, tables 3a and 3b).

2005 and detailed the financing problems experienced by small business owners, 95 percent of whom had less than 100 employees. As detailed in Table 6.7, over 1000 business owners were interviewed and reported that minority 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, they report that availability of credit is their top problem, exactly as reported by Blanchflower, Levine and Zimmerman. The biggest difference in responses between minorities and White men and women was availability of credit: 19 percent of White males report credit as their top problem compared with 54 percent for minority males. There was a 15 percentage point difference for women. In no other category is there more than a 10 percentage point difference for men or women.

In summary, Black-owned firms in particular and to a lesser extent Hispanics report that they had problems with the availability of credit in the past and expected that such difficulties would continue into the future. Whether or not these perceptions reflect actual discrimination can be distinguished in the econometric analysis to follow.

D. Differences in Loan Denial Rates by Race/Ethnicity

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 differences among firms.

In Table 6.8 and Table 6.9, we report the results from a series of loan denial Probit regressions of the form specified in Equation (1) using data from the 1993 NSSBF for the U.S. and the South Atlantic division. As indicated earlier, the 1993 and 1998 datasets have the particular advantage that they include information that can be used to proxy an applicant's creditworthiness. We report estimates from these models that can be interpreted as changes or differences in loan denial probabilities depending on the type of variables considered. For indicator variables, such as race and gender indicators, estimates show differences in loan denial probabilities between the indicated group and the base group.[181] In Column (1) of Table 6.8 (in which the regression model contains only race and gender indicators), the estimated coefficient of 0.426 on the Black indicator can be interpreted as indicating that the denial rate for Black-owned businesses is 42.6 percentage points higher than that for White-owned firms.[182]

[181] For "continuous" variables, such as profits and sales, estimates can be thought of as changes in loan denial probability when the continuous variable changes by one unit. For example, in Column (2) of Table 6.8, the estimated coefficient of -0.003 on owner's years of experience indicates that one additional year of owner's experience is related to -0.3 percentage point reduction in loan denial rate.

[182] This estimate largely replicates the raw difference in denial rates between Black- and White-owned businesses reported in Table 6.1. The raw differential observed there (0.659 – 0.269 = 0.39) differs slightly from the 0.426 differential reported here because this specification also controls for whether the business is owned by a woman

The remainder of Table 6.8 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race.[183] In Column (2) a number of controls are included that distinguish the creditworthiness of the firm and the owner.[184] 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, Black-owned firms remain 28 percentage points more likely than White-owned firms to have their loan request denied.

The models reported in Columns (3) through (5) of Table 6.8 control for an array of additional characteristics of firms. Column (3) adds 30 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 the firm's industry. 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.[185] In total these three columns add 164 variables to the more parsimonious specification reported in Column (2).[186] Nevertheless, the estimated disadvantage experienced by Black-owned firms in obtaining credit falls by a relatively small amount. The estimate from each of the three additional columns indicates that Black-owned firms are 23 percentage points more likely than White-owned firms to have their loan application denied even after controlling for the multitude of factors we have taken into consideration.[187] In Column (2) of Table 6.9, we see

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and because the regressions are unweighted whereas the descriptive statistics are weighted using the sample weights. When a full set of explanatory control variables are included the unweighted estimates are insignificantly different from the weighted estimates, hence in Table 6.7 and subsequent tables we report only unweighted estimates.

[183] In preliminary analyses, we have also estimated these models separately, focusing specifically on the differences in coefficient estimates between Whites and Blacks. The F-Test we conducted to determine whether parameter estimates were the same for Blacks and Whites rejected this null hypothesis. Then we used the estimates obtained by estimating the model separately by race and conducted an Oaxaca (1973) decomposition. The results from this analysis were similar to those obtained by restricting the coefficients to be the same between Blacks and Whites and using the coefficient on the Black indicator variable to measure the gap between groups. We have chosen to report all the results in this simpler format for ease of exposition and interpretation.

[184] In the current specification, all variables have been entered linearly. We have also experimented with some combinations of variables, like the ratio of debt to equity as well as various non-linearities (*e.g* sales, profits, employment, etc.). The results were unaffected by these alternative functional forms, so we chose to report results from the simpler specification.

[185] Approximately four out of five (80.5%) of the firms who required a loan applied to a commercial bank. Overall seventeen different types of financial institution were used, although only the following accounted for more than 1% of the total (weighted)—Credit Unions (2.0%); Savings Banks (2.5%); Savings & Loans (2.3%); Finance Companies (4.9%); Lease Companies (2.1%), and other business firms (1.7%).

[186] One piece of information to which we do not have access because of confidentiality concerns is each firm's credit rating. However, a working paper by Cavalluzzo, Cavalluzzo, and Wolken (1999) has been able to incorporate Dun and Bradstreet credit ratings for each firm because their connection to the Federal Reserve Board enables them to access the confidential firm identifiers. They have added this variable in a model comparable to that reported here and found the results insensitive to its inclusion.

[187] The results also indicate that Asians/Pacific Islanders also had significantly higher denial rates than Whites. There is little evidence in the national data that denial rates for firms owned by women or other racial groups were significantly different from the denial rates of firms owned by Whites.

results for the South Atlantic division similar to those reported in Table 6.8 for the nation as a whole. Table 6.9 shows that the results of our loan denial model in the South Atlantic, which includes Maryland and the surrounding area, are not significantly different from the nationwide results reported in Table 6.8. The indicator variable for the South Atlantic division is insignificantly different from zero, as are the interaction terms between race and the South Atlantic division.

Although the results provided so far indicate that financial institutions treat Black- and White-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 Black-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.[188]

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, we went to some local banks and obtained small business loan applications. Then, to supplement this small sample, we searched the Internet and examined web sites that provide general business advice to small firms, including a description of the loan application process and the information typically requested of applicants.[189]

We found that detailed information is requested of both the firm and its owner. 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's share, (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 reasonably closely the information available in the NSSBF. The particular strength of the NSSBF is the detail available on the firm, which covers much of the information typically requested on loan application forms. The main shortcoming that we have identified in these data is the limited detail available on the finances of the owner of the firm. 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. These factors would be necessary to

[188] On the other hand, however, if financial institutions discriminate against Black-owned firms, then the greater likelihood of denial for Blacks 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.

[189] An example of a typical application form is presented as Appendix B in Blanchflower, Levine, and Zimmerman (1998).

identify whether the business owner has sufficient personal resources to draw upon should the business encounter difficulties and to determine the personal collateral available should the firm default on its obligation. We do have measures of the owner's human capital in the form of education and experience, which likely capture at least some of the differential in available personal wealth across firm owners. Nevertheless, our potentially incomplete characterization of the business owner's personal financial condition may introduce a bias into our analysis if Black business owners have fewer resources than White business owners.

To assess the potential impact of this problem on our results, we separately examined groups of firms who differ in the degree to which personal finances should influence the loan decision and compare the estimated disadvantage experienced by Black-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.[190] 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.[191] In order to determine whether the findings for the South Atlantic division were different from those for the nation, in the second column of Table 6.10 we also report the coefficient and t-statistics on an interaction term between the South Atlantic division and Black ownership. In no case was the estimated coefficient on this interaction significant, implying that the national results also apply to the South Atlantic.

Results from these analyses provide no indication that omitting the owner's personal wealth substantially biases the results presented above in Tables 6.8 or 6.9. Estimates presented in Rows 1 through 8 of Table 6.10 indicate that Black-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, Black-owned firms are 20, 25, and 17 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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[190] 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.

[191] 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 or not the racial differences in loan denial rates among firms with similar characteristics can be attributable to differences in the geographic location of Black- and White-owned firms. If, for example, Black-owned firms are more likely 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 Black-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.[192]

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 marketplace. The results of this test, reported in Rows 9 and 10 of Table 6.10, reject the hypothesis that differences in loan denial rates are attributable to different propensities to locate in the center of a city. Estimates indicate that Black-owned firms that sell to the local market are 13 percentage points more likely to have their loan applications denied compared to a 30 percent excess denial rate for firms selling primarily to regional, national, or international markets.

We also estimate models that address a potential weakness in the specific functional form with which we control for differences in credit history across firms. As shown in Tables 6.1 and 6.2, Black-owned firms are considerably more likely to have had troubles in the past in the form of judgments against them, late payments by the firm or its owner, or past bankruptcies. The model specifications reported in Tables 6.8 and 6.9 implicitly assume that these past problems are additive in their effect on loan denials and one might suspect the marginal impact would rise as past problems rise. Therefore, in the final three rows of Table 6.10, we separated firms by the number of types 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 suggest that even Black-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 Black- and White-owned firms is virtually identical in each of these groups.

Finally, we considered whether Black-owned firms are treated differently from White-owned firms when requesting credit from other sources. If minority-owned firms really are less creditworthy, then other types of creditors also may be reluctant to provide them with credit. On the other hand, if they are able to obtain other kinds of credit at roughly the same rate regardless of the owner's race, then the disadvantage that Black-owned firms face when they apply for loans from financial institutions is more likely attributable to discrimination.

[192] A strong test to distinguish between statistical discrimination and "Becker-Type" discrimination would require a tremendous amount of detail about the specific location of the firm, characteristics of its surrounding area, characteristics of neighboring firms, and the like, which were unavailable to us. As indicated earlier, both forms of discrimination are illegal and this Chapter applies a definition that incorporates both.

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 quite likely that the race of the applicant is unknown to the financial institution.[193] 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 Black- and White-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 Blacks in providing small business loans, we may even expect to see Blacks use credit cards more often than Whites 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.[194]

In Tables 6.11 and 6.12 we examine the probability that a firm uses either a business credit card (Row 1) or a personal credit card (Row 2) to finance business expenses holding constant other differences across firms.[195] In neither case were Black-owned firms or other minority-owned firms significantly less likely to have access to such cards in the nation overall or in the South Atlantic division.[196]

We also had information available on the maximum amount that could be billed to these accounts and found no significant differences by race in a regression that modeled the amount that could be charged. Nor were any racial differences observed when we modeled the typical balance remaining on these cards at the end of a typical month.

E. Differences in Interest Rates Charged on Approved Loans

Although most of our analysis has addressed whether minority- and White-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

[193] In fact, it is our understanding that it is illegal for creditors to ask applicants about their race on a credit application. Lenders to small businesses appear to be exempt from this restriction, from what we can determine, so long as they are asking whether the entity is a certified minority-owned small business for the purpose of determining eligibility for Small Business Administration loan guarantees. In either case, it is illegal to use race as a factor in determining whether or not to grant a loan.

[194] It appears that race may also rarely be known to those institutions that issue credit ratings. As we mentioned above, Cavalluzo, Cavalluzo, and Wolken (1999) show that Dun & Bradstreet Credit Ratings are not helpful in explaining racial disparities in loan denials. Although we are not privy to Dun & Bradstreet's methodology for establishing its credit ratings, we do know from long experience that the good indicators of ownership by race are lacking in Dun & Bradstreet's master business identifier file. Indeed, this is the reason why NERA's availability estimation methodology requires us to create a master directory of disadvantaged, minority, and women-owned businesses for merging with Dun & Bradstreet's data.

[195] 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. Blanchflower, Evans and Oswald (1998a) use the same data to examine the role of credit cards and find that the presence of business credit cards enhances employment growth. Blanchflower, Evans and Oswald (1998b) used data from various Surveys of Consumer Finances to show that credit cards reduced households' transactions balances.

[196] Excepting Asians in the U.S. sample.

apparent if banks approve loans to equally creditworthy minority- and White-owned firms, but charge the minority-owned firms a higher interest rate. Therefore, we estimated model specifications analogous to those reported previously for loan denials, but now the dependent variable represents the interest rate charged for firms whose loans were approved and the set of explanatory variables includes characteristics of the loan. More formally, the model we estimated takes the form:

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

where I represents the interest rate charged on the loan, LC represents characteristics of the loan (see the notes to Table 6.8 for a full list of the variables included in this set), ε_i is a term capturing random factors, and all other notations are the same as in equation (1).

An important consideration is whether or not 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 Black-owned firms. Those firms whose loans were rejected would have been charged higher interest rates than those approved. Since Black-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 6.13, which includes the complete set of control variables comparable to those in Column 5 of Table 6.8, except that these models both include a full set of loan characteristics. Estimates indicated that Black-owned firms pay rates of interest that are almost 100 basis points higher than White-owned firms after controlling for differences in creditworthiness. Row 2 shows that even Black-owned firms with good credit histories are charged interest rates of almost a percentage point higher.[197]

The remainder of the table presents similar specification checks to those reported in Table 6.10. Recall that most of these models identify firms for which the firm's own history is likely to be a more important contributor to its creditworthiness. The specifications by sales market are

[197] We do not report estimates from sub-samples of firms that have had past credit problems because their higher likelihood of being denied credit significantly restricts the size of the sample, reducing our ability to provide a powerful test of the interest rates they are charged if approved.

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, Black-owned firms face statistically significantly higher interest rates. Overall, the evidence presented indicates that Blacks do face some disadvantage in the market for small business credit that does not appear to be attributable to differences in geography or creditworthiness.

F. Loan Approval Rates and Access to Credit

The results presented so far may be biased toward finding too small a disparity between White- and Black-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 Whites 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: Black- and Hispanic-owned firms are much more likely to report that they did not apply for a loan, even though they needed credit, because they thought they would be rejected. Table 6.14 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 Black- and Hispanic-owned firms are 40 and 23 percentage points more likely than White-owned firms to withhold an application fearing denial.[198]

Of course, some of this difference may be attributable to differences in creditworthiness across firms since firms that are bad credit risks should be afraid that their loan would be denied. To adjust for this, the second row of Table 6.14 reports comparable models that control for differences in creditworthiness and other characteristics of firms. The results from this specification show that the higher degree of fear of rejection among Black- and Hispanic-owned firms can partially be explained by these differences. Nevertheless, a gap of 26 and 16 percentage points still exists for Black- and Hispanic-owned firms relative to White-owned firms with similar characteristics. In fact, when asked directly why they were afraid to apply for loans, minority-owned firms were far more likely to report prejudice as the reason (18 percent for Black-owned firms, five percent for Hispanic-owned firms, and two percent for White-owned firms).[199] Results obtained in section (b) of Table 6.14 for the South Atlantic division are very similar to those found for the nation as a whole. As section (c) of Table 6.14 shows, Black-

[198]The actual percentages for each group are: 22.5 percent for White-owned businesses, 41.7 percent for Hispanic-owned businesses, and 60.8 percent for Black-owned businesses.

[199] 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.

owned firms in construction also appear to be fearful of applying because of the possibility of their application being turned down.[200]

If these minority-owned firms had applied for credit and were rejected because of discrimination, estimates of racial disparities based only upon loan applicants (as in Tables 6.8 and 6.9) would be understated. The perception of prejudice among these firms, however, does not necessarily imply that selection bias is present. Those firms that failed to apply because they feared rejection may have had similar loan denial rates as other minority-owned firms with comparable levels of creditworthiness that did apply. If those firms chose to apply for a loan, differences by race in the combined denial rate of the actual and potential applicants would be the same as what we have estimated for the observed sample of applicants.

More formally, suppose that loan denial rates for equally creditworthy White- 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 White- and minority-owned firms, respectively. Among the White-owned firms, the denial rate is identical regardless of whether the firm chose to apply or not, conditional upon creditworthiness. Among minority-owned firms, however, those who were afraid to apply may have been denied at a higher rate (perhaps because of their greater propensity to locate in the central city or other factors that are related to their race, but unrelated to creditworthiness) compared with other minority-owned firms. Then the correct representation of the disadvantage faced by minority-owned firms is $[\eta\theta^m + (1-\eta)\ \psi^m] - \theta^w$, 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.

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.[201]

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

[200] It was not possible to report separate construction results in earlier tables because of small sample sizes (there are 525 firms in construction: 234 applied for credit, of which 161 had their loan requests approved).

[201] The only variable that we felt 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.

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 Black- and Hispanic-owned firms have even less access to credit than an analysis of loan applicants would indicate.

To test this proposition, we estimate a regression model comparable to the one reported in Table 6.10 for the sample of firms that applied for a loan, except that this analysis considers all firms seeking credit and treats those who did not apply for fear of rejection as denials. The sample excludes firms that did not need additional credit in the preceding three years. The results, reported in Table 6.15, are consistent with the previous analysis; we find that selection is not much of an issue for Black-owned firms nationally, in the South Atlantic division, or in construction sub-samples. Regardless of whether we consider denial rates among applicants or denial rates among firms that desired additional credit, Black-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, 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 6.8, column 5). Among the pool of firms seeking additional credit, however, Hispanic-owned firms are 15 percentage points more likely to be denied access to credit, and this difference is statistically significant.

G. Analysis of Credit Market Discrimination in the U.S. in 1998

We now turn 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.[202] This section updates the several estimates obtained above using the 1993 NSSBF. One significant complication is that a number of the questions have been changed. However, the result still comes out loud and clear – Black-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 main pieces of evidence, all of which are consistent with our findings from above.

[202] 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.

1. Qualitative Evidence

As shown in Table 6.16, minority-owned firms report that the biggest problem they face is "financing and interest rates."[203] There are much smaller differences between minority and female-owned firms and those owned by White males in any of the other rows of the Table.

In the 1998 SSBF survey, respondents who were denied loans were asked why they believed the loans were turned down. Options included the following:

a) Prejudice on a racial/ethnic basis.

b) Prejudice against women.

c) Prejudice against the business location.

d) Prejudice against the business type.

e) Prejudice or discrimination (not-specified or other).

Similarly, firms who did not apply for fear of denial were asked the same question. Overall 2.3 percent of White males responded in the affirmative to any of these questions compared with 20.2 percent for minorities and women. In the case of the 1993 NSSBF survey 5.4 percent of White males responded in the affirmative compared with 19.8 percent for minorities and women). A substantial proportion of minorities and women in both surveys report that their loan applications were turned down because of *prejudice* based on race or gender.

2. Creditworthiness

In 1998, in comparison with firms owned by White males, minority and female-owned firms (MWBEs) 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. Their owners had lower amounts of both home and non-home equity. Minority-owned firms in general, and Black-owned firms in particular, were much less likely to be classified as having a "low risk" credit rating by Dun and Bradstreet.[204]

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 referred to new loans and renewals while in 1998 it

[203] In the 1993 survey, respondents were asked to report problems in the preceding 12 months (Tables 6.3 and 6.4) and over the next 12 months (Tables 6.5 and 6.6). Interestingly, even though credit availability was by far the most important category for Blacks (21% in Table 6.5), interest rates were very unimportant (1%). However, NSSBF no longer reports separate categories.

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

only referred to new loans, the pattern of denials by race is very 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
White males	26.2%	24.4%
Blacks	65.9%	62.3%
Asians, Native Americans, etc.	39.9%	47.0%
Hispanics	35.9%	54.5%
White females	30.1%	24.6%
Overall	28.8%	28.6%

Similarly, the proportion of firms that reported that they did not apply for fear of being denied shows a good deal of similarity by race across the two years. More than half of Black owners did not apply for a loan for fear of being denied compared with one out of five White males.

Percentage Did Not Apply for Fear of Denial		
	1993	1998
White males	22.5%	20.2%
Blacks	60.8%	53.9%
Asians, Native Americans, etc.	27.6%	23.1%
Hispanics	41.7%	30.1%
White females	22.7%	25.5%
Overall	24.7%	23.3%

H. Further Credit Market Analysis, 1998

In Tables 6.8 and 6.9, the determinants of loan denial rates were estimated using data from the 1993 NSSBF. It was found that Black-owned firms were approximately twice as likely to have their loans denied than White 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 White men. A similar exercise is performed in Tables 6.17 and 6.18 using data from the 1998 SSBF. Column 1 in Table 6.17 shows that Black-owned firms

have 38.9 (42.6) percentage point higher probability of denial than White-owned firms without taking account of creditworthiness of the firm.[205] The addition of a large number of controls reduces the size of the coefficient on Blacks to 0.31 (0.23) in column 6 as the full set of controls are added. Table 6.18 focusing on the South Atlantic division yields similar results. The main difference between 1993 and 1998 is that now we find evidence that the probability of denial is significantly higher for both Hispanic- and Asian-owned firms. In Table 6.17 column 6, Hispanic-owned firms have a 21.1 percentage point higher probability of being denied while Asians had a 15.9 percentage point higher probability than White male-owned firms. As in 1993, however, we found no significant effects for women. In Table 6.8, by contrast, denial probabilities for Hispanic- and Asian-owned firms were *not* significantly different from those of White male-owned firms. If anything, discrimination in the small business credit market appears to have expanded during the late 1990s.

To some extent, the quality of the experiment is better using the 1998 data than it was using the 1993 data. The reason for this is because of the availability of an improved set of controls for the creditworthiness of the firm and/or its owner. In 1998, we have available to us three new variables to indicate the financial viability of the firm that were not available in 1993:

a) The value of the equity, if any, in the owner's home.

b) The owner's net worth excluding home equity.

c) The Dun and Bradstreet 1999 credit rating in five categories (low, moderate, average, significant and high) indicating the likelihood of a firm defaulting on its loans.[206]

Despite the fact that these variables do help to predict loan denials,[207] the estimated race differences including these variables are unchanged from those reported above.[208] 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.

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 were as follows:

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[205] Numbers in parentheses are the (roughly) comparable numbers from the 1993 survey reported above in Table 6.8.

[206] 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. For further details see http://www.dunandbradstreet.com/.

[207] The coefficients and t-statistics on the credit score variables when they were included alone was as follows: moderate risk .215 (2.59), average risk= .297 (3.65); significant risk=.357 (4.19); high risk= .420 (4.46), n=962 pseudo r^2=.0301. Excluded category 'low risk'.

[208] This confirms the findings of Cavalluzzo, Cavalluzzo and Walken (1999) who performed a similar exercise with the 1993 data.

Did not apply	2599	73%
Always approved	713	20%
Always denied	166	5%
Sometimes approved/sometimes denied	83	2%
Total	3561	

The dependent variable used in earlier equations – *denied* – was set to one if the loan application was always denied, zero if the application was always or sometimes denied. An alternative dependent variable – *denylast* – is set to one if the application is always denied and zero if always approved with those responding "sometimes approved/sometimes denied" set to missing. Column 1 of Table 6.19 replicates column 1 of Table 6.17 using *denylast* as the dependent variable with the smaller sub-sample. Blacks, Asians and Hispanics are all confirmed to face higher denial rates than White males using this specification, by 45 percentage points for Blacks, 16 percentage points for Asians and 40 percentage points for Hispanics, which are substantial increases in the scale of the results compared to the results for 1993. There is an even more interesting finding in column 1 using *denylast*: we now find evidence that White females have significantly higher loan denials than White males. This is the first time we have seen strong evidence of this phenomenon for White women – White women appear to have denial probabilities 10 percentage points higher than White males.

Results consistent with discrimination are confirmed for Blacks, Asians, Hispanics, and White women in column 2 of Table 6.19 when a host of characteristics, region and industry indicators are included.[209]

Tables 6.20 through 6.22 provide confirmation from the 1998 survey of a number of other results from the 1993 survey reported earlier.

First, Table 6.20, which is comparable to Table 6.13, finds that conditional on obtaining a loan, Blacks are charged a higher price for their credit — on average more than 100 basis points nationally. These results are not significantly different in construction than in other industries nor in the South Atlantic than in the country as a whole.

Second, Table 6.21, which is comparable to Table 6.14, shows that Black owners are much more likely not to apply for a loan fearing they will be denied. On the basis of this evidence that seems like a sensible decision – if and when they do apply they are more than twice as likely as Whites to have their application rejected. This is evident in the South Atlantic as well and in the construction industries.

[209] For the specification in column 2 we increase the sample size by adding back into the sample a number of cases where the ownership of the firm was 50/50 with one of the partners being a woman but the identity of the other partner and the race of the woman was unknown. We excluded these individuals from all other analyses above. When they are added back and separately identified the significance of the White female indicator improves in the *denylast* equation. Neither the White female indicator nor the woman 50/50 indicator are ever significant in the specification that we use with the dependent variable *deny*; they are significant using *denylast*.

Finally, Table 6.22, which is comparable to Table 6.11, suggests that when the institution does not know the race of the applicant – as is the case by law in an application for a credit card – there are no differences in the usage of credit cards. Other analysis (not reported) finds no evidence of race effects on the average monthly charge to the card or the monthly balance or the balance remaining at the end of the month. There was also no evidence of any race effects in the use of credit cards in the South Atlantic division (rows 3 and 4) or in construction (results not reported here).

Our confidence in the strength of our findings is elevated by these findings from the 1998 survey that strongly confirm the results obtained from the 1993 survey. Unfortunately, minorities and especially Blacks continue to be discriminated against in the market for credit. By 1998, this discrimination appears to be on the increase for Blacks and to be expanding to impact the other minority groups as well and possibly even White women. This is an important market failure, and one which states such as Maryland cannot simply ignore if they are to avoid passive participation in a discriminatory marketplace.

I. Maryland Area Credit Survey, 2005

It could be claimed, wrongly in our view, that the data used so far in this study are not relevant to Maryland's geographic market area (as defined above in Chapter III) because they are drawn from a survey of the nation as a whole and from the South Atlantic division and not strictly from Maryland. Such a criticism is inappropriate because (a) the 1993 and 1998 data are of high quality; (b) when disaggregated estimates are obtained, for both the South Atlantic division and for the construction industries, they are quite similar to those obtained from the national data; (c) the market for small business credit is not primarily local as firms commonly make use of out-of-state financial institutions. As a formal check as to the validity of such a criticism, we conducted our own mail survey within Maryland's geographic market area, using a questionnaire based closely on that used in the 1993 NSSBF and the 1998 SSBF. The questionnaire was mailed to a large random sample of minorities, women, and non-minorities in construction, architecture and engineering services, and other goods and services industries drawn from the Baseline Business Universe described in Chapter IV. We obtained a total of 707 usable responses, or about 6 percent of all surveys delivered. As we show below, the results obtained from this survey are remarkably consistent with those reported earlier for the South Atlantic division as well as the U.S. as a whole.

Table 6.23 presents sample means from these data for *all* of the firms in the Maryland sample that applied for credit at any time in the three years prior to the survey. The estimates indicate that minority-owned firms reported a far higher incidence of credit denial than White-owned firms. Over the preceding three years 25 percent of White-owned firms had credit applications turned down (row 3) compared with 55 percent of minority-owned firms. Regarding the most recent credit application (row 1) the figures were 15 percent and 40 percent, respectively. These differences between minority- and White-owned firms are similar to those found, for example, for White- and Black-owned firms in the 1993 NSSBF for the three year period up to 1993 for the U.S. as a whole (Table 6.1) or for the South Atlantic (Table 6.2)—27 percent and 66 percent

for Whites compared with Blacks nationally, and 26 percent and 70 percent in the South Atlantic division, respectively.

Table 6.24 shows that minority-owned firms in our Maryland Area credit survey were younger, smaller, and less creditworthy than firms owned by other racial groups, measured by whether the owner had: (a) been bankrupt at any time during the preceding seven years, (b) been delinquent for more than 60 days on personal obligations during the previous three years, (c) been delinquent for more than 60 days on business obligations during the previous three years, or (d) had legal judgments entered against them during the previous three years.

Table 6.25 reports some qualitative evidence on the nature of the problems that firms are experiencing now. Seventeen percent of Black-owned firms reported that credit market conditions were a serious problem compared with only 4 percent of White-owned firms. Interestingly, there are fewer differences between minority- and White-owned firms in the distribution of responses to the other questions. The main exceptions are insurance costs, which are much more likely to be a serious problem for White-owned firms, and competition with larger firms, which is much more likely to be a serious problem for Minority-owned firms.

Next, we examine whether loan denial probabilities in the Maryland Area survey are similar to those reported above for the nation and the South Atlantic division using the 1993 and 1998 data. Recall that it was reported in these tables that Black-owned firms were more than twenty percentage points more likely to have a loan request denied than were White-owned firms, even after controlling for differences in creditworthiness. This result is confirmed in Table 6.26 using the Maryland area data. Columns 1-3 relate to the most recent application and columns 4-6 to any application that had occurred over the preceding three years, the latter being the same definition used in Table 6.8 and Table 6.9 based on the 1993 NSSBF. The raw difference for Blacks in column 4 is 29 percentage points[210] which falls to 16 percentage points once a variety of controls are included in column 6 allowing for a number of firm characteristics. The number of controls is somewhat less than included in the earlier tables but this is driven by the fact that the sample size is smaller and a desire not to over-parameterize the model. Despite the relatively smaller sample size the results are striking—minority-owned and woman-owned firms are far more likely to have a loan application denied than comparable White-owned firms.

NERA has conducted local credit market surveys such as the one for Maryland at six 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, and the State of Maryland again in 2005. The Chicago, Jacksonville, Baltimore and St. Louis surveys focused on construction, architecture/engineering, and related industries, while the two Maryland surveys included construction, architecture/engineering, other construction-related services, commodities, information technology, maintenance services, and other services. The Chicago, Maryland I, and Jacksonville survey questionnaires followed the format of the 1993 NSSBF while the Baltimore, St. Louis, Maryland II, and Denver surveys followed the format of the 1998 SSBF questionnaire. As a further check on our most recent findings for Maryland, we combined

[210] Numbers in parentheses relate to the equivalent estimates for the most recent application in columns 1-3.

the results of these seven surveys together in a consistent format and re-estimated the basic loan denial model on this larger file, including an indicator variable for Maryland and terms interacting race and sex with Maryland to check if it is different from the other areas. These results appear in Table 6.27 and are, again, remarkably similar to results seen in Tables 6.8, 6.9, 6.17, 6.18, and 6.26 — differences in denial rates between Blacks and Whites are between 32 and 44 percentage points even when interaction terms and creditworthiness controls are included.

The finding that loan denial probabilities from the Maryland Area Credit Survey are similar to those reported earlier using the 1993 NSSBF and 1998 SSBF data is repeated in Table 6.28. In this table we consider whether minority-owned firms are treated differently from White-owned firms when requesting credit from other sources; more precisely, we examine the probability that a firm uses either a business credit card (row one) or a personal credit card (row two) to finance business expenses, holding constant other differences across firms. In neither case could we find any evidence that minority-owned firms were less likely to have access to such cards. Indeed we find the opposite effect – minority-owned firms are more likely to rely on business and personal credit cards to finance their businesses than are Whites — a finding that is not surprising given their much lower chances of obtaining credit through more traditional financing.

We additionally model the rate of interest charged, conditional upon receiving loan approval, using our seven-jurisdiction dataset, as shown in Table 6.29. Results are very similar to that observed in Table 6.12 for 1993 and Table 6.19 for 1998. Blacks pay 105 basis points more for their credit than Whites, declining to between 77 and 86 basis points when creditworthiness and geographic controls are added.

Finally, as a check on the representativeness of our Maryland credit market survey, we conducted a secondary survey of non-respondents in order to check whether they were systematically different from the respondents on important variables, such as the loan denial rate. We selected random sample of 1000 MBE and non-MBE non-respondents and successfully completed 303 interviews, for a response rate of 30 percent. Greatly shortened interviews were given to the non-respondents; such questions that were asked were identical to those asked of the respondents. To test for response bias we pooled together our completed interviews for respondents and non-respondents and performed a regression analysis (once again using Stata's Probit and "dprobit" commands) using the answer to the loan denial question as the dependent variable and including indicator variables for minority ownership, female ownership, non-respondent status, and an interaction term between non-respondent status and minority ownership. Both the application rate and the denial rate in the main survey were higher than in the non-response survey. Nevertheless, even in the pooled regression, the coefficient on MBE status still demonstrates statistically significantly higher loan denial rates for MBE firms.

Table 6.30 reports the results of estimating a series of loan denial equations that include a non-response dummy included alone as well as interacted with the minority ownership dummy. Column 1 includes only respondents from the main survey. The results are quite similar in column 2 when the non-respondents are added. Similar results are observed in columns 3 and 4 when the bankruptcy variable is added as a control.

On the basis of the foregoing, we conclude that the evidence of credit discrimination from our 2005 study of Maryland's relevant contracting marketplace is entirely consistent with the results obtained earlier using data from the 1993 and 1998 NSSBF.

J. Caveats

The results presented indicate that Black-owned firms face obstacles in obtaining credit that are unrelated to their creditworthiness. Although one explanation for these findings is that these firms are discriminated against, we raise a few additional factors worth considering before one can draw definitive conclusions.

First, as in any regression-based study, our analysis hinges upon the proposition that all the factors that are related to loan denial rates have been included in our statistical model. If, for example, Blacks possess some unobservable characteristic that makes them less creditworthy, then our statistical finding would overstate the difference in loan denial rates. To reduce this possibility, the models we have estimated include an extensive array of factors that could conceivably affect loan decisions. Moreover, we have also estimated several alternative specifications that could potentially identify the impact of such a bias. Throughout, we have consistently found that Blacks are disadvantaged in the small business credit market and that our specification tests support the interpretation of discrimination. Nevertheless, we acknowledge that a bias in that direction may remain, even though we believe its likelihood is rather small if present.

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 Black firms then Black 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 Black and White applicants meeting the acceptance standard used for White 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 White- and Black-owned firms given the fact that Black-owned firms that obtain credit are charged higher interest rates, as we have shown. Finally, such an analysis would require longitudinal data, tracking firms for a few 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 Munnell et al. (1996) may be relevant here as well. Yet these criticisms appear to have been effectively countered by some of the authors (see Browne and Tootell, 1995; 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.[211]

The magnitude of the racial difference in small business loan approval rates is substantial, even after controlling for observed differences in creditworthiness, and considerably larger than that found in the analysis of discrimination in mortgage markets. Why do the results for small business loans differ so markedly from those obtained from mortgage loans? First, many mortgages are sold in the secondary market and a substantial fraction of mortgage lenders have little intention of keeping the loans they make. This added "distance" in the transaction might reduce the likelihood of discrimination. As Day and Liebowitz (1998, p.6) point out, "economic self-interest, therefore, should reduce racial discrimination in this market more completely than in many others." A highly sophisticated secondary market for loans to small firms does not exist. Second, the presence of special programs and regulatory incentives to encourage banks and others to increase their mortgage lending to minorities gives these groups some advantages in obtaining a mortgage.

Some of the difference in denial rates between the races 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.[212] The larger size and significance of the effects found in our analyses significantly reduce the possibility that the observed differences can be explained away by some quirk of the econometric estimation procedure.

K. Conclusions

Our analysis finds significant evidence that Black-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 Black-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 Black-owned firms than for White-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. Overall, the evidence is consistent that Black-owned firms and other minority-owned firms are disadvantaged in the market for small business credit, which would traditionally be attributed to discrimination. Evidence is mixed with respect to whether female-owned firms are discriminated against in this market.

[211] In the Boston Fed study 10 percent of Whites' mortgage applications were rejected compared with 28 percent for Blacks; loan denial rates for business credit in this study were 27 percent and 66 percent for White- and Black-owned firms.

[212] The gap in denial rates between Blacks and Whites with similar characteristics is 23 percentage points in the small business credit market compared with 7 percentage points in the mortgage market.

L. Tables

Table 6.1. Selected Sample Means of Loan Applicants from 1993 NSSBF Data

	All	White	Black	Hispanic	Other Races
% of Firms Denied in the Last Three Years	28.8	26.9	65.9	35.9	40.0
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 $)	1,795	1,871	589	1,361	1,309
Profits (in 1,000s of 1992 $)	87	85	60	189	54
Assets (in 1,000s of 1992 $)	889	922	230	746	747
Liabilities (in 1,000s of 1992 $)	547	573	146	309	486
Owner's Years of Experience	18.3	18.7	15.3	15.9	14.9
Owner's Share of Business	77.1	76.5	86.4	83.9	77.1
% <= 8th Grade Education	0.8	0.7	0	3.4	1.0
% 9th-11th Grade Education	2.2	2.2	3.7	1.8	1.2
% High School Graduate	19.6	19.7	12.8	27.7	14.9
% Some College	28.0	28.3	36.0	20.6	19.8
% College Graduate	29.2	29.2	28.0	24.1	36.5
% Postgraduate Education	20.2	19.9	19.5	22.3	26.6
% Line of credit	48.7	49.1	35.8	52.8	43.7
Total Full-time Employment in 1990	11.4	11.8	6.8	9.3	8.7
Total Full-time Employment in 1992	13.6	13.9	8.3	10.8	12.3
Firm age, in years	13.4	13.6	11.5	13.3	9.3
% New Firm Since 1990	9.4	9.4	13.0	6.4	9.5
% Firms Located in MSA	76.5	75.1	91.2	90.7	85.7
% Sole Proprietorship	32.8	32.3	48.6	38.2	24.2
% Partnership	7.8	7.8	7.7	6.7	7.9
% S Corporation	26.1	27.1	11.7	13.7	27.1
% C Corporation	33.4	32.8	32.1	41.4	40.8
% Existing Relationship with Lender	24.6	24.7	12.8	30.0	25.7
% Firms with Local Sales Market	54.1	54.7	42.9	55.0	47.4
Characteristics of Loan Application					
Amount Requested (in 1,000s of 1992$)	289	299	122	172	298
% Loans to be Used for Working Capital	49.5	48.4	62.5	62.3	51.6
% Loans to be Used for Equipment/Machinery	15.2	14.9	15.2	16.0	21.7
% Loans to be Used for Land/Buildings	11.6	11.9	3.7	10.5	11.9
% Loan to be Backed by Real Estate	28.3	28.6	24.7	26.2	24.7
Sample Size (unweighted)	2,007	1,648	170	96	93

Notes: Sample weights are used to provide statistics that are nationally representative of all small businesses. Some variable means are computed from slightly smaller samples because of missing values. Sample restricted to firms that applied for a loan over the preceding three years. Source: Authors' calculations from 1993 NSSBF.

Table 6.2. Selected Sample Means of Loan Applicants – South Atlantic

	All	White	Black	Hispanic
% of Firms Denied in the Last Three Years	29.2	26.3	69.8	50.9
Credit History of Firm/Owners				
% Owners with Judgments Against Them	5.0	3.9	15.9	10.3
% Firms Delinquent in Business Obligations	17.3	16.5	26.1	26.2
% Owners Delinquent on Personal Obligations	11.6	9.5	32.9	17.1
% Owners Declared Bankruptcy in Past 7yrs	3.2	2.7	4.7	0
Other Firm Characteristics				
Sales (in 1,000s of 1992$)	1102	1151	420	159
Profits (in 1,000s of 1992$)	102	104	20	273
Assets (in 1,000s of 1992$)	588	626	164	481
Liabilities (in 1,000s of 1992$)	330	345	97	390
Owner's Years of Experience	18.9	19.5	15.6	14.1
Owner's Share of Business	79.0	78.6	90.0	74.0
% Line of credit	27.9	28.5	20.3	44.7
Total Full-time Employment in 1990	8.0	8.3	5.8	5.3
Total Full-time Employment in 1992	9.2	9.5	7.5	6.9
Firm age, in years	14.1	14.6	11.8	9.7
% New Firm Since 1990	7.3	6.6	17.6	10.7
% Firms Located in MSA	81.0	79.9	89.8	95.4
% Existing Relationship with Lender	8.4	8.4	6.9	6.5
% Firms with Local Sales Market	55.2	55.5	48.4	49.9
Characteristics of Loan Application				
Amount Requested (in 1,000s of 1992$)	331	340	176	425
% Loans to be Used for Working Capital	50.9	49.1	64.6	70.7
% Loans to be Used for Equipment/Machinery	12.8	12.7	19.6	0
% Loans to be Used for Land/Buildings	13.4	13.8	2.8	21.8
% Loan to be Backed by Real Estate	24.6	23.9	38.5	34.4
Sample Size (unweighted)	342	270	45	19

Notes: Sample weights are used to provide statistics that are nationally representative of all small businesses. Some variable means are computed from slightly smaller samples because of missing values. "Other Races" are not reported separately due to small sample size. Source: Authors' calculations from 1993 NSSBF.

Table 6.3. Problems Firms Experienced During Preceding 12 Months - USA

	All	White	Black	Hispanic	Other Races
Credit Market Conditions					
% reporting not a problem	66	67	43	59	66
% reporting somewhat of a problem	20	20	26	18	21
% reporting serious problem	14	13	31	23	13
Other Potential Problems (% reporting problem is serious)					
Training costs	7	7	7	6	4
Worker's compensation costs	22	21	19	30	29
Health insurance costs	33	32	38	45	35
IRS regulation or penalties	12	12	17	17	14
Environmental regulations	8	8	6	7	11
Americans with Disabilities Act	3	3	4	3	4
Occupational Safety and Health Act	5	5	4	4	6
Family and Medical Leave Act	3	3	5	3	5

Source: Authors' calculations from 1993 NSSBF.

Table 6.4. Problems Firms Experienced During Preceding 12 Months – South Atlantic

	All	White	Black	Hispanic
Credit Market Conditions				
% reporting not a problem	65	67	38	60
% reporting somewhat of a problem	21	21	29	13
% reporting serious problem	14	12	33	27
Other Potential Problems (% reporting problem is serious)				
Training costs	6	7	5	5
Worker's compensation costs	21	20	25	45
Health insurance costs	30	28	39	45
IRS regulation or penalties	13	12	19	25
Environmental regulations	9	10	6	3
Americans with Disabilities Act	2	2	7	0
Occupational Safety and Health Act	3	3	6	5
Family and Medical Leave Act	3	2	8	2
Number of observations (unweighted)	773	573	112	46

Note: "Other Races" are not reported separately due to small sample size. Source: Authors' calculations from 1993 NSSBF.

Source: Authors' calculations from 1993 NSSBF.

Table 6.5. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months - USA

	All	White	Black	Hispanic	Other Races
Credit availability	6	6	21	5	4
Health care, health insurance	21	22	12	14	15
Taxes, tax policy	6	6	3	9	3
General U.S. business conditions	12	12	9	14	17
High interest rates	5	6	2	3	4
Costs of conducting business	3	3	4	4	4
Labor force problems	4	3	4	6	4
Profits, cash flow, expansion, sales	10	10	20	10	12
Number of observations (unweighted)	4,388	3,383	424	323	258

Source: Authors' calculations from 1993 NSSBF.

Table 6.6. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months – South Atlantic

	All	White	Black	Hispanic
Credit availability	7	7	25	7
Health care, health insurance	19	20	13	18
Taxes, tax policy	7	7	2	10
General U.S. business conditions	10	10	5	14
High interest rates	5	6	1	2
Costs of conducting business	4	4	6	5
Labor force problems	4	4	4	9
Profits, cash flow, expansion, sales	9	8	14	6
Number of observations (unweighted)	729	544	106	40

Note: "Other Races" are not reported separately due to small sample size. Source: Authors' calculations from 1993 NSSBF.

Source: Authors' calculations from 1993 NSSBF.

Table 6.7. Types of Problems Facing Your Business, by Race and Gender (%)

	White Male	White Female	Minority Male	Minority Female	Black	Hispanic	Asian
Availability of credit	19	23	54	38	46	52	34
Rising health care costs	60	49	50	41	31	42	66
Excessive tax burden	49	46	48	42	46	34	51
Lack of qualified workers	37	28	33	17	22	20	34
Rising energy costs	37	35	36	35	29	34	44
Rising costs of materials	44	47	36	47	53	42	32
Legal reform	21	15	15	12	11	10	17
Number firms	**415**	**356**	**80**	**81**	**55**	**50**	**41**

Total percentages may be greater than 100% due to respondents having the option to select multiple choices. Minorities also include 14 firms owned by Native Americans.

Source: U.S. Chamber of Commerce (2005), Appendix tables, page 55, downloadable at www.uschamber.com/publications/reports/050524_fundingsources.htm.

Table 6.8. Determinants of Loan Denial Rates - USA

	(1)	(2)	(3)	(4)	(5)
Black	.426	.277	.225	.226	.234
	(10.87)	(6.69)	(5.39)	(5.12)	(5.08)
Asian/Pacific Islanders	.207	.160	.120	.101	.100
	(3.90)	(3.02)	(2.27)	(1.87)	(1.80)
American Indian/Alaskan Eskimo	-.051	-.153	-.109	-.062	-.092
	(0.35)	(1.17)	(0.82)	(0.43)	(0.64)
Hispanic	.113	.061	.064	.036	.033
	(2.33)	(1.27)	(1.31)	(0.72)	(0.65)
Female-Owned	.073	.039	.037	.026	.025
	(2.54)	(1.36)	(1.30)	(0.88)	(0.85)
Judgments		.143	.129	.124	.121
		(2.84)	(2.56)	(2.39)	(2.28)
Firm delinquent		.176	.182	.197	.212
		(6.53)	(6.57)	(6.86)	(7.12)
Personally delinquent		.160	.128	.125	.120
		(4.41)	(3.55)	(3.40)	(3.18)
Bankrupt past 7 yrs		.208	.179	.164	.167
		(3.11)	(2.67)	(2.39)	(2.33)
$1992 profits (*$10^8$)		-.181	-.342	-.378	-.395
		(0.89)	(1.59)	(1.73)	(1.78)
$1992 sales (*$10^8$)		-.376	-.749	-.764	-.798
		(3.10)	(3.28)	(3.24)	(3.31)
$1992 assets (*$10^8$)		.133	.427	.189	.188
		(0.50)	(0.86)	(0.45)	(0.44)
$1992 liabilities (*$10^8$)		.246	.427	.363	.425
		(0.61)	(0.86)	(0.72)	(0.82)
Owner years experience		-.003	-.001	-.002	-.002
		(2.59)	(1.27)	(1.53)	(1.70)
Owners' share of business		.001	.000	.000	.000
		(1.93)	(0.73)	(0.25)	(0.30)
Owner's Education (5 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (13 variables)	No	No	Yes	Yes	Yes
Region (8 indicator variables)	No	No	No	Yes	Yes
Industry (59 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	1,997	1,976	1,964
Pseudo R^2	.0606	.1411	.2275	.2539	.2725
Chi^2	143.0	333.1	534.3	592.5	632.7
Log likelihood	-1109.0	-1014.0	-907.3	-870.4	-844.5

Notes: Reported estimates are derivatives from Probit models, t-Statistics are in parentheses. "Other firm characteristics" include variables indicating whether the firm had a line of credit, 1990 employment, firm age, metropolitan area, a new firm since 1990, 3 legal form of organization, 1990-1992 employment change, existing long run relation with lender, geographic scope of market (regional, national or international), the value of the firm's inventory, the level of wages and salaries paid to workers, officers' cash holdings, and the value of land help by the firm. "Characteristics of the loan" include the size of the loan applied for, a variable indicating whether the loan was backed by real estate, and eleven variables indicating the intended use of the loan. Source: Authors' calculations from 1993 NSSBF.

Table 6.9. Determinants of Loan Denial Rates – South Atlantic Region

	(1)	(2)	(3)	(4)	(5)
Black	.433	.286	.227	.225	.237
	(10.47)	(6.56)	(5.16	(4.88	(4.92
Asian/Pacific Islanders	.210	.170	.117	.104	.106
	(3.81)	(3.08)	(2.15	(1.88	(1.89)
Hispanic	.107	.067	.062	.051	.048
	(1.81)	(1.15)	(1.08	(0.87)	(0.81
Female-Owned	.084	.050	.053	.043	.043
	(2.57)	(1.53)	(1.65	(1.29)	(1.26)
Black*SATL	-.013	-.023	-.001	.001	-.019
	(0.29)	(0.50)	(0.03	(0.02	(0.39)
Asian/Pacific*SATL	-.088	-.124	-.084	-.087	-.113
	(0.80)	(1.19)	(0.78	(0.81	(1.10)
Hispanic*SATL	-.086	-.146	-.096	-.069	-.131
	(0.78)	(1.04)	(0.66	(0.47	(0.89)
Female-Owned*SATL	-.025	-.017	-.053	-.040	-.033
	(0.37)	(0.24)	(0.81	(0.60	(0.47)
South Atlantic region	.2883	.344	.227	.001	-.019
	(0.94)	(1.19)	(0.68	(0.02	(0.39)
Creditworthiness controls (10 variables)	No	Yes	Yes	Yes	Yes
Owner's Education (5 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (13 variables)	No	No	Yes	Yes	Yes
Region (7 indicator variables)	No	No	No	Yes	Yes
Industry (59 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	2007	2,007	1,997	1,976	1,964
Pseudo R^2	.0614	.1416	.2259	.2495	.2682
Chi^2	144.9	334.4	530.7	582.3	622.8
Log likelihood	-1108.1	-1013.3	-909.1	-875.5	-849.4

Note: Creditworthiness controls are those used in Table 6.8 above.

Table 6.10. Alternative Models of Loan Denials

Specification	Black	Black* South Atlantic	Asian	Hispanic	Sample Size
All	.220 (5.12)	.014 (0.40)	.115 (2.15)	.059 (1.12)	1997
		Organization Type			
1) Proprietorships and Partnerships	.234 (3.06)	.088 (1.29)	.163 (1.54))	.066 (0.77)	535
2) Corporations	.197 (3.73)	-.011 (0.26)	.094 (1.50)	.062 (0.91)	1457
		Age of Firm			
3) 12 Years or Under	.235 (3.99)	.045 (0.90)	.171 (2.45)	.008 (0.11)	1071
4) Over 12 Years	.174 (2.80)	.004 (0.08)	-.011 (0.14)	.104 (1.67)	922
		1990 Firm Size			
5) Fewer than 10 Employees	.192 (3.66)	.032 (0.68)	.101 (1.41)	.016 (0.24)	962
6) 10 or More Employees	.249 (3.26)	-.004 (0.07)	.148 (1.76)	.152 (0.11)	1031
		Use of Loan			
7) Working Capital	.223 (4.06)	.052 (1.14)	.041 (0.62)	-.036 (0.55)	1085
8) Other Use	.171 (2.46)	-.045 (0.80	.262 (2.82)	.154 (2.02)	912
		Sales Market			
9) Local	.129 (2.05)	.028 (0.62)	.118 (1.68)	-.013 (0.22)	873
10) Regional, National, or international	.303 (5.10)	-.023 (0.44)	.072 (0.90)	.173 (2.00)	1124
		Creditworthiness			
11) No Past Problems	.212 (3.90)	-.004 (0.12)	.166 (3.01)	.029 (0.61)	1385
12) One Past Problem	.266 (2.71)	-.037 (0.36)	-.066 (0.41)	.220 (1.48)	376
13) More Than One Problem	.184 (1.60)	.278 (1.67)	.273 (1.75)	-.205 (1.03)	231

Notes: Reported estimates are derivatives from Probit models, t-Statistics are in parentheses. Each line of this table represents a separate regression with the same control variables as Column 3 of Table 6.8. The dependent variable in all specifications represents an indicator for whether or not a loan application was denied. Native Americans include both American Indians and Alaskan Eskimo. Source: Authors' calculations from 1993 NSSBF.

Table 6.11. Models of Credit Card Use - USA

Specification	Black	Asian	Native American	Hispanic	Sample Size
1) Business Credit Card	.032 (1.26)	-.102 (3.51)	.072 (0.86)	.029 (0.95)	4,618
2) Personal Credit Card	.015 (0.58)	-.028 (0.96)	-.004 (0.05)	-.045 (1.50)	4,618

Notes: Reported estimates are derivatives from Probit models, t-statistics are in parentheses.

Source: Authors' calculations from 1993 NSSBF.

Table 6.12. Models of Credit Card Use – South Atlantic

Specification	Black	Hispanic	Sample Size
1) Business Credit Card	.050 (0.93)	-.053 (1.42)	772
2) Personal Credit Card	.118 (2.10)	-.068 (0.84)	772

Notes: Reported estimates are derivatives from Probit models, t-statistics are in parentheses. Each line of this table represents a separate regression with the same control variables as Column 3 of Table 6.8 but excluding the loan characteristics. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size is all firms. Other races are excluded due to sample size limitations.

Source: Authors' calculations from 1993 NSSBF.

Table 6.13. Models of Interest Rate Charged

Specification	Black	Asian	Native American	Hispanic	Sample Size
1) All loans (controls as in column 5, Table 6.7	.970 (3.02)	.010 (0.04)	-.173 (0.18)	-.106 (0.44)	1,448
2) No credit problems	.957 (2.27)	.353 (0.98)	.886 (1.04)	.411 (1.40)	1,133
Organization Type					
3) Proprietorships and Partnerships	1.556 (2.27)	.255 (0.34)	2.588 (0.90)	1.071 (1.87)	362
4) Corporations	.613 (1.51)	.354 (1.05)	-.660 (0.97)	.441 (1.38)	1,086
1990 Firm Size					
5) Fewer than 10 Employees	1.303 (2.81)	-.033 (0.07)	-.263 (0.21)	.933 (2.29)	656
6) 10 or More Employees	.595 (0.97)	.499 (1.15)	-.213 (0.26)	.300 (0.69)	792
Sales Market					
7) Local	1.158 (2.12)	-.236 (0.44)	1.481 (0.95)	.637 (1.65)	631
8) Regional, National, or International	1.205 (2.75)	1.146 (2.84)	-1.361 (1.84)	.476 (1.16)	817

Notes: Reported estimates are Ordinary Least Squares (OLS) coefficients, t-statistics in parentheses. Each line of this table represents a separate regression with all of the control variables as Column 5 of Table 6.8 (except where specified) as well as: an indicator variable for whether the loan request was for a fixed interest rate loan, the length of the loan, the size of the loan, whether the loan was guaranteed, whether the loan was secured by collateral, and 7 variables identifying the type of collateral used if the loan was secured. The sample consists of firms who had applied for a loan and had their application approved. Native Americans include American Indians and Alaskan Eskimo. '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. Source: Authors' calculations from 1993 NSSBF.

Table 6.14. Racial Differences in Failing to Apply for Loans Fearing Denial

Specification	Black	Asian	Native American	Hispanic
a) USA				
No Other Control Variables (n=4,635)	0.400 (16.66)	0.096 (3.56)	0.148 (1.92)	0.225 (7.97)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=4,616)	.264 (10.49)	.059 (2.19)	.039 (0.55)	.161 (5.63)
b) South Atlantic				
No Other Control Variables (n=772)	.398 (8.04)	.146 (1.84)	n/a	.191 (2.67)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=771)	.292 (5.81)	.075 (1.05)	n/a	.186 (2.54)
c) Construction				
No Other Control Variables (n=525)	.359 (5.49)	-.004 (0.03)	.089 (0.52)	.109 (1.40)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=521)	.176 (3.38)	-.037 (0.47)	.061 (0.45)	-.005 (0.10)

Notes: Reported estimates are Probit derivatives, t-Statistics in parentheses. Sample consists of all firms. Native Americans include American Indians and Alaskan Eskimo. Dependent variable is unity if the firm said they did not apply for a loan fearing denial, zero otherwise. Source: Authors' calculations from 1993 NSSBF.

Table 6.15. Models of Failure to Obtain Credit Among Firms that Desired Additional Credit

Specification	Black	Asian	Native American	Hispanic
a) USA				
No Other Control Variables (n=2,647)	.442 (14.44)	.287 (6.59)	.194 (1.66)	.275 (7.13)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=2,634)	.277 (7.39)	.174 (3.52)	.002 (0.01)	.153 (3.41)
b) South Atlantic				
No Other Control Variables (n=450)	.437 (6.92)	.380 (3.08)		.270 (2.86)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=450)	.319 (3.73)	.362 (2.13)		.218 (1.59)
c) Construction				
No Other Control Variables (n=310)	.391 (4.60)	-.135 (0.69)	-	.218 (1.98)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=307)	.228 (2.12)	-.262 (1.08)	.071 (0.55)	-.036 (0.32)

Notes: Reported estimates are Probit derivatives, t-Statistics in parentheses. The sample consists of all firms that applied for loans along with those who needed credit, but didn't apply for fear of refusal. Failure to obtain credit includes those firms that were denied and those that did not apply for fear of refusal. Dependent variable is unity if the firm failed to obtain credit and zero if the firm applied for credit and had their loan application approved. Native Americans include American Indians and Alaskan Eskimo. Source: Authors' calculations from 1993 NSSBF.

Table 6.16. What is the Most Important Problem Facing Your Business Today?

	White Males	Black	Other	Hispanic	White Females	Total
Financing and interest rates	5.8	18.2	8.2	10.0	6.5	6.8
Taxes	7.7	1.9	3.1	4.9	6.6	6.8
Inflation	0.4	0.6	1.0	0.0	0.4	0.4
Poor sales	7.0	5.9	7.0	12.4	8.4	7.5
Cost/availability of labor	3.6	3.3	3.5	2.4	4.4	3.7
Government regulations/red tape	7.2	3.0	8.1	5.5	6.3	6.8
Competition (from larger firms)	11.1	10.7	18.4	8.8	0.6	11.3
Quality of labor	14.2	11.0	8.7	9.8	9.1	12.5
Cost and availability of insurance	2.5	1.0	0.0	0.5	2.3	2.1
Other	11.6	10.0	16.0	8.5	2.4	11.8
Cash flow	4.5	10.9	3.5	7.5	3.3	4.6
Capital other than working capital	1.2	1.7	0.8	3.8	1.5	1.4
Acquiring and retaining new customers	3.1	3.9	1.9	5.6	3.2	3.2
Growth of firm/industry	1.0	1.0	0.1	0.4	0.6	0.8
Overcapacity of firm/industry	0.1	0.0	0.3	0.0	0.0	0.1
Marketing/advertising	2.0	3.9	2.8	3.2	3.4	2.5
Technology	1.5	1.2	2.6	2.1	1.2	1.5
Costs, other than labor	2.7	1.8	3.6	2.5	3.8	2.9
Seasonal/cyclical issues	1.3	1.2	0.4	0.9	0.7	1.1
Bill collection	3.0	2.2	2.7	3.1	2.7	2.9
Too much work/not enough time	3.6	2.2	1.4	4.0	5.6	3.9
No problems	4.8	4.3	5.8	4.2	6.6	5.2

Source: Authors' calculations from the 1998 SSBF (n=3561).

Table 6.17. Loan Denial Probabilities - USA

	(1)	(2)	(3)	(4)	(5)	(6)
Black	.389	.269	.247	.253	.276	.306
	(6.83)	(4.46)	(4.13)	(4.07)	(4.17)	(4.50)
Asians	.173	.172	.147	.129	.152	.159
	(2.77)	(2.73)	(2.34)	(2.03)	(2.23)	(2.39)
Hispanic	.315	.266	.229	.198	.220	.211
	(4.67)	(3.83)	(3.36)	(2.87)	(3.09)	(3.01)
Female-Owned	.036	.001	-.006	-.008	.022	.035
	(0.87)	(0.02)	(0.14)	(0.18)	(0.50)	(0.81)
Judgments		.359	.335	.321	.366	.371
		(4.11)	(3.91)	(3.74)	(3.92)	(3.92)
Firm delinquent		.132	.167	.167	.185	.179
		(3.29)	(4.00)	(3.98)	(4.27)	(4.16)
Personally delinquent		.215	.169	.169	.152	.159
		(4.46)	(3.53)	(3.50)	(3.20)	(3.35)
Bankrupt past 7 years		.615	.613	.620	.600	.603
		(4.28)	(4.01)	(4.01)	(3.46)	(3.54)
Owner years experience		-.005	-.000	-.000	.001	.001
		(3.14)	(0.18)	(0.16)	(0.63)	(0.71)
Dun & Bradstreet credit ratings (4)	No	Yes	Yes	Yes	Yes	Yes
Other firm characteristics	No	No	Yes	Yes	Yes	Yes
Characteristics of the loan	No	No	No	No	No	Yes
Region (9)	No	No	No	Yes	Yes	Yes
Industry (37)	No	No	No	No	Yes	Yes
N	927	927	927	927	927	927
Pseudo R^2	.0622	.1990	.2351	.2415	.3072	.3183
Chi^2	65.56	209.8	247.8	254.6	323.7	335.5

Notes: "Other firm characteristics" include firm age, 1998 employment, 5 type of organization indicator variables, 4 indicator variables identifying if the firm's market was regional, national or international, the value of home equity (zero if didn't own home), owner's net worth without home equity. "Characteristics of the loan" include the size of the loan being applied for, five indicators to identify the year the application for the loan was made.

Source: Authors' calculations from 1998 SSBF.

Table 6.18. Loan Denial Probabilities – South Atlantic

	(1)	(2)	(3)	(4)	(5)	(6)
Black	.421	.318	.276	.319	.302	.334
	(6.20)	(4.34)	(3.80)	(4.10)	(3.79)	(4.10)
Asians	.220	.200	.180	.159	.180	.187
	(3.10)	(2.95)	(2.68)	(2.33)	(2.50)	(2.59)
Hispanic	.304	.272	.260	.202	.264	.254
	(4.12)	(3.57)	(3.43)	(2.69)	(3.26)	(3.17)
Female-Owned	.030	.003	.007	.002	.014	.028
	(0.64)	(0.07)	(0.16)	(0.04)	(0.31)	(0.58)
Black*SATL	-.083	-.109	-.070	-.065	-.056	-.061
	(0.84)	(1.16)	(0.72)	(0.65)	(0.60)	(0.66)
Asians* SATL	-.191	-.154	-.148	-.141	-.134	-.132
	(1.46)	(1.07)	(1.07)	(1.04)	(1.13)	(1.13)
Hispanic* SATL	.052	-.027	-.027	-.009	-.093	-.092
	(0.32)	(0.18)	(0.19)	(0.06)	(0.83)	(0.85)
Female-Owned* SATL	.033	-.018	-.017	.007	.036	.032
	(0.31)	(0.17)	(0.17)	(0.07)	(0.32)	(0.29)
SATL	.013	.027	.033	-.009	-.005	-.000
	(0.25)	(0.51)	(0.63)	(0.17)	(0.09)	(0.01)
Dun & Bradstreet credit ratings (4)	No	Yes	Yes	Yes	Yes	Yes
Other firm characteristics	No	No	Yes	Yes	Yes	Yes
Characteristics of the loan	No	No	No	No	No	Yes
Region (9)	No	No	No	Yes	Yes	Yes
Industry (37)	No	No	No	No	Yes	Yes
N	927	927	927	927	927	927
Pseudo R^2	.0657	.2013	.2222	.2537	.3077	.3190
Chi^2	69.25	212.2	234.2	267.39	324.3	336.2

Notes: t-statistics in parentheses.

Source: Authors' calculations from 1998 SSBF.

Table 6.19. More Loan Denial Probabilities

	(1)	(2)	(3)	(4)
	Denylast	*Denylast*	*Denylast*	*Denylast*
Black	.449	.187	.491	.214
	(7.91)	(4.97)	(7.32)	(4.61)
Asians	.155	.064	.156	.066
	(2.48)	(2.06)	(2.49)	(2.08)
Hispanic	.399	.188	.398	.217
	(6.10)	(4.61)	(5.58)	(4.55)
White Female	.099	.035	.092	.032
	(2.52)	(1.98)	(2.11)	(1.71)
Woman 50/50		.071		.022
		(1.76)		(0.71)
Black* SATL			-.084	-.019
			(1.11)	(0.75)
Asians* SATL			n/a	n/a
Hispanic* SATL			.007	-.021
			(0.05)	(0.72)
Female-Owned* SATL			.030	.005
			(0.32)	(0.16)
South Atlantic			.016	-.000
			(0.34)	(0.01)
Dun & Bradstreet credit ratings (4)	No	Yes	No	Yes
Other firm characteristics	No	Yes	No	Yes
Characteristics of the loan	No	Yes	No	Yes
Region (9)	No	Yes	No	Yes
Industry (37)	No	Yes	No	Yes
N	849	879	849	879
Pseudo R^2	.1077	.4061	.1096	.4060
Chi2	88.21	345.0	89.74	345.9

Source: Authors' calculations from 1998 SSBF.

Table 6.20. Models of Interest Rate Charged

Specification	Black	Black* South Atlantic	Black* Construc-tion	Hispanic	White Women
1a) All Loans (as in column 5 of Table 6.17) n=768	1.009 (2.49)	-	-	-.145 (0.32)	-.316 (1.25)
1b) All Loans (as in column 5 of Table 6.17) n=768	1.187 (2.30)	-.436 (0.54)	.303 (0.37)	-.151 (0.34)	-.312 (1.23)
1c) South Atlantic region All Loans (as in column 1 of Table 6.17) n=132	1.536 (2.19)	-	-	.597 (0.52)	-.076 (0.12)

Notes: Each line of this table represents a separate regression with all of the control variables. Controls for fixed interest rate or amount of points paid were not significant and hence excluded. The sample consists of firms who had applied for a loan and had their application approved.

Source: Authors' calculations from 1998 SSBF.

Table 6.21. Racial Differences in Failing to Apply for Loans Fearing Denial

Specification	Black	Hispanic	White Women
a) U.S.			
No Other Control Variables (n=3,457)	.352 (11.87)	.141 (4.25)	.071 (7.97)
Full Set of Control Variables (as in column 5 of Table 6.17) (n=3,457)	.227 (7.51)	.042 (1.38)	.042 (2.12)
b) South Atlantic region			
No Other Control Variables (n=620)	.385 (6.93)	.184 (2.26)	.184 (2.26)
Dun & Bradstreet Credit Reports (n=620)	.263 (4.65)	.155 (1.88)	.027 (0.57)
c) Construction			
No Other Control Variables (n=354)	.346 (3.48)	.014 (0.12)	.098 (1.21)
Dun & Bradstreet Credit Ratings (n=468)	.313 (3.17)	-.046 (0.41)	.094 (1.17)

Equations also include controls for Asian, Native American and Other Races. Reported estimates are Probit derivatives with t-statistics in parentheses.

Source: Authors' calculations from 1998 SSBF.

Table 6.22. Models of Credit Card Use

Specification	Black	Hispanic	White Women	Sample Size
1) Business Credit Card	-.008 (0.23)	-.027 (0.67)	-.019 (0.78)	3,457
2) Personal Credit Card	-.006 (0.18)	-.064 (1.66)	.005 (0.22)	3,457
3) Business Credit Card South Atlantic	.047 (0.71)	-.018 (0.19)	-.091 (1.55)	620
4) Personal Credit Card South Atlantic	-.022 (0.35)	-.063 (0.69)	.088 (1.58)	620

Notes: Each line of this table represents a separate regression with the same control variables as Column 3 of Table 6.17. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size is all firms. Reported estimates are Probit derivatives with t-statistics in parentheses.

Source: Authors' calculations from 1998 NSSBF.

Table 6.23. Loan / Credit Denial Statistics by Race/Sex – Maryland Area Geographic Market

	White men	Black	Hispanics	White Women	N
% loan / credit applications denied (on most recent credit application)	14.9	39.8	19.2	11.6	328
% loan / credit applications denied in last three years (excluding most recent application)	17.1	45.2	40.7	23.7	333
% loan / credit application in last three years (including most recent credit application)	25.0	54.7	44.4	28.6	336

Source: NERA Maryland Area Credit Survey conducted September-November 2005. Minorities include Black, Asian, Hispanic, and Native American-owned firms.

Table 6.24. Selected Sample Means of Loan Applicants – Maryland Area

Sample Characteristic	All	White Males	Blacks	Hispanics	White Women
% owner with judgments against them	4	3	6	9	3
% firm delinquent on business obligations	19	20	22	34	14
% owner delinquent on personal obligations	15	13	28	20	10
% owner declared bankrupt in past 7 years	2	0	5	0	4
Firm age, in years	14	17	10	12	13
% sole proprietorship	20	20	23	14	20
% partnership	2	3	4		3
% S corporation	40	35	26	43	46
% C corporation	26	30	27	37	24
Sample size (unweighted)	707	279	129	35	183

Note: Employment size counts a part-time employee as equivalent to one-half of a full-time employee. Source: NERA Maryland Area Credit Survey.

Table 6.25. Percentage of Firms Reporting Most Important Issues Affecting Them Now

	All	White Males	Blacks	Hispanics	White Women
Taxes	11	12	7	7	13
Inflation	3	3	0	0	4
Poor Sales	8	6	13	7	14
Cost of labor	5	4	3	25	4
Quality of labor	14	18	8	0	19
Financing and interest rates	6	4	17	7	2
Government regulations/red tape	5	10	4	4	3
Competition from larger firms	26	15	35	39	24
Cost and availability of insurance	12	16	6	7	16
Other	10	12	7	4	13
Number of observations (unweighted)	517	142	12	28	166

Source: NERA Maryland Area Credit Survey, 2005.

Table 6.26. Determinants of Loan Denial Rates – Maryland Area

	(1)	(2)	(3)	(4)	(5)	(6)
	Most Recent Application			*Last Three Years*		
Black	.260	.185	.131	.287	.217	.161
	(4.53)	(3.18)	(2.13)	(2.49)	(3.07)	(2.09)
Hispanic	.082	.058	-.028	.226	.205	.181
	(0.87)	(0.61)	(0.30)	(2.16)	(1.85)	(1.50)
Asian	-.008	.027	-.022	.009	-.022	-.064
	(0.09)	(0.27)	(0.21)	(0.08)	(0.18)	(0.49)
White female	.031	.010	.010	.070	.040	.013
	(0.66)	(0.22)	(0.20)	(1.27)	(0.66)	(0.21)
Judgments		.049	.055		.221	.267
		(0.45)	(0.48)		(1.29)	(1.47)
Firm delinquent		-.034	-.080		-.033	-.055
		(0.56)	(1.23)		(0.42)	(0.62)
Personally delinquent		.419	.453		.487	.503
		(4.96)	(4.76)		(5.14)	(4.88)
Bankrupt past 3yrs		.166	.212		.084	.071
		(1.08)	(1.29)		(0.42)	(0.35)
Industry indicators	No	No	Yes	No	No	Yes
Organizational status indicators	No	No	Yes	No	No	Yes
N	313	305	289	321	300	299
Pseudo R^2	.0688	.2006	.231	.0541	.121	.2010
Chi^2	22.17	62.85	68.3	10.6	47.0	78.2
Log likelihood	-150.1	-125.3	113.5	-192.8	-170.1	-155.3

Notes: Reported estimates are derivatives from Probit models, t-statistics are in parentheses. Source: Maryland Area Credit Survey, 2005.

Table 6.27. Determinants of Loan Denial Rates – Seven Jurisdictions

	(1)	(2)	(3)	(4)
	Most Recent Application		*Last Three Years*	
Black	.306	.315	.388	.436
	(7.94)	(6.86)	(8.72)	(7.88)
Hispanic	.196	.235	.264	.266
	(4.01)	(4.18)	(4.59)	(4.02)
Native American	.142	.152	.140	.153
	(2.01)	(1.86)	(1.66)	(1.56)
Asian	.114	.116	.185	.226
	(2.17)	(1.90)	(3.10)	(3.3`)
Other race	.246	.242	.305	.300
	(2.24)	(2.22)	(2.35)	(2.31)
White female	.055	.070	.098	.095
	(2.01)	(2.31)	(2.91)	(2.55)
Black*Maryland		-.055		-.137
		(0.89)		(1.61)
Hispanic*Maryland		-.107		-.043
		(1.46)		(0.35)
Native American*Maryland		-.054		-.075
		(0.44)		(0.43)
White female*Maryland		-.078		-.023
		(1.30)		(0.26)
Judgments	.061	.062	.148	.146
	(1.56)	(1.60)	(2.47)	(2.42)
Firm delinquent	.069	.069	.145	.146
	(2.76)	(2.76)	(4.59)	(4.59)
Personally delinquent	.218	.215	.299	.296
	(6.60)	(6.49)	(7.22)	(7.12)
Bankrupt past 3yrs	.300	.303	.495	.498
	(4.87)	(4.91)	(5.83)	(5.84)
N	1637	1637	1645	1645
Pseudo R^2	.1699	.1716	.1805	.1824
Chi^2	276.8	279.6	380.9	384.9
Log likelihood	-76.0	-674.6	-864.5	-862.5

Notes: Reported estimates are derivatives from Probit models, t-statistics are in parentheses. Five additional indicator variables are also included for other jurisdictions. Source: NERA Credit Market Surveys, 1999-2005.

Table 6.28. Models of Credit Card Use – Maryland Area Geographic Market

Specification	Blacks	Hispanics	White females	Sample Size
A) No Control Variables				
1) Business Credit Card	.110 (1.86)	.108 (1.17)	-.006 (0.12)	565
2) Personal Credit Card	.254 (4.21)	.201 (2.18)	.107 (1.90)	565
B) Controls Variables as in Columns 1 of Table 6.27				
3) Business Credit Card	.157 (2.54)	.122 (1.31)	.028 (0.50)	547
4) Personal Credit Card	.232 (3.68)	.182 (1.93)	.110 (1.90)	549

Notes: Reported estimates are Probit derivatives, t-statistics in parentheses. Source: Maryland Area Credit Survey.

Table 6.29. Determinants of Interest rates – Seven Jurisdictions

	(1)	(2)	(3)	(4)
Black	1.053	1.221	.767	.855
	(2.95)	(2.72)	(2.10)	(1.87)
Hispanic	.819	.903	.662	.615
	(1.92)	(1.85)	(1.53)	(1.23)
Native American	.309	1.049	.313	.957
	(0.50)	(1.40)	(0.51)	(1.29)
Asian	.908	.775	.983	.833
	(2.14)	(1.60)	(2.31)	(1.70)
Other race	-.2917	-.314	-.623	-.629
	(0.28)	(0.30)	(0.60)	(0.61)
White female	.238	.2933	.247	.302
	(0.96)	(1.07)	(1.00)	(1.10)
Black*Maryland		-.655		-.360
		(0.84)		(0.46)
Hispanic*Maryland		-.532		.049
		(0.52)		(0.05)
Native American*Maryland		-2.453		-2.07
		(1.83)		(1.56)
White female*Maryland		-.432		-.347
		(0.67)		(0.54)
Judgments			1.276	1.278
			(2.55)	(2.56)
Firm delinquent			.000	.-.013
			(0.00)	(0.05)
Personally delinquent			1.127	1.107
			(3.20)	(3.14)
Bankrupt past 3yrs			1.362	1.306
			(2.02)	(2.01)
N	1274	1274	1253	1253
Adjusted R^2	.0824	.0819	.1012	.0990
F	10.5	7.9	9.81	7.62

Notes: Reported estimates are OLS regression models, T-statistics are in parentheses. Source: Seven NERA Credit Surveys. Five additional indicator variables are also included for other jurisdictions.

Table 6.30. Models of Loan Denials in the Maryland Market Area– Checking for Non-response Bias

	(1)	(2)	(3)	(4)
Minority	.1763	.1585	.1759	.1576
	(3.68)	(3.70)	(3.64)	(3.66)
Women	.0301	.0343	.0192	.0229
	(0.64)	(0.82)	(2.29)	(0.54)
Bankrupt			.6669	.6756
			(4.36)	(4.40)
Non-response data included	No	Yes	No	Yes
N	313	359	310	356
Pseudo R^2	.0428	.0401	.0639	.0618
Chi^2	13.79	13.96	20.35	21.29
Likelihood ratio	-154.3	-167.3	-149.0	-161.5

Notes: The dependent variable indicates a loan has ever been denied. Estimates are Probit derivatives, t-statistics in parentheses.

Source: Authors' calculations from the 2005 Maryland Area Credit Market Survey and the 2005 Maryland Area Credit Market Non-Response Survey.

VII. MBE Utilization and Disparity in Maryland's Contracting and Procurement Markets, 2000–2004

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 MBE participation in contracting and procurement. Chapters V and VI documented the extent of disparity facing minority- and women- owned firms in the private sector of the Maryland area economy, where contracting and procurement activity is generally *not* subject to such requirements. In this Chapter we examine whether there is statistical evidence of disparities in the contracting and procurement activities of the State of Maryland itself.

To determine whether MBEs have been underutilized in the public sector we should ideally examine public expenditures that were *not* subject to affirmative action requirements. However, the State of Maryland has a longstanding policy of pursuing affirmative action program in contracting and procurement.[213]

Given the history of Maryland's MBE policies, the State's own data may not show evidence of underutilization, even if such underutilization exists in the private sector. Instead, Maryland's data, in our own view, is most useful for examining the effectiveness of Maryland's MBE policies between FY2000 and FY2004. On the other hand, of course, if actual Maryland MBE utilization still turns out to be significantly less than MBE availability in certain procurement categories, then Maryland's data will still provide evidence of underutilization. The statistical evidence reported in Chapter III has already established the following:

- What Maryland spends its contracting and procurement dollars on;
- Where Maryland spends its contracting and procurement dollars;

Furthermore, the statistical evidence reported in Chapter IV has established:

- What percentage of all firms in Maryland's geographic and product markets are MBEs.

[213] See Chapter IX, Section B, for a historical summary of the State's MBE policies.

This Chapter will document:

- To what extent Maryland has utilized MBEs in its contracting and subcontracting opportunities between FY2000–FY2004;
- Whether MBEs have been utilized to the extent that they are available in the relevant marketplace.

We report this information for Construction, AE-CRS, CSE, IT, Maintenance, and Services, as well as for all procurement categories combined. These six procurement categories reflect differences in contract award, contract administration, contract reporting procedures, and state purchasing law, in each area. For example, AE-CRS contracts are often obtained through Requests for Proposals (RFPs) and similar methods where price is usually only one factor in consideration for award. In contrast, Construction contracts are typically obtained through competitive sealed bidding and similar methods where price is usually the determining factor among responsive and responsible bidders. Where the data allow, results are reported by race and sex as well as for all MBEs combined.

B. MBE Utilization

For this Study, we examined 3,056 prime contracts and 10,158 associated subcontracts covering a five-year time period and with a total value of $8.57 billion.

SIC codes, MBE status, and detailed race and sex status for the prime contractors and subcontractors included in the sample database were established through extensive computer-assisted cross-referencing of firms in our sample with firms in (a) the state-provided sample universe, (b) the MDOT directory of certified MBEs, (c) the master directory of MBEs assembled for this study, (d) Dun & Bradstreet's *Marketplace*, (e) company profiles drawn from ABI-Inform, Hoover's, Standard & Poors, and other sources, (f) the DLLR database of Maryland employers, and (g) the results of our race/sex misclassification/non-classification surveys.

We found that during the study period, as a group, MBEs earned 15.8 percent of all Maryland contract and subcontract dollars in Construction ($697.5 million) and 24.5 percent of all contract and subcontract dollars in AE-CRS ($122.6 million). MBEs earned 15.5 percent of all Maryland contract and subcontract dollars ($155.9 million) in CSE and 9.7 percent of all contract and subcontract dollars in IT ($31.5 million). MBEs earned 34.4 percent of all Maryland contract and subcontract dollars ($93.5 million) in Maintenance and 8.5 percent of all contract and subcontract dollars in Services ($175.3 million).

Altogether, MBEs earned 14.79 percent of all contract and subcontract dollars ($1.27 billion) during the five-year FY2000-FY2004 study period.

Table 7.1 details the key results of our analysis of MBE participation in Maryland by race, sex, six major procurement categories, and overall. For minority-owned MBEs (i.e. MBEs other than White women), utilization was 7.9 percent in Construction, 19.5 percent in AE-CRS, 12.3 percent in CSE, 7.9 percent in IT, 15.8 percent in Maintenance, 4.1 percent in Services, and 8.4 percent overall.

Among MBEs, firms owned by White females earned the largest fraction of State contracting dollars (6.4 percent), followed in descending order by firms owned Blacks (3.5 percent), firms owned by Hispanics (2.5 percent), firms owned by Asians (2.1 percent), and finally, firms owned by Native Americans (0.3 percent).

- For firms owned by Blacks, the procurement category with the highest MBE utilization was Maintenance, followed by, in descending order, Services, Construction, AE-CRS, CSE, and IT.

- For firms owned by Hispanics, the procurement category with the highest MBE utilization was CSE, followed by, in descending order, Construction, Maintenance, AE-CRS, Services, and IT.

- For firms owned by Asians, the procurement category with the highest MBE utilization was AE-CRS, followed by, in descending order, IT, Construction, Maintenance, CSE, and Services.

- For firms owned by Native Americans, the procurement category with the highest MBE utilization was IT, followed by, in descending order, AE-CRS, CSE, Maintenance, Construction, and Services.

- For firms owned by White females, the procurement category with the highest MBE utilization was Maintenance followed by, in descending order, Construction, AE-CRS, Services, CSE, and IT.

C. Disparity Analysis

We turn finally to a comparison between our estimates of MBE utilization in Maryland's own contracting and subcontracting activities and our estimates of MBE availability in Maryland's geographic and product market area.

Table 7.2 presents the results of this comparison for Maryland contracting and procurement as a whole. The figures in the utilization column are the same as those from Table 7.1 and include both prime contract and subcontract dollars. The figures in the availability column are the same as those in Table 4.23.

The disparity index, in the final column, is derived by dividing utilization by availability and multiplying the result by 100. A disparity index below 100 indicates that MBEs are participating in Maryland contracting and subcontracting at a level that is less than their estimated availability in the relevant marketplace.

In Construction, statistically significant adverse disparities are observed for Black-owned firms, Hispanic-owned firms, Asian-owned firms, Native American-owned firms, White women-owned firms, and for the MBE group as a whole.

In AE-CRS, statistically significant adverse disparities are observed for Black-owned firms, Hispanic-owned firms, White women-owned firms, and for the MBE group as a whole.

In CSE, statistically significant adverse disparities are observed for Black-owned firms, Asian-owned firms, Native American-owned firms, White women-owned firms, and for the MBE group as a whole.

In IT, statistically significant adverse disparities are observed for Black-owned firms, Hispanic-owned firms, Asian-owned firms, White women-owned firms, and for the MBE group as a whole.

In Maintenance, statistically significant adverse disparities are observed for Hispanic-owned firms, Asian-owned firms, and Native American-owned firms.

In Services, statistically significant adverse disparities are observed for Black-owned firms, Hispanic-owned firms, Asian-owned firms, Native American-owned firms, White women-owned firms, and for the MBE group as a whole.

Tables 7.3 through 7.7 present information comparable to that presented in Table 7.2 for various agencies. Although there are exceptions, statistically significant adverse disparities were observed in all procurement categories, for all MBE types, and in all agencies during the FY2000-FY2004 period.

D. Tables

Table 7.1. MBE Utilization in State of Maryland Contracting and Procurement, 2000-2005

MBE Type	Procurement Category						
	Constr. (%)	AE-CRS (%)	CSE (%)	IT (%)	Maint. (%)	Services (%)	Overall (%)
Black	3.57	2.32	1.50	0.34	12.53	3.82	3.48
Hispanic	2.28	0.50	10.13	0.01	2.18	0.04	2.48
Asian	1.93	15.78	0.39	3.56	0.76	0.22	2.14
Native American	0.15	0.87	0.32	3.95	0.28	0.01	0.33
Minority total	7.94	19.47	12.34	7.86	15.76	4.09	8.44
White Females	7.87	5.05	3.12	1.87	18.62	4.44	6.36
MBE Total	15.81	24.52	15.46	9.74	34.38	8.53	14.79
Non-MBE Total	84.19	75.48	84.54	90.26	65.62	91.47	85.21
Total (%)	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Total ($)	$4,411,550,975	$499,798,243	$1,008,519,276	$323,249,710	$272,100,761	$2,055,644,094	$8,570,863,060

Source: NERA Master Contract/Subcontract Database, FY2000-FY2004.

Table 7.2. Overall Disparity Results—FY2000-FY2004

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
All Procurement				
Black:	3.48	6.49	53.6	***
Hispanic	2.48	3.17	78.2	***
Asian	2.14	4.76	45.1	***
Native American	0.33	0.63	52.7	***
Minority total	8.44	15.05	56.0	***
White female	6.36	14.56	43.7	***
MBE total	14.79	29.61	50.0	***
Construction				
Black:	3.57	6.09	58.6	***
Hispanic	2.28	2.95	77.4	***
Asian	1.93	2.21	87.5	***
Native American	0.15	0.49	30.8	***
Minority total	7.94	11.75	67.6	***
White female	7.87	12.26	64.2	***
MBE total	15.81	24.00	65.9	***
AE-CRS				
Black:	2.32	5.80	40.0	***
Hispanic	0.50	2.79	17.9	***
Asian	15.78	7.22	218.5	N/A
Native American	0.87	0.45	194.7	N/A
Minority total	19.47	16.26	119.7	N/A
White female	5.05	12.20	41.4	***
MBE total	24.52	28.46	86.2	***
CSE				
Black:	1.50	6.91	21.6	***
Hispanic	10.13	3.43	295.3	N/A
Asian	0.39	7.49	5.3	***
Native American	0.32	0.81	39.2	***
Minority total	12.34	18.64	66.2	***
White female	3.12	16.60	18.8	***
MBE total	15.46	35.24	43.9	***
IT				
Black:	0.34	12.18	2.8	***
Hispanic	0.01	4.23	0.3	***
Asian	3.56	9.82	36.2	***
Native American	3.95	0.95	414.2	N/A
Minority total	7.86	27.18	28.9	***
White female	1.87	16.24	11.5	***
MBE total	9.74	43.42	22.4	***

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
Maintenance				
Black:	12.53	8.11	154.6	N/A
Hispanic	2.18	3.34	65.2	***
Asian	0.76	3.24	23.5	***
Native American	0.28	0.56	50.5	***
Minority total	15.76	15.26	103.3	N/A
White female	18.62	14.81	125.8	N/A
MBE total	34.38	30.06	114.4	N/A
Services				
Black:	3.82	6.15	62.1	**
Hispanic	0.04	3.39	1.2	***
Asian	0.22	6.42	3.5	***
Native American	0.01	0.80	0.9	***
Minority total	4.09	16.76	24.4	***
White female	4.44	17.66	25.1	***
MBE total	8.53	34.42	24.8	***

Source: Calculations from NERA Master Contract/Subcontract Database and NERA Baseline Business Population.

Notes: (1) "*" 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). "N/A" indicates that no adverse disparity was observed in that category. If the cell is blank, the disparity is adverse but not statistically significantly so; (2) *See* Table 3.1 for a list of all agencies and educational institutions included in these analyses.

Table 7.3. Disparity Results for Maryland Department of Transportation—FY2000-FY2004

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
All Procurement				
Black:	3.34	6.49	51.4	***
Hispanic	4.28	3.17	134.8	N/A
Asian	2.14	4.76	45.0	***
Native American	0.32	0.63	50.6	***
Minority total	10.08	15.05	67.0	***
White female	6.57	14.56	45.2	***
MBE total	16.65	29.61	56.2	***
Construction				
Black:	3.67	6.09	60.2	***
Hispanic	2.43	2.95	82.6	***
Asian	1.59	2.21	71.8	***
Native American	0.20	0.49	40.2	***
Minority total	7.89	11.75	67.1	***
White female	8.79	12.26	71.7	***
MBE total	16.68	24.00	69.5	***
AE-CRS				
Black:	2.27	5.80	39.1	***
Hispanic	0.34	2.79	12.1	***
Asian	10.35	7.22	143.4	N/A
Native American	0.00	0.45	1.0	***
Minority total	12.96	16.26	79.7	***
White female	5.06	12.20	41.5	***
MBE total	18.03	28.46	63.3	***
CSE				
Black:	0.03	6.91	0.5	***
Hispanic	24.32	3.43	708.7	N/A
Asian	0.24	7.49	3.2	***
Native American	0.73	0.81	90.7	*
Minority total	25.32	18.64	135.9	N/A
White female	0.70	16.60	4.2	***
MBE total	26.03	35.24	73.9	***
IT				
Black:	0.00	12.18	0.0	***
Hispanic	0.00	4.23	0.0	***
Asian	2.48	9.82	25.2	***
Native American	4.09	0.95	428.1	N/A
Minority total	6.57	27.18	24.2	***
White female	0.78	16.24	4.8	***
MBE total	7.35	43.42	16.9	***

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
Maintenance				
Black:	11.07	8.11	136.5	N/A
Hispanic	2.89	3.34	86.6	***
Asian	0.26	3.24	8.1	***
Native American	0.37	0.56	65.9	***
Minority total	14.59	15.26	95.7	
White female	14.75	14.81	99.6	
MBE total	29.34	30.06	97.6	
Services				
Black:	3.12	6.15	50.8	***
Hispanic	0.04	3.39	1.3	***
Asian	0.56	6.42	8.8	***
Native American	0.00	0.80	0.0	***
Minority total	3.73	16.76	22.2	***
White female	1.56	17.66	8.8	***
MBE total	5.28	34.42	15.4	***

Source and Notes: *See* Table 7.2.

Table 7.4. Disparity Results for University System of Maryland—FY2000-FY2004

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
All Procurement				
Black:	2.69	6.49	41.5	***
Hispanic	0.95	3.17	29.9	***
Asian	4.25	4.76	89.3	***
Native American	0.62	0.63	98.5	
Minority total	8.51	15.05	56.5	***
White female	4.78	14.56	32.8	***
MBE total	13.29	29.61	44.9	***
Construction				
Black:	2.88	6.09	47.3	***
Hispanic	1.41	2.95	47.7	***
Asian	0.62	2.21	27.9	***
Native American	0.20	0.49	41.1	***
Minority total	5.11	11.75	43.5	***
White female	5.18	12.26	42.3	***
MBE total	10.29	24.00	42.9	***
AE-CRS				
Black:	2.06	5.80	35.5	***
Hispanic	1.23	2.79	44.0	***
Asian	39.09	7.22	541.4	N/A
Native American	4.65	0.45	1040.6	N/A
Minority total	47.03	16.26	289.2	N/A
White female	5.09	12.20	41.7	***
MBE total	52.12	28.46	183.2	N/A
CSE				
Black:	1.07	6.91	15.5	***
Hispanic	0.00	3.43	0.0	***
Asian	0.48	7.49	6.5	***
Native American	0.06	0.81	7.1	***
Minority total	1.61	18.64	8.7	***
White female	3.27	16.60	19.7	***
MBE total	4.88	35.24	13.9	***
IT				
Black:	1.05	12.18	8.6	***
Hispanic	0.10	4.23	2.3	***
Asian	8.68	9.82	88.3	*
Native American	2.16	0.95	226.3	N/A
Minority total	11.99	27.18	44.1	***
White female	1.77	16.24	10.9	***
MBE total	13.76	43.42	31.7	***

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
Maintenance				
Black:	8.25	8.11	101.8	N/A
Hispanic	0.31	3.34	9.3	***
Asian	0.00	3.24	0.0	***
Native American	0.00	0.56	0.0	***
Minority total	8.56	15.26	56.1	***
White female	0.49	14.81	3.3	***
MBE total	9.05	30.06	30.1	***
Services				
Black:	9.94	6.15	161.7	N/A
Hispanic	0.00	3.39	0.0	***
Asian	0.65	6.42	10.1	***
Native American	0.00	0.80	0.0	***
Minority total	10.59	16.76	63.2	***
White female	11.18	17.66	63.3	***
MBE total	21.77	34.42	63.2	***

Source and Notes: *See* Table 7.2.

Table 7.5. Disparity Results for Morgan State University—FY2000-FY2004

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
All Procurement				
Black:	55.56	6.49	856.0	N/A
Hispanic	0.46	3.17	14.5	***
Asian	0.04	4.76	0.8	***
Native American	0.24	0.63	38.9	***
Minority total	56.30	15.05	374.1	N/A
White female	0.32	14.56	2.2	***
MBE total	56.63	29.61	191.2	N/A
Construction				
Black:	27.14	6.09	445.4	N/A
Hispanic	11.57	2.95	392.6	N/A
Asian	1.20	2.21	54.1	***
Native American	0.00	0.49	0.0	***
Minority total	39.92	11.75	339.8	N/A
White female	10.32	12.26	84.2	**
MBE total	50.24	24.00	209.3	N/A
CSE				
Black:	0.00	6.91	0.0	***
Hispanic	0.00	3.43	0.0	***
Asian	0.00	7.49	0.0	***
Native American	0.00	0.81	0.0	***
Minority total	0.00	18.64	0.0	***
White female	0.00	16.60	0.0	***
MBE total	0.00	35.24	0.0	***
IT				
Black:	0.00	12.18	0.0	***
Hispanic	0.00	4.23	0.0	***
Asian	0.00	9.82	0.0	***
Native American	2.87	0.95	300.4	N/A
Minority total	2.87	27.18	10.5	***
White female	0.00	16.24	0.0	***
MBE total	2.87	43.42	6.6	***
Maintenance				
Black:	0.00	8.11	0.0	*
Hispanic	6.79	3.34	203.0	N/A
Asian	0.00	3.24	0.0	*
Native American	0.00	0.56	0.0	*
Minority total	6.79	15.26	44.5	
White female	0.00	14.81	0.0	*
MBE total	6.79	30.06	22.6	*

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
Services				
Black:	78.67	6.15	1279.3	N/A
Hispanic	0.00	3.39	0.0	***
Asian	0.00	6.42	0.0	***
Native American	0.00	0.80	0.0	***
Minority total	78.67	16.76	469.5	N/A
White female	0.00	17.66	0.0	***
MBE total	78.67	34.42	228.6	N/A

Source and Notes: *See* Table 7.2. Morgan State had no sample contracts in the AE-CRS procurement category.

Table 7.6. Disparity Results for Interagency Committee for Public School Construction—FY2000-FY2004

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
All Procurement				
Black:	3.78	6.49	58.2	***
Hispanic	2.02	3.17	63.5	***
Asian	3.18	4.76	66.8	***
Native American	0.02	0.63	3.2	***
Minority total	9.00	15.05	59.8	***
White female	7.33	14.56	50.4	***
MBE total	16.33	29.61	55.1	***
Construction				
Black:	3.78	6.09	62.0	***
Hispanic	2.02	2.95	68.4	***
Asian	3.18	2.21	143.8	N/A
Native American	0.02	0.49	4.1	***
Minority total	9.00	11.75	76.6	***
White female	7.33	12.26	59.8	***
MBE total	16.33	24.00	68.0	***

Source and Notes: *See* Table 7.2. All Interagency Committee sample contracts were from the Construction procurement category.

Table 7.7. Disparity Results for Balance of State Agencies Studied—FY2000-FY2004

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
All Procurement				
Black:	2.75	6.49	42.4	***
Hispanic	0.43	3.17	13.6	***
Asian	0.71	4.76	14.8	***
Native American	0.38	0.63	60.6	**
Minority total	4.27	15.05	28.4	***
White female	6.36	14.56	43.7	***
MBE total	10.63	29.61	35.9	***
Construction				
Black:	3.25	6.09	53.3	***
Hispanic	5.51	2.95	187.0	N/A
Asian	2.78	2.21	125.8	N/A
Native American	0.29	0.49	58.7	***
Minority total	11.83	11.75	100.8	N/A
White female	9.60	12.26	78.3	***
MBE total	21.44	24.00	89.3	***
AE-CRS				
Black:	11.60	5.80	200.0	N/A
Hispanic	0.00	2.79	0.0	***
Asian	17.52	7.22	242.6	N/A
Native American	0.00	0.45	0.0	***
Minority total	29.12	16.26	179.1	N/A
White female	3.22	12.20	26.4	***
MBE total	32.34	28.46	113.6	N/A
CSE				
Black:	3.57	6.91	51.6	***
Hispanic	0.17	3.43	4.9	***
Asian	0.53	7.49	7.0	***
Native American	0.00	0.81	0.0	***
Minority total	4.26	18.64	22.9	***
White female	5.99	16.60	36.1	***
MBE total	10.25	35.24	29.1	***
IT				
Black:	0.39	12.18	3.2	*
Hispanic	0.00	4.23	0.0	
Asian	3.20	9.82	32.6	
Native American	4.26	0.95	446.4	N/A
Minority total	7.85	27.18	28.9	
White female	2.51	16.24	15.4	
MBE total	10.36	43.42	23.9	**

MBE Utilization and Disparity in Maryland's Contracting and Procurement Markets, 2000–2004

Procurement Category / MBE Type	Utilization	Availability	Disparity Index	
Maintenance				
Black:	19.26	8.11	237.6	N/A
Hispanic	0.07	3.34	2.1	***
Asian	2.81	3.24	86.8	***
Native American	0.05	0.56	9.6	***
Minority total	22.20	15.26	145.5	N/A
White female	38.25	14.81	258.3	N/A
MBE total	60.45	30.06	201.1	N/A
Services				
Black:	2.16	6.15	35.1	*
Hispanic	0.04	3.39	1.3	***
Asian	0.09	6.42	1.5	***
Native American	0.01	0.80	1.3	***
Minority total	2.31	16.76	13.8	***
White female	5.41	17.66	30.7	**
MBE total	7.72	34.42	22.4	***

Source and Notes: *See* Table 7.2.

VIII. Anecdotal Evidence of Disparities in Maryland's Marketplace

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 State of Maryland's contracting and procurement activities. Chapters V and VI in particular have documented large and statistically significant adverse disparities in the State of Maryland's relevant markets impacting minority and female entrepreneurs. Commercial loan denial rates are higher, the cost of credit is higher, business formation rates are lower, and business owner earnings are lower — even when comparisons are restricted to similarly situated businesses and business owners.

As a further check on these findings, we investigated anecdotal evidence of disparities in Maryland's marketplace. First, we conducted a large scale survey of business establishments in these markets — both MBE and non-MBE — and asked owners directly about their experiences, if any, with contemporary business-related acts of discrimination. We find that MBEs in the State of Maryland's markets report suffering business-related discrimination in large numbers and with statistically significantly greater frequency than non-MBEs. These differences remain statistically significant when firm size and owner characteristics are held constant. We also find that MBEs in these markets are more likely than similarly situated non-MBEs to report that specific aspects of the regular business environment make it harder for them to conduct their businesses, less likely than similarly situated non-MBEs to report that specific aspects of the regular business environment make it easier for them to conduct their businesses, and that these differences are statistically significant in many cases. Additionally, we find that MBE firms that have been hired in the past by non-MBE prime contractors to work on public sector contracts with MBE goals are rarely hired—or even solicited—by these prime contractors to work on projects without MBE goals. The relative lack of MBE hiring and, even more tellingly, the relative lack of solicitation of MBEs in the absence of affirmative efforts by the State of Maryland shows that business discrimination continues to fetter MBE business opportunities in Maryland's relevant markets. We conclude that the statistical evidence presented in this report is consistent with these anecdotal accounts of contemporary business discrimination.

Next, we conducted extensive group interviews with minority, women and majority business owners about their experiences in seeking and performing contracts in Maryland's marketplace. These focus groups confirmed the results of the statistical evidence and the mail surveys: minorities and women encounter significant barriers to the success of their firms in seeking State and private sector work, and these barriers are often the result of discrimination. The focus group comments were similar to the testimony heard by the Governor's Commission on Minority Business Enterprise Reform in four public hearings held throughout Maryland in the Fall of 2003 (Governor's Commission on Minority Enterprise Reform, 2003, Vol. II). An informal survey during registration at the public hearings of the Governor's Commission (2003, vol. I) also ranked obtaining State contracts as the most pressing problem facing minority businesses followed by access to capital and credit.

The remainder of this Chapter is organized as follows. We first discuss the mail survey results in Section A. In Section A.1, we discuss the survey questionnaire, sample frame, and response rate. Section A.2 presents evidence on willingness of firms to do business with the public sector in

general and the State of Maryland in particular. Section A.3 presents the key findings from the MBE and non-MBE respondents concerning disparate treatment. Section A.4 documents disparities in firm experience and size among MBE and non-MBE respondents. Section A.5 presents the key findings concerning the impact of the regular business environment on MBEs' ability to conduct their businesses. Section A.6 presents key findings to our questions concerning whether prime contractors solicit or hire MBEs for work on public or private contracts without MBE goals. Section A.7 then examines whether MBEs and non-MBEs that responded to the mail surveys are representative of all MBEs and non-MBEs in the relevant markets. To do so, we surveyed a random sample of MBEs and non-MBEs that did not respond to our mail survey, and then compared their responses to key questions with those of our survey respondents. Finally, Section B describes the results of the business experience group interviews. Responses are grouped under the headings of the most common cited barriers and issues facing MBEs and non-MBEs.

A. Business Experiences Surveys

1. Survey Questionnaire, Sample, and Responses

The survey questionnaires asked whether and with what frequency firms had experienced discrimination in a wide variety of likely business dealings in the previous five years. The survey also inquired about the influence of specific aspects of the everyday business environment, such as bonding and insurance requirements, on each firm's ability to do business in Maryland'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* MBE goals have been hired to work, or even solicited to bid, on similar contracts *without* MBE 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 Baseline Business Population compiled for this study. Firms were sampled randomly within strata. MBE firms were oversampled to facilitate statistical comparisons with non-MBEs.[214] Of 9,577 businesses that received the questionnaire, 1,091 (11.4 percent) responded to the survey.[215] However, 34 of these responses were unusable because the respondent left the race/ethnicity question and/or the sex question blank.[216] The distribution of total responses according to the race and sex of the business owner, by major procurement category, appears in Table 8.1.

[214] See Chapter III for a discussion of how the product and geographic markets were defined. See Chapter IV for discussion of how the Baseline Business Population was assembled.

[215] These figures exclude surveys that were returned undelivered or otherwise undeliverable as well as those that were completed but returned too late to be included in the analysis.

[216] The total number of valid responses to any particular survey question, however, was sometimes lower than this since not all questions were relevant to and/or answered by all respondents.

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 such as in the present case. 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.

As shown below in Table 8.2, there is a strong linkage between the firms responding to our mail survey and the public sector of the Maryland area economy. Not only are all respondents located in the relevant geographic and product markets but, moreover, significant numbers of survey respondents have, in the last five years, worked or attempted to do work for the State of Maryland or for other public entities in Maryland and the surrounding area. This is observed for virtually all types of MBEs and non-MBEs in all procurement categories. Overall, fully half of non-MBEs and two-thirds of MBEs have worked or attempted to work for the State of Maryland or some other Maryland area public entity in the previous five years. This phenomenon is especially apparent for MBEs in Architecture and Engineering Services (A&E) and in Construction.

3. Experiences of Disparate Treatment in Business Dealings

The survey included questions about instances of disparate treatment based on race and/or sex experienced in various business dealings during the past five years. As shown in the last two rows of Table 8.3, fully half of all MBE firms said they had experienced at least one instance of disparate treatment in one or more areas of the business dealings identified on the survey. Reports of disparate treatment were highest among Blacks, Hispanics, and Native Americans — all with overall rates in excess of 60 percent. Overall, rates were somewhat lower for Asians and White women, 44 percent and 39 percent, respectively, but these rates as well are almost double those reported by White Men, casting doubt on claims of widespread "reverse discrimination." Similar patterns were observed when the data were disaggregated by procurement category as well.

The balance of Table 8.3 show results for each of 14 distinct types of disparate treatment covered in the survey. In many categories, the difference in reported amounts of disparate treatment between MBEs and non-MBEs is very large. In the area of commercial insurance, for example, minority MBEs reported being discriminated against almost 16 times more frequently than White males. In the area of commercial loans it was reported 13 times more frequently.[217] In the areas of joining or dealing with trade associations, working on private sector subcontracts, working on private sector prime contracts, and obtaining bonding, the figures are 9 times, 7 times, 7 times, and 7 times higher for minority-owned businesses than majority owners, respectively. The differences on all but one of the remaining items range from 3 to 5 times more frequent.

For White female MBEs, the differences are large as well, though not so large as those observed for minority firms. In all but two areas (hiring from union hiring halls and surety bonding),

[217] Discrimination in access to commercial credit and capital is the most widely and commonly cited problem facing minority-owned firms. See Chapter VI for an extensive discussion of the theory and evidence behind this phenomenon.

White women reported encountering discrimination 2 to 6 times more often than did White males. In no case do non-MBEs report disparate treatment more frequently than MBEs.

For Blacks, there are 11 categories where more than one-in-four reported discrimination. In descending order of frequency these are: (A) working or attempting to work on public sector subcontracts (51%), (B) applying for commercial loans (49%), (C) working or attempting to work on public sector prime contracts (49%), (D) working or attempting to work on private sector prime contracts (47%), (E) working or attempting to work on private sector subcontracts (44%), (F) receiving timely payment for work performed (40%), (G) having to do inappropriate or extra work that is not required of comparable non-MBE firms (36%), (H) applying for surety bonds (34%), (I) having to meet quality, inspection, or performance standards that were not required of comparable firms (32%), (J) functioning without hindrance or harassment at the job site (27%), and (K) obtaining price quotes from suppliers or subcontractors (26%).

For Hispanics, there are ten categories where more than one-in-four reported discrimination. In descending order of frequency these are: (A) receiving timely payment for work performed, (B) applying for commercial loans, (C) working or attempting to work on public sector prime contracts, (D) working or attempting to work on public sector subcontracts, (E) applying for surety bonds, (F) working or attempting to work on private sector prime contracts, (G) having to do inappropriate or extra work that is not required of comparable non-MBE firms, (H) working or attempting to work on private sector subcontracts, (I) obtaining price quotes from suppliers or subcontractors, and (J) having to meet quality, inspection, or performance standards that were not required of comparable non-MBE firms.

For Asians, there are three categories where more than one-in-four reported discrimination. In descending order of frequency these are: (A) working or attempting to work on public sector prime contracts, (B) working or attempting to work on public sector subcontracts, and (C) receiving timely payment for work performed.

For Native Americans, there are seven categories where more than one-in-four reported discrimination. In descending order of frequency these are: (A) receiving timely payment for work performed, (B) working or attempting to work on public sector subcontracts, (C) functioning without hindrance or harassment at the job site, (D) working or attempting to work on public sector prime contracts, (E) having to meet quality, inspection, or performance standards that were not required of comparable firms (F) having to do inappropriate or extra work that is not required of comparable non-MBE firms, and (G) obtaining price quotes from suppliers or subcontractors.

For White women, the top three areas where discriminatory treatment was reported were: (A) receiving timely payment for work performed, (B) working or attempting to work on public sector prime contracts, and (C) working or attempting to work on public sector subcontracts.

Table 8.4 represents the same disparate treatment information as in Table 8.3, but with the frequency percentages replaced by relative rankings. That is, the 14 kinds of disparate treatment are ranked by each group according to the frequency with which discrimination was reported, with "1" representing the most frequent and "14" representing the least frequent. As the table makes clear, there is a high degree of correlation among the rankings, indicating that different

groups of minorities and women tended to rank order problem areas quite similarly — problems that ranked high on one group's list tended to be high on the other groups' lists and vice-versa.[218]

Some courts and other observers have asserted that findings such as those in Table 8.3 tell us nothing about discrimination against MBEs since, even though they are current, even though they come directly from the businesses alleging disparate treatment, even though they are restricted to the relevant geographic and product markets, even though they are disaggregated by procurement category, and even though they are disaggregated by race and sex, 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, 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 below in Table 8.5 show that even when levels of size, qualifications, and experience are held constant across firms, disparate treatment of both minorities and White women is still very evident.

In Table 8.5, we report the results from a series of disparate treatment Probit regressions using the mail survey data.[219] 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. For race and gender the estimates in the table show large differences in disparate treatment probabilities between the indicated group and the base group (non-MBEs). In Column (1) of Table 8.5 (in which the regression model contains only MBE status and industry category indicators), the estimated coefficient of 0.309 on the MBE indicator can be interpreted as indicating that the likelihood of experiencing disparate treatment for MBE firms is 30.9 percentage points higher than that for non-MBE firms.[220] This difference is statistically significant within a 95 percent confidence interval or better.

The remainder of Table 8.5 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race or sex. In Column (2) a number of controls are included that distinguish the size and experience of the firm and the education of the owner. Even after controlling for these differences in experience, size, and qualifications, however, MBE firms remain 30.8 percentage points more likely than non-MBE firms to experience disparate treatment.

The models reported in Columns (3) and (4) of Table 8.5 are the same as in (1) and (2), respectively, except that the MBE indicator is parsed into two components—one for minority firms and one for White women. In Column (3), the estimated coefficient of 0.400 on the

[218] Kendall's rank correlation statistic for the Black, Hispanic, Asian, Native American, and White female rankings in Table 8.4 is 0.738 (one a scale of 0 to 1 – 1 being perfect correlation) confirms this impression. It is statistically significant within a 95% or better confidence interval. For more on this statistic, see Goldstein (1991).

[219] See Chapter V for a description of Probit regression.

[220] This estimate largely replicates the raw difference in disparate treatment rates between MBE and non-MBE firms reported in the second to last row of Table 8.3. The raw differential observed there (0.500 – 0.229 = 0.271) differs slightly from the 0.309 differential reported here because this specification also controls for whether the business is owned by a woman and for industry category.

Minority MBE indicator and 0.227 on the White Female indicator shows that the likelihood of experiencing disparate treatment for Minority MBE firms is 40.0 percentage points higher and that for White women is 22.7 percentage points higher than that for non-MBE firms. Both these differences are statistically significant within a 95 percent confidence interval or better. Once again in Column (4), controlling for size, experience, and qualifications does not significantly alter the size or significance of the observed disparity.

Columns (5) and (6) show similar results when the MBE indicator is parsed into five components—one each for White females, Blacks, Hispanics, Asians, and Native Americans. Again, disparate treatment appears to affect minority and women-owned firms of all size, experience, and qualification levels. As can be seen in Column (5) the most severe disparities are observed for Blacks (44.7 percentage points more likely than non-MBEs to experience disparate treatment), followed by Native Americans (41.6 percentage points), Hispanics (41.3 percentage points), Asians (28.2 percentage points), and White females (22.8 percentage points).

The regression models reported in Table 8.5 used as their dependent variable an indicator of whether or not a survey respondent had been treated less favorably in *any* of the 14 different types of business dealings described in the first column of Table 8.3.[221] We re-estimated the three regression models reported in Columns (2), (4), and (6) of Table 8.5 separately using as the dependent variable, in turn, each of the 14 types of business dealings (a total of 42 distinct regressions) and report those results in Table 8.6. As Table 8.6 shows, large and statistically significant amounts of disparate treatment are observed in virtually every case.[222]

4. Disparities in Firm Experience and Firm Size

Disparate treatment of minority-owned and women-owned business enterprises and their owners in the marketplace leads predictably to the types of statistical disparities in outcomes that were documented for the State of Maryland in Chapters V and VI above. These statistical disparities are evident among our mail survey respondents as well.

We asked MBE and non-MBE respondents several background questions concerning firm experience, owner qualifications, and firm size. Tables 8.7 through 8.10 report the findings from these questions.

Table 8.7 shows the findings with respect to firm age. It is evident from this table that minority-owned firms and women-owned firms are younger, on average, than their non-minority male counterparts, both across industries and within them. Overall, only 0.2 percent of minority-owned firms and 1.3 percent of women-owned firms had been in business for more than 50 years, compared to 7.7 percent for White male-owned firms. Only 5.3 percent of minority-owned firms and 8.3 percent of women-owned firms had been in business for 26 to 50 years, compared

[221] Our disparate treatment question also allowed respondents to indicate the quantity of disparate treatment experienced (never, 1-5 times, 6-20 times, more than 20-times). Although not reported here, we also ran regressions using a dependent variable measuring high frequency of disparate treatment (6 or more times) during the prior five years. Results were more limited due to smaller sample sizes but were qualitatively similar to those obtained in Tables 8.5 and 8.6.

[222] The exception being hiring workers from union hiring halls.

with 25.2 percent for White male-owned firms. In contrast, 33.0 percent of minority-owned firms and 18.9 percent of women-owned firms were 5 years old or less, compared to only 12.2 percent of White male-owned firms.

Table 8.8 shows the distribution of MBE and non-MBE firms by the number of employees on their payrolls at the time of the survey. On average, across industries, minority-owned firms and White-female owned firms are smaller than their White male counterparts. In the top panel of Table 8.8, for example, we see that 60.4 percent of minority-owned firms and 64.6 percent of White female-owned firms had 5 or fewer employees on their payroll, compared with 50.2 percent for non-MBEs. At the upper end of the spectrum the phenomenon is observed in reverse—only 2.8 percent of minority firms and 3.2 percent of White female firms had over 100 employees, compared with 10.3 percent of non-MBEs. A similar pattern is observed by procurement category as well.[223]

Table 8.9 shows the distribution of MBE and non-MBE firms by their total gross sales or revenues during 2004 (the last full year prior to the survey). As with employment size, MBE firms are over-represented among small firms and under-represented among larger ones, both across and within industries. The top panel of Table 8.9, for example, shows that 59.9 percent of minority-owned firms and 60.8 percent of White female-owned firms had $500,000 or less in total gross sales or revenues in 2004, compared with only 44.5 percent for non-MBEs. At the upper end of the spectrum the reverse is true—only 10.4 percent of minority firms and 10.5 percent of White female firms had over $5,000,000 in total gross sales or revenues, compared with 18.4 percent of non-MBEs. A similar pattern is observed by procurement category as well.[224]

Some judges and other observers have suggested that lack of qualifications, rather than discrimination, is the best explanation for the observed adverse disparities facing MBEs in Maryland and elsewhere in the U.S. Table 8.10, which shows our survey findings with respect to the question about the highest level of education reached by the firm's primary owner, provides some suggestive findings to the contrary.[225] In some procurement categories, the minorities and White women responding to our survey appear to be *better* educated on average than their White male counterparts. The second panel of Table 8.10, for example, shows that 29.6 percent of minority business owners and 31.0 percent of White female business owners had bachelor's degrees, compared with 20.2 percent among White male business owners. A similar finding is made for postgraduate degrees — 11.1 percent of minority owners and 11.3 percent of White female owners reported having postgraduate degrees, compared to 7.6 percent among White male business owners.

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[223] An exception is among small size employers in A&E, where more non-MBEs than MBEs had 5 or fewer employees and MBE firms were relatively more concentrated in the middle ranges of the employment size distribution.

[224] A&E is again the exception among smaller firms, where more MBE firms are relatively more concentrated in the middle ranges of the revenue size distribution.

[225] Aronson (1991, 24-25) contains an informative discussion on the positive effect of education on business ownership.

5. 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 MBEs as serious impediments to obtaining contracts.

As Table 8.11 makes clear, substantial percentages of both MBEs and non-MBEs report that certain factors, such as "Late notice of bid/proposal deadlines" and "Large project sizes," make it harder or impossible for firms to obtain contracts. For example, among non-MBEs 51.5 percent reported that late notice of bid/proposal deadlines made it harder or impossible for them to win contracts, and 42.2 percent reported that large project sizes made it harder or impossible for them to win contracts. The figures for MBEs, however, at 70.1 percent and 61.9 percent, respectively, are substantially and statistically significantly higher than for non-MBEs. Indeed, as Table 8.11 shows, MBEs reported statistically significantly more difficulty on 7 out of the 9 factors about which they were polled.[226]

To control for firm and owner characteristics, we use a regression technique known as the ordered Probit.[227] Ordered Probit regression is used when the dependent variable is discrete and ordinal (and hence can be ranked). We use ordered Probit to model the ordinal ranking—helps me (1), no effect (2), makes it harder (3), and makes it impossible (4)—of the aspect of procurement under consideration. The firm characteristics used as control variables consist of the age of the firm, the number of employees, the size of revenues, and the education level of the primary owner of the firm. To report results from ordered Probit analysis, we use a "+" to indicate that MBEs had more difficulty than non-MBEs with similar firm characteristics, and a "–" to indicate that MBEs had less difficulty than non-MBEs with similar firm characteristics.

Tables 8.12-8.14 report the sign and statistical significance from the ordered Probit analysis. Table 8.12 reports results for all procurement categories combined. Table 8.13 reports results for construction and A&E combined. Table 8.14 reports results for goods and services. We find that when observable firm characteristics are controlled for, many factors still prove to be greater difficulties for MBEs than for non-MBEs (as indicated by the "+" sign). In particular, the disparities in "Large project sizes," "Late notice of bid/proposal deadlines," and "Obtaining working capital" are statistically significant for MBEs.

6. Solicitation and Use of MBEs 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?" More than 69 percent of MBE firms responded that this seldom or never happens. Similar results were observed for all minority groups and for White women, both overall and by procurement category (See Table 8.15).

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[226] The exceptions were "Insurance Requirements" and "Price of Supplies or Materials" where MBE and non-MBE frequencies were similar.

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

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 established the government's compelling interest in remedying that failure.[228] Among the evidence relied upon for this holding was a survey similar to that performed for Maryland, in which approximately 50 percent of the respondents reported that they were seldom or never solicited for non-goals work.[229]

Our final survey question therefore asked "How often do prime contractors who use your firm as a subcontractor on public-sector projects with requirements for minority, women and/or disadvantaged businesses *solicit* your firm on projects (public or private) without such goals or requirements?" Responses to this question are tabulated in Table 8.16, which shows the same pattern as in Table 8.15. Overall, just under 69 percent of MBEs report that they are seldom or never solicited for non-goals work. Once again, similar results are observed for all minority types and for White women, both across and within procurement categories.

7. Caveats

As our mail survey was voluntary we must account for the fact that a majority of those who received it did not respond. As a check on the representativeness of our mail survey findings, we conducted telephone surveys of 1,000 randomly selected MBEs and non-MBEs 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 systematically different from the answers of respondents.

We conducted telephone surveys of MBEs and non-MBEs that did not respond to the mail surveys. The purpose of these telephone surveys was to test for evidence of a non-response bias that could affect the results from the original mail surveys. A non-response bias is said to exist when respondents' answers are systematically different from the answers of non-respondents. To conduct non-response surveys, we attempted to contact a random sample of 1,000 MBEs and non-MBEs that did not respond to our mail surveys to elicit answers to select questions asked in the original mail surveys. We obtained responses from 306 firms, for a response rate of 30.6 percent.

Of the firms we completed interviews with, 39.1 percent were minority-owned, compared with a rate of 43.0 percent in the mail survey. The percentage of women-owned firms was 46.5 percent, compared to 47.8 percent in the mail survey. Neither of these differences is statistically significant.

According to the results of the non-response surveys, 15 percent of the MBEs that did not respond to our mail survey said bonding requirements made it harder or impossible to obtain contracts. This difference is not statistically significantly different from the 22 percent of MBEs that said this in the mail survey. Among the non-MBEs that did not respond to the mail survey, however, the figure was 5 percent—an amount significantly different from the 14 percent reported by non-MBEs in the mail survey. In both the mail survey and the non-response surveys, therefore, a significantly higher percentage of MBEs than non-MBEs indicated that bonding

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

[229] *Id.*

requirements inhibited their contracting opportunities. However, the disparity between MBEs and non-MBEs was even more pronounced among the non-respondents than among the respondents, indicating that the disparities reported above in this Chapter may be somewhat conservatively estimated.

According to the results of the non-response surveys, 2.8 percent of the MBEs that did not respond to our mail survey said they had experienced at least one instance of discrimination in the last five years while seeking credit for their business. This is significantly different from the 23.8 percent of MBEs that said this in the mail survey. Among the non-MBEs that did not respond to the mail survey the figure was 1.7 percent—an amount significantly different from the 5.3 percent reported by non-MBEs in the mail survey. In both the mail survey and the non-response surveys, therefore, a higher percentage of MBEs than non-MBEs indicated experiencing discrimination in credit opportunities. In this case, the disparity between MBEs and non-MBEs was less pronounced among the non-respondents than among the respondents, indicating that the disparities reported above in this Chapter should be interpreted cautiously.

According to the results of the non-response surveys, 5.3 percent of the MBEs that did not respond to our mail survey said they had experienced at least one instance of discrimination in the last five years while seeking price quotes from suppliers. This is significantly different from the 15.9 percent of MBEs that said this in the mail survey. Among the non-MBEs that did not respond to the mail survey the figure was 2.8 percent—an amount significantly different from the 4.6 percent reported by non-MBEs in the mail survey. In both the mail survey and the non-response surveys, therefore, a higher percentage of MBEs than non-MBEs indicated experiencing discrimination in obtaining price quotes. In this case, the disparity between MBEs and non-MBEs was less pronounced among the non-respondents than among the respondents, indicating that the disparities reported above in this Chapter should be interpreted cautiously.

These results indicate that both MBEs and non-MBEs are more likely to have responded to the mail survey if they had experienced the difficulties identified in the mail survey. In some cases this means the actual disparities may be somewhat smaller than we have estimated in our mail survey and in other cases it means they may be somewhat larger. For all three questions examined, however, the basic qualitative finding of more problems and greater disparities being observed among MBEs than among non-MBEs is unchanged.

B. Business Owner Interviews

To explore additional anecdotal evidence of possible discrimination against minorities and women in the Maryland market place, we conducted 22 group interviews around the State. We met with a total of 239 business owners from the building and highway construction, design, other professional services, information technology and supply industries. Firms ranged in size from large international businesses to new start-ups. Owners' backgrounds included individuals with decades of experience in their fields, and young entrepreneurs beginning their careers. We sought to explore their experiences in seeking and performing public sector and private sector contracts, and with the State's MBE Program. All had done or attempted to do business with Maryland. This effort gathered individual perspectives to augment the statistical information from the business experience and credit access surveys. In general, interviewees' individual

experiences mirrored the responses to the business experience surveys. We also elicited recommendations for improvements to State procurement practices in general and the MBE Program in particular, reported below in Chapter IX.

The following are summaries of the issues discussed. Quotations are in italics, and are representative of the views expressed over the many sessions by many participants.

1. Perceptions of Competence and Higher Performance Standards

One overriding theme of the interviews is that while significant progress has been made in integrating minorities and women into Maryland's public and private sector contracting activities, many barriers remain. Perhaps the most subtle and difficult to address is that of perceptions and stereotypes. Minorities and women repeatedly discussed their struggles with negative perceptions and attitudes of their capabilities in the business world.

In particular, Black business owners repeatedly stressed that they encounter racist attitudes that impede their abilities to compete fully and fairly for prime contracts and subcontracts in Maryland's marketplace.

> *You have that problem of that perception with competence. I don't care how many degrees you have, I don't care what schooling you have, I don't care what you were doing before, what positions you have held, there is that initial perception. I still suffer from that perception. And my experience is extensive…. [T]he perception is also with the staff and the agencies. If you are awarded a contract, you are monitored much more stringently than a non-minority. And they make your life a little difficult.*

A White female engineer with 20 years of experience echoed this concern.

> *If you are an MBE, you must not be qualified, you must not be this or you must not be that.*

Some minority owners reported that White males generalize from one or two bad experiences with one or two MBEs to all MBEs. These stereotypes of lack of competence infect all aspects of the MBEs' attempts to obtain contracts and to be treated equally in performing contract work. Women in construction reported that the industry is still very sexist.

2. Applying for Commercial Loans

Many MBEs, especially Blacks, stated that they found it difficult to obtain working capital.

> *You go [to banks] and go through all of this paperwork and they finally tell you, after many months, I'm sorry. We can't offer you this loan at this time and so forth.*

A Black construction owner recounted that his director of operations, who is White, was able to obtain a more favorable rate than the owner from a bank with which the company had not previously done business.

Similarly, a Black owner with two engineering degrees reported that White-owned subcontractors who had worked for him in the past had quickly outgrown him, even though they possessed less experience and weaker qualifications. The difference was access to credit.

> *I have had subs that are non-minority that has worked for me that … have ventured out and started their own firms that are doing three or four times the volume of work we are doing in two or three years.… Because it all boils down to the line of credit you can get, and the perception out there. I am talking about highway work, what you guys mentioned. The perception that minority contractors in certain technical areas, engineering, are not qualified.*

One woman reported being unable to obtain a line of credit from the bank she had patronized for years without her husband's co-signature. Another White female recounted that the only way she was able to finance her business was with loans from the Maryland's Department of Business and Economic Development because she could not obtain loans from commercial banks.

A Black firm has been able to obtain a loan with a large bank when the contract was backed by the District of Columbia; before that project, he had been unsuccessful with this lender. White contractors seemed to have access to financing networks closed to Blacks. Some large established majority firm owners agreed that minorities, especially Blacks, had problems getting loans because of their lack of personal networks.

3. Applying for Surety Bonds

Many firms reported difficulty obtaining surety bonds. The underwriting standards were so strict that they could not qualify. They saw it as similar to lending discrimination, since the criteria are very similar. Relief came only either through the State's bonding support program, or through the passage of time and the development of more resources and industry contracts.

4. Obtaining Price Quotes from Suppliers or Subcontractors

MBEs, especially in construction, encountered what they believed to be predatory and discriminatory pricing by majority male suppliers. This makes them instantly less competitive. Non-MBEs in construction acknowledged that the MBEs often cannot obtain the same prices from suppliers offered to long established and larger majority-owned firms. Therefore, the MBEs' bids are higher than their White male competitors, or the MBEs take on the job at reduced profit margins. A non-MBE specialty trade contractor recognized the consequences of the latter course of action:

> *The MBE is going to take that work on at my number and run the risk of being harmed.*

5. Obtaining Work as Prime Contractors on Public Sector Projects

Most MBEs expressed frustration with obtaining public sector contracts as prime contractors. This sentiment crossed industries, size of firms, and length of time in business. While all small firms find it more difficult to receive prime contract awards than do large firms, minorities and

women felt that their race, ethnicity and gender created additional barriers. However, one White female electrical firm owner stated that she has had no problems obtaining public sector work as the low bidder. She is not certified and saw little value in seeking certification for her firm.

Several women business owners felt that their biggest barrier was their lack of personal relationships with the procurement officials, *i.e.*, not being part of the "good ole boy" network of contractors and agency people. Black owners echoed that concern, which reflects the effects of racial exclusion when those relationships were formed.

> *You will see the same procurement people that have been in those jobs for 15-20 years. They have developed a relationship. And I'll put it this way, I don't suggest it's in the wrong way, except to say that they're comfortable with certain contractor people because they know what to expect from them. Most people are unwilling to go into new areas. All of us fear that which we don't know. So, unless they are made to do it, they're not going to do it.*

Some MBEs voiced the suspicion that the their prime contracts were sometimes cancelled prior to award but after bid or proposal submission—even though they had submitted the low bid—because agency procurement officials simply did not want to award to a MBE.

Some Black construction firms suspected that non-MBEs against whom they bid as primes and as subcontractors had access to inside information about the procurement process or the contract specifications. The favored majority firms then were permitted to increase prices after award.

Many firms, especially in professional services and information technology (IT), vigorously pursue work as prime contractors but find it virtually impossible to succeed because of the large size of the State's projects, or impossible to satisfy insurance or bonding requirements. They further stated that some contracting officials seem to think that MBEs should all be janitorial firms, not professionals in highly complex industries.

> *They don't assume that these [minority-owned] IT companies were technical enough to do the job. So when [the non-MBEs] actually get the contract, it is a different story when their guy goes out there to survey the work. Believe, me, they are not using the contract numbers. That is what is happening out there and how they survive.*

Some solicitations in the IT area seemed drafted to favor individual firms. MBEs wondered if the favored businesses actually draft the specifications.

> *It is like [the majority firms] have actually written the RFP so they get it. It is not even a state agency that is writing it. It is that particular company that is writing it so that they get the win. And you would be surprised how often you hear stuff like that … They brag about it.*
>
> *You can read some of these RFPs and tell that they are set for somebody, because they have got some paragraph in there that is—why do they want this requirement?*

Some Black firms felt that State procurement employees deliberately abuse the emergency procurement rules, which do not require any MBE goal consideration.

> *[These examples] document a pattern, I think, of deliberate, intentional, purposeful evasion of the state's procurement rules, in addition to a purposeful and deliberate evasion and discrimination against certain contractors. And of the three contractors that were invited to bid, all of them were non-minority.… [The] old boy network is as alive today that if you check, the same firms that are getting contracts 20 years ago on a non-bid, non-competitive basis are getting the same contracts today in the same way*

A few long-established MBEs counseled that minorities need to band together to bid bigger jobs as a team, even if that meant that the joint venture would not be eligible as a MBE because of the Program's size limitations. A Black construction firm owner offered this example:

> *I was talking to my banker this morning; I have got a line of credit. I am telling him, look, I am going to bring you three guys, and they are going to be strong, but I want you to treat them same way you treat me. It ain't got to be a large line of credit. I was talking to my bondsman. I want to get the whole job, I want the whole finish- but I want these guys to bond their portion of the job. But I want us all to get together and do this job. And this way, we feel that we will be stronger because everything I see in the [construction] industry is consolidation.*

6. Obtaining Work as Prime Contractors on Private Sector Projects

Several MBEs in the IT industry and other professional services reported that the State's Requests for Proposals (RFP) process is such a waste of time that they concentrate on the private sector.

> *I'm so discouraged that I don't mess with the RFP anymore. I go after the private sector, because if I am going to succeed, I know it right there when I talk to the manager. So, submitting an RFP is a waste of time, as I have seen several times.*
>
> ***
>
> *I am going after my business in the private sector. I have got a product. I have got a service. If you are interested, these are my rates and we can do business and I don't have to be waiting, because my bills don't wait for me to pay them.*
>
> ***
>
> *With me being a smaller business, I cannot afford to invest those thousands and thousands of dollars each time going after a deal with levels and levels of process for us not to get it. I can't afford to do that. And when I deal with corporate clients, they say what they want. I mean, you still go through a proposal, not as lengthy of a process, and they either want you or they don't.… One of the other reasons that I don't is we generally—when we subcontract under another company, that whole process really doesn't make my company that much money.*

7. Obtaining Work as Subcontractors on Public Sector Projects

MBEs reported that while it is easier to obtain subcontracts on public projects because of the MBE goals, it is still difficult to get work, receive fair treatment, and get paid on time. Little or

no monitoring by the State of which subcontractors are performing on the job leads to the general contractor often ignoring the Program and seeking a waiver after the fact. Many MBEs described being listed on a general contractor's MBE utilization plan, then being substituted on the project by the general contractor's own forces or a non-MBE subcontractor after work commences.

> *[A]s a woman-owned business in the construction industry, [general contractors] have no respect for me. They want you to work without a contract. I won't do it.*

Another recounted that the general contractor had

> *used [my] MBE number to win the bid. Now, I have had situations where- I just got off a job in [location]. Where we got the job, a dollar figure was put on the project, and then the general contractor came back and said, well, we are going to do the topsoil. We are going to take this out. So your dollar figure goes from say $200,000 down to $90,000 because he decided now he was going to supply his top soil, he is going to do his green, and it changes. Now, where is the redress on that?*

Similar to reports of firms seeking a contract as a general contractor, subcontractors stated that they were routinely underbid by non-MBEs at very low prices. Large, majority subcontractors will bid projects at less than actual costs just to drive out MBE competitors.

> *[W]e are bidding it at $23,000 or $22,000, [the non-MBE] is coming in at $12,000, and he is getting all of the state highway work.*

Another agreed that, for example, on the Woodrow Wilson Bridge project, general contractors were permitted to self-perform so as to reduce MBE utilization.

Black owners reported that the vast majority of MBE utilization on road contracts is through hiring truckers. They felt that Blacks are segregated into this lower profit and less secure type of work, and actively discouraged from entering into the areas where the large firms dominate. There was discussion of the effect of this segregation into specialty trades on non-MBE subcontractors who compete in those limited areas. MBEs and non-MBEs were frustrated by this situation, and recommended that more emphasis be put on less traditional scopes and increased prime MBE contracting.

Black-owned IT firms sometimes were told by majority prime consultants that they were limited to the State's annual goal of 7 percent for Black-owned firms.

> *I have been involved in a relationship with a contractor that I thought was like a partner relationship. They came back and told me, look, all we have to do—you're African American? We only have to do—what is it? Seven percent? With you.… [S]ome of those [agency] people that knew us and knew that we had credibility in the area and felt we could deliver and told us that that was one of the reasons that they selected our team over the other team—and yet, when it came time for us to sign our contract with our prime contractor, they told us, we may end up paying you more than this, but we don't want to, in writing, agree to anymore than seven percent.*

One non-MBE highway prime contractor felt strongly that White males were being discriminated against by the operations of the MBE program. He stated that MBEs are now favored over White males in obtaining MDOT work.

8. Obtaining Work as Subcontractors on Private Sector Projects

Few MBEs have developed significant business as subcontractors on private projects, other than in the IT area. A few construction and design firms had branched out into commercial work, and some of the MBEs got their start in residential construction. Overall, however, the larger development projects were out of the reach of their business, community and personal networks and virtually impossible to access. Minority firms in particular reported that general contractors who use them successfully and repeatedly on state contracts or other projects with mandated affirmative action provisions rarely or never solicit or hire them regarding private work.

Even public-private partnership projects with voluntary affirmative action goals, such as the Harbor Project, often produce few results because of lax enforcement.

9. Conclusions

Consistent with other evidence reported in this Study, anecdotal information strongly suggests that MBEs continue to suffer discriminatory barriers to full and fair access to State and private sector contracts. This includes perceptions of MBE incompetence and being subject to higher performance standards; discrimination in access to commercial loans and surety bonds; paying higher prices for supplies than non-MBEs; inability to obtain public sector prime contracts; difficulties in receiving fair treatment in obtaining public sector subcontracts; and virtual exclusion from private sector opportunities to perform as either prime contractors as subcontractors, outside of IT services. While not definitive proof that Maryland has a compelling interest in implementing race- and gender-conscious remedies for these impediments, the results of the surveys and the personal interviews are the types of evidence that, especially when considered along side the numerous pieces of statistical evidence assembled, the courts have found to be highly probative of whether the State would be a passive participant in a discriminatory market place without affirmative interventions.

C. Tables

Table 8.1. Race, Sex and Procurement Category of Mail Survey Respondents

Group	Construction	A/E Services	Other Services	Commodities	Total
Black	44	8	187	7	246
Hispanic	23	3	41	4	71
Asian	9	11	77	15	112
Native American	8	1	7	2	18
Unknown Minorities	1	1	2	0	4
White Women	71	9	218	22	320
Total MBE	156	33	532	50	771
White Men	119	17	110	40	286
Total	275	50	642	90	1,057

Source: NERA mail surveys conducted in September-November, 2005.

Table 8.2. Survey Respondents Indicating They Had Worked or Attempted to Work for Public Sector Agencies in the Last Five Years

Worked of Attempted to Work, Last Five Years	Black	Hispanic	Asian	Native American	Total Minorities	White Women	Total MBEs	White Men
ALL INDUSTRIES								
With the State of Maryland	57.2%	50.0%	43.2%	41.2%	51.9%	36.9%	45.6%	35.6%
	(243)	(70)	(111)	(17)	(441)	(317)	(758)	(284)
With Other Public Entity in Maryland Region	71.7%	54.9%	54.5%	58.8%	64.2%	54.7%	60.2%	43.8%
	(244)	(71)	(112)	(17)	(444)	(318)	(762)	(281)
With any Public Entity in Maryland Region	**75.1%**	**64.8%**	**61.6%**	**64.7%**	**69.7%**	**60.4%**	**65.8%**	**49.5%**
	(245)	**(71)**	**(112)**	**(17)**	**(445)**	**(318)**	**(763)**	**(281)**
CONSTRUCTION								
With the State of Maryland	75.0%	54.5%	66.7%	62.5%	67.5%	42.3%	55.8%	36.8%
	(44)	(22)	(9)	(8)	(83)	(71)	(154)	(117)
With Other Public Entity in Maryland Region	75.0%	78.3%	77.8%	62.5%	75.0%	53.5%	65.2%	39.1%
	(44)	(23)	(9)	(8)	(84)	(71)	(155)	(115)
With any Public Entity in Maryland Region	**81.8%**	**78.3%**	**77.8%**	**75.0%**	**79.8%**	**56.3%**	**69.0%**	**45.2%**
	(44)	**(23)**	**(9)**	**(8)**	**(84)**	**(71)**	**(155)**	**(115)**
A&E								
With the State of Maryland	50.0%	100.0%	81.8%	0.0%	69.6%	88.9%	75.0%	35.3%
	(8)	(3)	(11)	(1)	(23)	(9)	(32)	(17)
With Other Public Entity in Maryland Region	75.0%	100.0%	90.9%	100.0%	87.0%	100.0%	90.6%	58.8%
	(8)	(3)	(11)	(1)	(23)	(9)	(32)	(17)
With any Public Entity in Maryland Region	**75.0%**	**100.0%**	**90.9%**	**100.0%**	**87.0%**	**100.0%**	**90.6%**	**58.8%**
	(8)	**(3)**	**(11)**	**(1)**	**(23)**	**(9)**	**(32)**	**(17)**

Table 8.2. Survey Respondents Indicating They Had Worked or Attempted to Work for Public Sector Agencies in the Last Five Years (Cont'd)

Worked of Attempted to Work, Last Five Years	Black	Hispanic	Asian	Native American	Total Minorities	White Women	Total MBEs	White Men
OTHER SERVICES								
With the State of Maryland	52.7%	48.8%	40.3%	28.6%	48.6%	29.8%	40.9%	33.6%
	(186)	(41)	(77)	(7)	(311)	(215)	(526)	(110)
With Other Public Entity in Maryland Region	69.9%	43.9%	51.9%	42.9%	61.4%	51.9%	57.5%	45.9%
	(186)	(41)	(77)	(7)	(311)	(216)	(527)	(109)
With any Public Entity in Maryland Region	**72.7%**	**61.0%**	**61.0%**	**42.9%**	**67.6%**	**57.9%**	**63.6%**	**52.3%**
	(187)	**(41)**	**(77)**	**(7)**	**(312)**	**(216)**	**(528)**	**(109)**
COMMODITIES								
With the State of Maryland	80.0%	0.0%	14.3%	0.0%	25.0%	68.2%	45.7%	37.5%
	(5)	(4)	(14)	(1)	(24)	(22)	(46)	(40)
With Other Public Entity in Maryland Region	100.0%	0.0%	26.7%	100.0%	42.3%	68.2%	54.2%	45.0%
	(6)	(4)	(15)	(1)	(26)	(22)	(48)	(40)
With any Public Entity in Maryland Region	**100.0%**	**0.0%**	**33.3%**	**100.0%**	**46.2%**	**81.8%**	**62.5%**	**50.0%**
	(6)	**(4)**	**(15)**	**(1)**	**(26)**	**(22)**	**(48)**	**(40)**

Source: NERA mail surveys conducted in September-November, 2005.

Note: Total number of valid responses in parentheses.

Table 8.3. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Sex While Participating in Business Dealings

Business Dealings	Black	Hispanic	Asian	Native American	Total Minorities	White Women	Total MBEs	White Men
Applying for commercial loans	**49.2%** (132)	**39.5%** (43)	19.6% (56)	**22.2%** (9)	**39.6%** (240)	**18.5%** (151)	**31.5%** (391)	3.1% (161)
Applying for surety bonds	**33.8%** (71)	**31.4%** (35)	**8.6%** (35)	10.0% (10)	**25.8%** (151)	5.4% (92)	**18.1%** (243)	3.8% (130)
Applying for commercial or professional insurance	**17.6%** (142)	**15.4%** (52)	**15.9%** (69)	**15.4%** (13)	**16.7%** (276)	***4.7%*** (192)	**11.8%** (468)	1.0% (191)
Hiring workers from union hiring halls	9.4% (53)	0.0% (24)	3.7% (27)	20.0% (5)	6.4% (109)	4.0% (50)	5.7% (159)	4.6% (87)
Obtaining price quotes from suppliers or subs	**25.7%** (140)	**26.5%** (49)	**18.3%** (60)	**25.0%** (12)	**24.1%** (261)	**12.4%** (161)	**19.7%** (422)	4.4% (180)
Working or attempting to obtain work on public-sector prime contracts	**49.0%** (155)	**38.3%** (47)	**30.3%** (66)	**44.4%** (9)	**42.6%** (277)	**23.5%** (162)	**35.5%** (439)	12.3% (146)
Working or attempting to obtain work on public-sector subcontracts	**50.6%** (160)	**35.6%** (45)	**25.9%** (58)	**50.0%** (12)	**42.9%** (275)	**22.2%** (171)	**35.0%** (446)	11.1% (144)
Working or attempting to obtain work on private-sector prime contracts	**47.4%** (156)	**31.3%** (48)	**20.6%** (63)	20.0% (10)	**37.5%** (277)	**15.9%** (170)	**29.3%** (447)	5.4% (166)
Working or attempting to obtain work on private-sector subcontracts	**43.9%** (148)	**27.3%** (44)	**22.0%** (59)	10.0% (10)	**34.9%** (261)	**16.0%** (175)	**27.3%** (436)	4.8% (168)
Receiving timely payment for work performed	**40.1%** (162)	**43.1%** (51)	**25.0%** (72)	**53.8%** (13)	**37.6%** (298)	**24.2%** (215)	**32.0%** (513)	14.4% (202)
Functioning without hindrance or harassment on the work site	**26.7%** (131)	**17.1%** (41)	**13.8%** (65)	**45.5%** (11)	**22.6%** (248)	**15.3%** (190)	**19.4%** (438)	4.9% (184)
Joining or dealing with trade associations	**16.9%** (71)	3.2% (31)	**13.9%** (36)	11.1% (9)	**12.9%** (147)	**6.8%** (103)	**10.4%** (250)	1.4% (139)
Having to do extra work not required of others	**35.7%** (126)	**28.9%** (45)	***15.8%*** (57)	**27.3%** (11)	**29.3%** (239)	**14.7%** (184)	**22.9%** (423)	7.0% (171)
Having to meet quality or performance standards not required of others	**32.4%** (136)	**25.0%** (48)	**16.1%** (62)	**36.4%** (11)	**27.2%** (257)	***12.6%*** (182)	**21.2%** (439)	7.0% (185)
In any one of the business dealings listed above	**61.7%** (206)	**62.3%** (61)	**44.2%** (95)	**64.7%** (17)	**57.5%** (379)	**38.8%** (255)	**50.0%** (634)	**22.9%** (223)

Source: Authors' calculations from the NERA mail surveys conducted in September-November, 2005.

Note: Total number of valid responses in parentheses. Figures in **boldface** type are statistically significantly different from non-MBEs using a conventional two-tailed Fisher's Exact Test and within a 95% or better confidence interval. Figures in ***boldface italicized*** type are significant within a 90% confidence interval.

Table 8.4. Firms Indicating They Had Been Treated Less Favorably Due to Race and/or Sex While Participating in Business Dealings (Rankings)

Business Dealings	Black	Hispanic	Asian	Native American	Total Minorities	White Women	Total MBEs
Working or attempting to obtain work on public-sector prime contracts	3	3	1	4	2	3	3
Working or attempting to obtain work on public-sector subcontracts	1	4	2	2	1	1	4
Receiving timely payment for work performed	6	1	3	1	4	6	1
Applying for commercial loans	2	2	6	8	3	2	2
Working or attempting to obtain work on private-sector prime contracts	4	6	5	9	5	4	6
Working or attempting to obtain work on private-sector subcontracts	5	8	4	13	6	5	8
Having to do extra work not required of others	7	7	10	6	7	7	7
Having to meet quality or performance standards not required of others	9	10	8	5	8	9	10
Obtaining price quotes from suppliers or subs	11	9	7	7	10	11	9
Functioning without hindrance or harassment on the work site	10	11	12	3	11	10	11
Applying for surety bonds	8	5	13	14	9	8	5
Applying for commercial or professional insurance	12	12	9	11	12	12	12
Joining or dealing with trade associations	13	13	11	12	13	13	13
Hiring workers from union hiring halls	14	14	14	10	14	14	14

Source: Authors' calculations from the NERA mail surveys conducted in September-November, 2005.

Table 8.5. Prevalence of Disparate Treatment Facing Maryland MBEs

	(1)	(2)	(3)	(4)	(5)	(6)
MBE	0.309 (7.72)	0.308 (7.08)				
MBE-Minority			0.400 (8.84)	0.411 (8.23)		
MBE-White Female			0.227 (4.53)	0.231 (4.34)	0.228 (4.55)	0.233 (4.37)
Black					0.447 (8.73)	0.462 (8.30)
Hispanic					0.413 (5.95)	0.453 (6.04)
Asian/Pacific Islanders					0.282 (4.37)	0.268 (3.85)
Native American					0.416 (3.53)	0.403 (3.16)
Owner's Education (4 indicator variables)	No	Yes	No	Yes	No	Yes
Firm Age (5 variables)	No	Yes	No	Yes	No	Yes
Employment size bracket (7 variables)	No	Yes	No	Yes	No	Yes
Sales/revenue size bracket (5 variables)	No	Yes	No	Yes	No	Yes
Industry category (4 indicator variables)	Yes	Yes	Yes	Yes	Yes	Yes
N	861.00	822.00	861.00	822.00	861.00	822.00
Pseudo R^2	0.06	0.08	0.08	0.10	0.09	0.11
Chi^2	72.89	91.20	94.69	111.75	104.07	125.11
Log likelihood	(551.82)	(516.51)	(540.92)	(506.24)	(536.24)	(499.56)

Source: Authors' calculations from NERA mail surveys conducted in October-November, 2005.

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

Table 8.6. Prevalence of Disparate Treatment Facing Maryland MBEs, by Type of Business Dealing

Business Dealings	Black	Hispanic	Asian	Native American	Total Minorities	White Women	Total MBEs
Applying for commercial loans	65.3% (7.83)	63.3% (5.80)	37.1% (3.59)	47.2% (2.30)	48.4% (7.17)	33.7% (4.36)	28.7% (6.25)
Applying for surety bonds	37.6% (5.11)	34.5% (3.80)	7.7% (1.07)	9.8% (0.81)	22.1% (4.51)	2.2% (0.42)	12.8% (3.48)
Applying for commercial or professional insurance	27.9% (4.59)	26.9% (3.44)	25.8% (3.59)	33.6% (2.56)	17.6% (4.52)	*7.0% (1.77)*	8.5% (3.70)
Hiring workers from union hiring halls	*7.7% (1.88)*	0.0% (0.00)	1.9% (0.45)	23.8% (1.50)	2.5% (1.11)	0.2% (0.06)	1.5% (0.81)
Obtaining price quotes from suppliers or subs	36.0% (5.54)	40.1% (4.50)	30.1% (3.59)	*26.1% (1.76)*	26.8% (5.57)	16.4% (2.94)	16.0% (4.83)
Working or attempting to obtain work on public-sector prime contracts	39.1% (5.74)	34.9% (3.65)	19.4% (2.28)	46.9% (2.63)	31.0% (5.37)	14.3% (2.17)	21.6% (4.43)
Working or attempting to obtain work on public-sector subcontracts	44.8% (6.42)	34.2% (3.44)	19.7% (2.18)	46.5% (2.82)	34.5% (5.81)	15.3% (2.33)	22.6% (4.63)
Working or attempting to obtain work on private-sector prime contracts	53.3% (7.53)	41.3% (4.30)	23.5% (2.75)	31.1% (1.66)	36.5% (6.54)	18.5% (2.86)	23.0% (5.45)
Working or attempting to obtain work on private-sector subcontracts	53.2% (7.29)	39.8% (3.99)	31.6% (3.53)	8.5% (0.44)	36.9% (6.46)	21.2% (3.33)	22.3% (5.45)
Receiving timely payment for work performed	40.6% (6.57)	41.1% (4.74)	20.4% (2.62)	56.3% (3.81)	32.2% (6.41)	17.7% (3.32)	21.4% (5.47)
Functioning without hindrance or harassment on the work site	34.0% (5.37)	21.2% (2.41)	14.5% (2.03)	51.6% (3.40)	23.3% (4.89)	18.2% (3.60)	14.8% (4.61)
Joining or dealing with trade associations	6.5% (3.96)	0.3% (0.46)	3.8% (2.41)	*9.6% (1.93)*	2.8% (3.43)	1.6% (1.99)	0.9% (3.10)
Having to do extra work not required of others	39.7% (5.91)	32.4% (3.62)	10.0% (1.35)	36.5% (2.30)	25.8% (5.12)	12.9% (2.43)	15.7% (4.26)
Having to meet quality or performance standards not required of others	34.5% (5.63)	25.6% (3.16)	10.1% (1.48)	44.8% (2.93)	23.2% (5.05)	7.5% (1.54)	13.6% (3.88)
In any one of the business dealings listed above	46.2% (8.30)	45.3% (6.04)	26.8% (3.85)	40.3% (3.16)	41.1% (8.23)	23.1% (4.34)	30.8% (7.08)

Source: Authors' calculations from the NERA mail surveys conducted in September-November, 2005.

Note: Reported estimates are derivatives from Probit models with specifications such as in Table 8.5, columns (2), (4), and (6). T-statistics are in parentheses. T-statistics of 1.96 (1.64) or larger indicate that the result is significant within a 95 (90) percent confidence interval.

Table 8.7. Firm Age, by MBE Status and Industry

Firm Age	Minorities	White Women	Non-MBEs
All Industries			
Less than 1 Year	0.9%	0.0%	0.0%
1 to 2 Years	5.8%	3.3%	1.4%
2 to 5 Years	27.2%	15.6%	10.8%
5 to 10 Years	27.0%	21.5%	15.7%
10 to 15 Years	17.5%	23.2%	11.5%
15 to 25 Years	16.2%	26.8%	27.6%
26 to 50 Years	5.3%	8.3%	25.2%
Over 50 Years	0.2%	1.3%	7.7%
Number of Observations	452	302	286
Construction			
Less than 1 Year	1.2%	0.0%	0.0%
1 to 2 Years	6.0%	1.4%	2.5%
2 to 5 Years	20.2%	12.7%	7.5%
5 to 10 Years	25.0%	16.9%	11.7%
10 to 15 Years	23.8%	19.7%	10.0%
15 to 25 Years	16.7%	31.0%	30.8%
26 to 50 Years	7.1%	15.5%	28.3%
Over 50 Years	0.0%	2.8%	9.2%
Number of Observations	84	71	120
A&E			
Less than 1 Year	0.0%	0.0%	0.0%
1 to 2 Years	4.2%	0.0%	0.0%
2 to 5 Years	29.2%	37.5%	5.9%
5 to 10 Years	8.3%	25.0%	29.4%
10 to 15 Years	12.5%	12.5%	5.9%
15 to 25 Years	25.0%	12.5%	29.4%
26 to 50 Years	16.7%	12.5%	23.5%
Over 50 Years	4.2%	0.0%	5.9%
Number of Observations	24	8	17

Table 8.7. Firm Age, by MBE Status and Industry (Cont'd)

Firm Age	Minorities	White Women	Non-MBEs
Other Services			
Less than 1 Year	0.9%	0.0%	0.0%
1 to 2 Years	6.3%	3.9%	0.9%
2 to 5 Years	29.7%	15.2%	15.6%
5 to 10 Years	30.1%	23.0%	20.2%
10 to 15 Years	16.1%	24.0%	14.7%
15 to 25 Years	13.0%	27.5%	23.9%
26 to 50 Years	3.8%	5.4%	21.1%
Over 50 Years	0.0%	1.0%	3.7%
Number of Observations	316	204	109
Commodities			
Less than 1 Year	0.0%	0.0%	0.0%
1 to 2 Years	0.0%	5.3%	0.0%
2 to 5 Years	17.9%	21.1%	10.0%
5 to 10 Years	14.3%	21.1%	10.0%
10 to 15 Years	17.9%	31.6%	10.0%
15 to 25 Years	42.9%	10.5%	27.5%
26 to 50 Years	7.1%	10.5%	27.5%
Over 50 Years	0.0%	0.0%	15.0%
Number of Observations	28	19	40

Source: Authors' calculations from the NERA mail surveys conducted in September-November, 2005.

Note: Columns in each panel may no total exactly 100.0% due to rounding.

Table 8.8. Number of Employees on Payroll, by MBE Status and Industry

Number of Employees	Minorities	White Women	Non-MBEs
All Industries			
None	20.8%	29.5%	22.8%
1	9.8%	9.6%	6.7%
2 to 5	29.8%	25.5%	20.7%
6 to 10	11.4%	12.3%	13.3%
11 to 25	11.2%	10.6%	13.3%
26 to 50	8.5%	4.3%	9.5%
51 to 100	5.6%	5.0%	3.5%
101 to 250	2.0%	2.6%	4.2%
251 to 500	0.4%	0.3%	2.8%
501 to 750	0.2%	0.0%	1.1%
751 to 1,000	0.2%	0.0%	0.4%
Over 1,000	0.0%	0.3%	1.8%
Number of Observations	447	302	285
Construction			
None	13.3%	7.0%	19.2%
1	6.0%	9.9%	6.7%
2 to 5	32.5%	31.0%	18.3%
6 to 10	15.7%	15.5%	16.7%
11 to 25	15.7%	14.1%	13.3%
26 to 50	10.8%	9.9%	12.5%
51 to 100	6.0%	8.5%	4.2%
101 to 250	0.0%	4.2%	2.5%
251 to 500	0.0%	0.0%	3.3%
501 to 750	0.0%	0.0%	0.0%
751 to 1,000	0.0%	0.0%	0.8%
Over 1,000	0.0%	0.0%	2.5%
Number of Observations	83	71	120
A&E			
None	4.2%	0.0%	35.3%
1	4.2%	12.5%	11.8%
2 to 5	33.3%	12.5%	17.6%
6 to 10	16.7%	12.5%	0.0%
11 to 25	16.7%	50.0%	11.8%
26 to 50	12.5%	0.0%	5.9%
51 to 100	12.5%	0.0%	0.0%
101 to 250	0.0%	12.5%	5.9%
251 to 500	0.0%	0.0%	11.8%
501 to 750	0.0%	0.0%	0.0%
751 to 1,000	0.0%	0.0%	0.0%
Over 1,000	0.0%	0.0%	0.0%
Number of Observations	24	8	17

Table 8.8. Number of Employees on Payroll, by MBE Status and Industry (Cont'd)

Number of Employees	Minorities	White Women	Non-MBEs
Other Services			
None	24.7%	39.7%	25.9%
1	10.9%	9.3%	6.5%
2 to 5	27.9%	24.5%	24.1%
6 to 10	10.3%	11.3%	12.0%
11 to 25	9.3%	6.9%	12.0%
26 to 50	8.0%	2.5%	7.4%
51 to 100	4.8%	3.9%	2.8%
101 to 250	2.9%	1.5%	3.7%
251 to 500	0.6%	0.0%	0.9%
501 to 750	0.3%	0.0%	2.8%
751 to 1,000	0.3%	0.0%	0.0%
Over 1,000	0.0%	0.5%	1.9%
Number of Observations	312	204	108
Commodities			
None	14.3%	15.8%	20.0%
1	14.3%	10.5%	5.0%
2 to 5	39.3%	21.1%	20.0%
6 to 10	7.1%	10.5%	12.5%
11 to 25	14.3%	21.1%	17.5%
26 to 50	3.6%	5.3%	7.5%
51 to 100	7.1%	5.3%	5.0%
101 to 250	0.0%	5.3%	10.0%
251 to 500	0.0%	5.3%	2.5%
501 to 750	0.0%	0.0%	0.0%
751 to 1,000	0.0%	0.0%	0.0%
Over 1,000	0.0%	0.0%	0.0%
Number of Observations	28	19	40

Source: Authors' calculations from the NERA mail surveys conducted in September-November, 2005.

Note: Columns in each panel may no total exactly 100.0% due to rounding.

Table 8.9. Gross Sales or Revenues in 2004, by MBE Status and Industry

Gross Sales/Revenues in 2004	Minorities	White Women	Non-MBEs
All Industries			
$0 to $250,000	45.0%	47.1%	32.4%
$250,001 to $500,000	14.9%	13.7%	12.1%
$500,001 to $1,000,000	12.7%	13.3%	16.9%
$1,000,001 to $5,000,000	16.9%	15.4%	20.2%
$5,000,001 to $12,000,000	6.9%	5.1%	6.6%
$12,000,001 to $28,500,000	2.2%	3.4%	4.4%
Over $28,500,000	1.3%	2.0%	7.4%
Number of Observations	449	293	272
Construction			
$0 to $250,000	33.3%	23.2%	28.3%
$250,001 to $500,000	19.0%	18.8%	13.3%
$500,001 to $1,000,000	13.1%	14.5%	16.8%
$1,000,001 to $5,000,000	25.0%	27.5%	23.9%
$5,000,001 to $12,000,000	7.1%	7.2%	6.2%
$12,000,001 to $28,500,000	2.4%	4.3%	4.4%
Over $28,500,000	0.0%	4.3%	7.1%
Number of Observations	84	69	113
A&E			
$0 to $250,000	20.8%	12.5%	52.9%
$250,001 to $500,000	20.8%	0.0%	5.9%
$500,001 to $1,000,000	16.7%	50.0%	5.9%
$1,000,001 to $5,000,000	33.3%	25.0%	17.6%
$5,000,001 to $12,000,000	8.3%	0.0%	0.0%
$12,000,001 to $28,500,000	0.0%	12.5%	5.9%
Over $28,500,000	0.0%	0.0%	11.8%
Number of Observations	24	8	17

Table 8.9. Gross Sales or Revenues in 2004, by MBE Status and Industry (Cont'd)

Gross Sales/Revenues in 2004	Minorities	White Women	Non-MBEs
Other Services			
$0 to $250,000	50.0%	59.6%	35.6%
$250,001 to $500,000	12.7%	10.6%	13.5%
$500,001 to $1,000,000	11.8%	10.6%	20.2%
$1,000,001 to $5,000,000	14.6%	11.1%	14.4%
$5,000,001 to $12,000,000	7.3%	4.5%	7.7%
$12,000,001 to $28,500,000	1.6%	2.5%	2.9%
Over $28,500,000	1.9%	1.0%	5.8%
Number of Observations	314	198	104
Commodities			
$0 to $250,000	44.4%	16.7%	26.3%
$250,001 to $500,000	22.2%	33.3%	7.9%
$500,001 to $1,000,000	18.5%	22.2%	13.2%
$1,000,001 to $5,000,000	3.7%	11.1%	26.3%
$5,000,001 to $12,000,000	0.0%	5.6%	7.9%
$12,000,001 to $28,500,000	11.1%	5.6%	7.9%
Over $28,500,000	0.0%	5.6%	10.5%
Number of Observations	27	18	38

Source: Authors' calculations from the NERA mail surveys conducted in Sept.-November, 2005.

Note: Columns in each panel may no total exactly 100.0% due to rounding.

Table 8.10. Owner's Education, by MBE Status and Industry

Owner's Education	Minorities	White Women	Non-MBEs
All Industries			
Some High School	1.8%	1.0%	4.6%
High School Diploma	5.6%	7.1%	14.4%
Some College	14.7%	19.5%	18.7%
Trade, Vocational or Technical Degree	7.2%	4.4%	8.1%
Bachelor's Degree	27.5%	34.0%	25.4%
Postgraduate Degree	43.1%	34.0%	28.9%
Number of Observations	443	297	284
Construction			
Some High School	4.9%	0.0%	6.7%
High School Diploma	14.8%	14.1%	24.4%
Some College	18.5%	35.2%	26.9%
Trade, Vocational or Technical Degree	21.0%	8.5%	14.3%
Bachelor's Degree	29.6%	31.0%	20.2%
Postgraduate Degree	11.1%	11.3%	7.6%
Number of Observations	81	71	119
A&E			
Some High School	0.0%	0.0%	0.0%
High School Diploma	0.0%	0.0%	0.0%
Some College	0.0%	12.5%	5.9%
Trade, Vocational or Technical Degree	4.2%	0.0%	11.8%
Bachelor's Degree	37.5%	50.0%	35.3%
Postgraduate Degree	58.3%	37.5%	47.1%
Number of Observations	24	8	17
Other Services			
Some High School	1.0%	1.0%	1.9%
High School Diploma	3.2%	4.5%	9.3%
Some College	12.9%	14.1%	10.2%
Trade, Vocational or Technical Degree	4.2%	3.0%	0.9%
Bachelor's Degree	25.1%	34.7%	20.4%
Postgraduate Degree	53.7%	42.7%	57.4%
Number of Observations	311	199	108
Commodities			
Some High School	3.7%	5.3%	7.5%
High School Diploma	11.1%	10.5%	5.0%
Some College	37.0%	21.1%	22.5%
Trade, Vocational or Technical Degree	3.7%	5.3%	7.5%
Bachelor's Degree	40.7%	31.6%	50.0%
Postgraduate Degree	3.7%	26.3%	7.5%
Number of Observations	27	19	40

Source: Authors' calculations from the NERA mail surveys conducted in September-November, 2005.

Note: Columns in each panel may no total exactly 100.0% due to rounding.

Table 8.11. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts

(Total number of valid responses in parentheses)

Business Environment	Black	Hispanic	Asian	Native American	Total Minorities	White Women	Total MBEs	Non-MBEs
Bonding Requirements	**43.8% (96)**	**53.1% (32)**	45.2% (31)	0.0% (8)	**43.8% (169)**	35.7% (98)	**40.8% (267)**	28.3% (99)
Insurance Requirements	19.1% (136)	14.6% (41)	19.6% (56)	10.0% (10)	18.2% (247)	16.0% (163)	17.3% (410)	19.7% (152)
Previous Experience Requirements	**35.8% (179)**	**27.7% (47)**	**25.0% (72)**	0.0% (9)	**30.5% (311)**	14.5% (200)	**24.3% (511)**	11.3% (168)
Cost of Bidding or Proposing	**39.8% (166)**	**47.7% (44)**	**47.7% (65)**	41.7% (12)	**42.6% (291)**	**36.4% (184)**	**40.2% (475)**	24.2% (153)
Large Project Sizes	**69.1% (165)**	***58.5% (41)***	***54.8% (62)***	45.5% (11)	**63.6% (283)**	**59.0% (166)**	**61.9% (449)**	42.2% (147)
Price of Supplies or Materials	29.8% (161)	20.5% (39)	31.7% (60)	27.3% (11)	28.6% (273)	24.2% (157)	27.0% (430)	29.1% (151)
Obtaining Working Capital	**59.5% (163)**	43.6% (39)	31.7% (63)	25.0% (8)	**49.8% (275)**	36.9% (149)	**45.3% (424)**	30.8% (143)
Late Notice of Bid/ Proposal Deadlines	**74.5% (157)**	**73.7% (38)**	***65.1% (63)***	70.0% (10)	**72.2% (270)**	**66.4% (152)**	**70.1% (422)**	51.5% (134)
Prior Dealings with Owner	**26.7% (161)**	**24.3% (37)**	13.8% (65)	0.0% (9)	**22.1% (276)**	8.0% (174)	**16.7% (450)**	9.0% (156)

Source: Authors' calculations from the NERA mail surveys conducted in September-November, 2005.

Note: Total number of valid responses in parentheses. Figures in **boldface** type are statistically significantly different from non-MBEs using a conventional two-tailed Fisher's Exact Test and within a 95% or better confidence interval. Figures in ***boldface italicized*** type are significant within a 90% confidence interval.

Table 8.12. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts

(Total number of valid responses in parentheses)

Business Environment	Black	Hispanic	Asian	Native American	Total Minorities	White Women	Total MBEs
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: Authors' calculations from the NERA mail surveys conducted in September-November, 2005.

Note: A plus (+) indicates that a group is more likely than non-MBEs to report difficulty with business environment factors. A minus (–) indicates that a group is less likely than non-MBEs to experience difficulty. An asterisk (*) indicates that the disparity is statistically significant within a 95% or better confidence interval. A dagger (†) indicates that the disparity is statistically significant within a 90% or better confidence interval.

Table 8.13. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Construction and A&E

(Total number of valid responses in parentheses)

Business Environment	Black	Hispanic	Asian	Native American	Total Minorities	White Women	Total MBEs
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: Authors' calculations from the NERA mail surveys conducted in September-November, 2005.

Note: See Table 8.12.

Table 8.14. Firms Indicating that Specific Factors in the Business Environment Make It Harder or Impossible to Obtain Contracts, Goods and Services

(Total number of valid responses in parentheses)

Business Environment	Black	Hispanic	Asian	Native American	Total Minorities	White Women	Total MBEs
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: Authors' calculations from the NERA mail surveys conducted in September-November, 2005.

Note: See Table 8.12.

Table 8.15. Percent of MBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with M/W/DBE Goals Seldom or Never Hire Them on Projects without Such Goals

(Total number of valid responses in parentheses)

MBE Group	All Industries	Construction	A/E Services	Other Services	Commodities
Black	75.9%	70.3%	50.0%	78.1%	85.7%
	(187)	(37)	(6)	(137)	(7)
Hispanic	58.3%	42.9%	0.0%	82.6%	0.0%
	(48)	(21)	(3)	(23)	(1)
Asian	73.9%	66.7%	72.7%	76.1%	66.7%
	(69)	(6)	(11)	(46)	(6)
Native American	57.1%	50.0%	100.0%	66.7%	0.0%
	(14)	(6)	(1)	(6)	(1)
Total Minorities	71.7%	59.2%	54.5%	78.0%	66.7%
	(322)	(71)	(22)	(214)	(15)
White Women	65.4%	54.0%	66.7%	69.0%	80.0%
	(185)	(50)	(9)	(116)	(10)
Total MBEs	69.4%	57.0%	58.1%	74.8%	72.0%
	(507)	(121)	(31)	(330)	(25)

Source: NERA's mail surveys conducted in September-November, 2005

Table 8.16. Percent of MBEs Indicating that Prime Contractors Who Use Them as Subcontractors on Projects with M/W/DBE Goals Seldom or Never Solicit Them on Projects without Such Goals

(Total number of valid responses in parentheses)

MBE Group	All Industries	Construction	A/E Services	Other Services	Commodities
Black	73.3%	58.3%	50.0%	77.5%	85.7%
	(187)	(36)	(6)	(138)	(7)
Hispanic	58.0%	40.0%	0.0%	76.9%	100.0%
	(50)	(20)	(3)	(26)	(1)
Asian	78.9%	83.3%	72.7%	81.6%	60.0%
	(71)	(6)	(11)	(49)	(5)
Native American	60.0%	57.1%	0.0%	83.3%	0.0%
	(15)	(7)	(1)	(6)	(1)
Total Minorities	71.2%	54.3%	50.0%	78.6%	71.4%
	(326)	(70)	(22)	(220)	(14)
White Women	64.0%	51.0%	55.6%	68.7%	81.8%
	(186)	(51)	(9)	(115)	(11)
Total MBEs	68.6%	52.9%	51.6%	75.2%	76.0%
	(512)	(121)	(31)	(335)	(25)

Source: NERA's mail surveys conducted in September-November, 2005

IX. MBE Program Analysis and Feedback Interviews

As discussed in Chapter II, a crucial element of narrowly tailoring a race- and gender-conscious program is the use of race- and gender-neutral measures[230] to the maximum feasible extent to reduce barriers to MBE contracting. We therefore first discuss Maryland's current race-neutral initiatives. We then turn to the analysis of the State's current MBE Program.

A. Race-Neutral and Gender- Neutral Initiatives

1. Small Business Preference Program

The State's Small Business Preference Program provides a bid preference for small businesses.[231] The program is designed to provide small businesses with effective access to State procurements. During most of the Study period,[232] a business was considered a "small business" if:

- It was independently owned and operated;
- It was not a subsidiary of another firm;
- It was not dominant in its field of operation;
- Its wholesale operations did not employ more than 50 persons and its gross sales did not exceed $2,000,000 in its most recently completed fiscal year;
- Its retail operations did not employ more than 25 persons and its gross sales did not exceed $1,000,000 in its most recently completed fiscal year;
- Its manufacturing operations did not employ more than 100 persons and its gross sales did not exceed $1,000,000 in its most recently completed fiscal year;
- Its service operations did not employ more than 100 persons and its gross sales did not exceed $1,000,000 in its most recently completed fiscal years; and
- Its construction operations did not employ more than 50 persons and its gross sales did not exceed $4,000,000 in its most recently completed fiscal year.[233]

Based on its "Bidders Application" form, the agency designates vendors as small businesses and includes them on its "Small Business" vendor list.[234]

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[230] By race and gender-neutral, we mean any policy, requirement or measure other than race- and gender-conscious subcontracting goals, e.g., small business assistance or set-asides. See Md. Code Ann., State Fin. & Proc. Art., §14-301(h) ("Race-neutral measure" means a method that is or can be used to assist all small businesses.")

[231] COMAR 21.11.01.01.

[232] The limits were raised in 2004. COMAR 21.01.02.01B(80).

[233] COMAR 21.01.02.01B(80).

Under the Small Business Program, DGS, USM, and MDOT may send solicitations both to firms identified on the Small Business vendor list and to regular vendors in order to establish a reasonable price range commensurate with current market conditions. User agencies also send solicitations to qualified small business vendors for contracts within their authority. Each of the agencies is to accept the most favorable responsive bid, or most advantageous offer, from a responsible small business vendor for a small business preference procurement, if the small business bid or offer does not exceed the most favorable responsible bid, or most advantageous offer, received from a responsible regular vendor by more than five percent or the predetermined percentage preference. The preference is calculated by multiplying the regular business's apparent low bid by five percent and adding that amount to the regular business's price quote to derive the "calculated" quote for the regular business. If the small business's actual price quote is lower than the "calculated" quote for the regular business, the small business must be given the award.

An unintended drawback of the program as it currently exists is that a large majority of firms on the State's vendor listing qualify as "small," thereby reducing the utility of the effort while increasing the administrative burden.

2. Small Business Reserve Program

The Small Business Reserve Program, became effective October 1, 2004, and requires that 22 designated state agencies structure their procurement processes so that at least 10 percent of their total procurement dollars are spent with qualified small businesses. The overall goal is to increase economic opportunities for small businesses by encouraging competition among qualified small businesses, by guaranteeing that the contract will be awarded to a qualified small business. Only qualified small business may participate in the Program. Once a solicitation has been designated for a small business reserve, only bids or proposals from qualified small business are accepted.

a. Eligibility Standards

A small business is defined as a business, other than a broker, that is independently owned and operated, not a subsidiary of another business and not dominant in its field of operation. Other criteria also apply by procurement category as follows:

- The wholesale operations of the business do not employ more than 50 persons and the gross sales of the business do not exceed an average of $2,000,000 in its most recently completed three fiscal years;
- The retail operations of the business do not employ more than 25 persons and the gross sales of the business do not exceed an average of $2,000,000 in its most recently completed three fiscal years;

[234] COMAR 21.11.01.01.A.

- The manufacturing operations of the business do not employ more than 100 persons and the gross sales of the business do not exceed an average of $2,000,000 in its most recently completed three fiscal years;
- The service operations of the business do not employ more than 100 persons and the gross sales of the business do not exceed an average of $2,000,000 in its more recently completed three fiscal years; and
- The construction operations of the business do not employ more than 50 persons and the gross sales of the business do not exceed an average of $7,000,000 in its most recently completed three fiscal years.

If a business is less than three years old, the gross sales average is computed for the entire period it has been in existence. For newly formed businesses, the determination will be based upon employment levels and projected gross sales.

For a business that has filed a Federal income tax return, the annual average gross sales of the business are calculated from the sales amounts contained on the tax return.

Employment is calculated on an employee "Full-Time Equivalent" (FTE) basis. All full time, part time, temporary or contractual employees, including employees of temporary help firms or subcontractors working for the business, are counted against the applicable employment limitation. The specific FTE employment levels for a business at the end of each calendar quarter are averaged to determine a business' most recent FTE employment level.

If a business operates in more than one of the following business classifications- wholesale, retail, manufacturing, service and construction- its combined operation must meet the limitation of the more liberal classifications. Only for-profit businesses can apply to be qualified as a small business. A business can qualify as a small business, a MBE and a DBE.

b. Application Process

The Maryland Department of General Services (DGS) established an online self-certification process effective September 15, 2004. A business is required to reapply for qualification every year by the anniversary date of the initial certification. A firm's gross sales and employment data are also verified annually.

3. Outreach to Small Firms and MBEs

Invitations for Bids are advertised in the *Maryland Contract Weekly*, *eMaryland Marketplace*, minority media, and sent to minority and female contractor associations. Some agencies waive fees for sending copies of bid specifications to such organizations. Because of prohibitive costs, MDOT generally only sends bid packages upon request. DGS, USM, and DPSCS each maintain a bidders list that includes MBEs to whom Invitations for Bid notices are routinely mailed. Generally, agencies rely on the MDOT Directory to identify MBEs and on the Governor's Office of Minority Affairs (GOMA) to ensure that MBE organizations are notified. MDOT also notifies MBEs and trade organizations.

The State's World Wide Web site for businesses, known as the Maryland Business Information Network (www.mdbusiness.state.md.us), provides information on anticipated and current procurement opportunities and events of interest, such as outreach fairs to small businesses and MBEs.

MDOT sponsors workshops, seminars and conferences for small and minority businesses. The Entrepreneurial Development Institute provides training courses to enhance contracting success with the Department.

4. Governor's Office of Business Advocacy

Housed in the Department of Business & Economic Development, the Office seeks to assist Maryland businesses in navigating the processes and regulations of local, state and federal governments. Of particular importance to small and emerging businesses, the Office seeks to:

- Work to improve the business environment and create a seamless regulatory process;
- Act as an information source and liaison on behalf of the business community;
- Facilitate communications between state, local and federal agencies and the business community;
- Guide Maryland businesses through the regulatory process;
- Provide analysis of recurring business regulatory problems and make recommendations to the Governor;
- Provide a regional ombudsman service to Maryland businesses; and
- Promote Maryland's Business License Information System (www.blis.state.md.us).

5. Maryland Small Business Development Financing Authority

The Maryland Small Business Development Financing Authority (MSBDFA) was created in 1978 to assist in the promotion of business growth in the State for businesses owned by socially or economically disadvantaged persons in Maryland. A major criterion for approval is the economic impact of the loan, investment or guaranty, via employment opportunities and tax base increases.

MSBDFA offers four assistance programs:

Contract Financing Program. This Program assists firms through loans and guaranties. Loan funds can be used for working capital or the acquisition of equipment to begin, continue and complete work on contracts that receive the majority of their funding (51 percent or greater) from government agencies or public utilities. Applicants may also qualify for financing prior to contract award.

Long-Term Guaranty Program. This Program assists eligible firms through guarantees for loans to be used for, among other things, working capital, the acquisition and related installation of machinery or equipment, and the acquisition of real property to be owned by the applicant and to be used in the business for which financing assistance is being provided. Established in 1982, this Program makes available loan guaranties and interest rate subsidies to financial institutions making loans to socially or economically disadvantaged persons who own businesses in Maryland. Guaranties may not exceed the lesser of 80 percent of the loan or $600,000. The minimum loan is $5,000, the term not to exceed 10 years and the maximum interest rate is the prime rate plus 2 percent. MSBDFA can also provide interest rate subsidies up to 4 percent to a financial institution making a loan to a qualified applicant. The subsidy may be reviewed annually, and may be for the life of the loan. The institution is required to pay up to 1.5 percent of the loan amount at closing and annually. This cost may be passed on to the applicant. Collateral may consist of accounts receivable, machinery and equipment, inventory, real estate, cash surrender value of life insurance, assignment of securities and personal guaranties. In addition to the general eligibility requirements, applicants must have applied for and been denied a loan by a financial institution, and have sufficient experience and capacity to manage the business for which financing is sought.

Surety Bond Program. This Program assists through guaranties of bid, performance and payment bonds, or by providing such bonds directly for contracts that receive the majority of their funding (greater than 51 percent) from governmental agencies or public utilities. This effort is designed specifically to facilitate the bonding process for contractors who do not meet the surety industry's standard underwriting criteria. Applicants may qualify prior to contract award to assist their success in bidding. MSBDFA can directly issue bid, performance or payment bonds up to $750,000. It can guaranty up to the lower of 90 percent or $900,000 of a surety's losses incurred as a result of a contractor's breach of a bid, performance or payment bond. It may establish a surety bond line in order to directly issue or guaranty multiple bonds to a principal within pre-approved terms, conditions and limitations.

MSBDFA generally requires fees of 3 percent per $1,000 of the contract price for construction projects and 3 percent per $1,000 of the bond amount for supply and service contracts. There is a $50 charge for bid bonds or a $200 annual fee if a bid bond service undertaking is issued. The contractor's fee for bond guaranties is 0.5 percent of the bond amount. Generally, the standard guaranty fee payable to the surety is 20 percent of the premium charged by the contractor. The bonding agent's fee for a bond issued directly by the agency is up to 20 percent of the premium collected by MSBDFA. The agent's fees for bonds guaranteed by MSBDFA will be paid by the issuing surety. However, fees and premiums need not be uniform among transactions. Collateral consists of assignment of contracts, machinery and equipment, inventory, real estate, life insurance cash value, and securities.

Eligibility criteria further include the applicant having been denied bonding by at least one surety within 90 days of submitting an application; subcontracting no more than 75 percent of the dollar value of the contract; the contract will have substantial economic impact in Maryland through job generation and expansion of the State's tax base; the applicant never has defaulted on any loan or financial assistance made or guarantied by MSBDFA; and the firm employs fewer than 500 full time employees or has gross revenues of less than $50 million.

Equity Participation Investment Program. This Program assists eligible firms through the use of loan guaranties, and equity investments in franchises, technology based businesses and for the acquisition of existing profitable businesses. The funds may be used for among other things, working capital, inventory, and the acquisition of machinery, equipment and real property. Forms of investment may include evidence of indebtedness, equity participation, participation in a profit sharing agreement, investment contract, or security.

Particular attention is paid to the structure and eventual liquidation of EPIP's investments. Each investment is designed to enhance the long-term growth prospects for the company. In all cases, MSBDFA's recovery shall be the greater of its percentage of the current value of the business or the amount of its initial investment. Before a financing relationship is consummated, there must be an agreement regarding the probable method of liquidation.

The Franchising Component seeks to increase the number of jobs created or retained, generate incremental tax revenues, and serve the needs of the local community. It permits direct investment up to the lesser of 45 percent of the total financing or $500,000. MSDBFA's investment must be recoverable within 7 years and the return shall be commensurate with the risk undertaken. The applicant must make an equity investment of not less than 10 percent of the total project costs.

The Technology Component was established to enhance the business potential of socially or economically disadvantaged entrepreneurs. It provides debt or equity financing for the expansion of technology-based businesses. It focuses on proven technological products and services in the critical marketing and early production stages. MSBDFA's equity participation financing shall not exceed $500,000 to any enterprise. It shall be recoverable within 10 years and the return shall be commensurate with the risk. As a venture capital program, EPIP expects to provide financing that supplements normal bank loans. Typical investments range from $200,000 to $400,000. Administrative expenses prohibit the agency from considering new financing requests less than $50,000, although lesser supplements to existing MSBDFA investments are possible. While EPIP will invest in either equity or debt, most debt investments will include warrants or convertible equity instruments relating to the acquisition of common stock. Preferred stock usually carries cumulative dividend and conversion rights. EPIP must dispose of its equity in 10 years or less. It is expected that the business owners will invest personal capital into the business.

The Business Acquisition Component seeks to provide equity or debt financing for the acquisition of existing profitable businesses. MSBDFA's equity participation financing shall not exceed the lesser of $500,000 or 25 percent of the total project cost. Its investment shall be recoverable within 7 years and the return shall be commensurate with the risk. The applicant is required to make a minimum equity investment of 5 percent of the total project costs. The acquired business shall have been in existence for at least 5 years; been profitable for at least two of the previous three years; have sufficient cash flow to service the debt and ensure adequate return on the agency's investment; demonstrate the capacity for growth and job creation in Maryland; and enjoy a strong customer base.

6. Governor's Office of Minority Affairs

The Governor's Office of Minority Affairs is a cabinet-level state office that serves as an advocate for minority business enterprises in Maryland. GOMA's mission is to strengthen and preserve Maryland's MBEs. GOMA is responsible for establishing executive policy directives and overseeing the MBE Program for all 75 State agencies. GOMA provides support to these agencies to ensure they can achieve their MBE Program goals. GOMA assists minority businesses to understand and comply with the State's certification and procurement processes. The Office also coordinates and promotes government programs that support MBEs.

GOMA is also responsible for monitoring State agency compliance with the laws and regulations governing the Minority Business Program. GOMA fulfills its oversight mandate by staying in contact with state agency MBE liaisons. The Office also keeps abreast of MBE procurement opportunities at the county level.

GOMA's specific mandated responsibilities include:

- Carrying out each State or federal program that is created to promote the growth or participation of MBEs;

- Promoting and coordinating the plans, programs, and operations of State government that promote or otherwise affect the establishment, preservation and strengthening of MBEs:

- Promoting activities and the use of the resources of State government, local governments, and private entities for the growth of MBEs:

- Coordinating the effort of private entities and public agencies to develop MBEs: and

- Establishing a system to develop, collect, summarize and disseminate information to promote the establishment and success of MBEs,

The State Auditor's Report also provided other GOMA mandated responsibilities subject to the limitations of the law and availability of funds as follows:

- Providing technical and managerial assistance to MBEs;

- Providing the managerial and organizational framework for private entities and units of State government to plan and carry out joint undertakings that relate to MBEs; and

- Paying, wholly or partly, the costs of a pilot or demonstration project that is intended to overcome special problems of MBEs.

GOMA prepares an annual report that summarizes procurement activity by State agencies for each fiscal year, including the dollar value and percentage of awards made to certified MBEs.

The Office receives requests to investigate procurement-related complaints. GOMA acts a mediator between state agencies and MBEs in certification and contracting disputes. Parties can make on-line requests for assistance. They can also call to request an appointment.

The Office coordinates all statewide outreach events such as conferences, workshops and training that target MBEs. At several of the largest events in Maryland GOMA facilitates the contact of senior State agency contracting officials and MBEs to discuss open procurements.

GOMA refers MBEs to state agencies and other entities that offer procurement information and opportunities. The website contains extensive links to many State, federal and local agencies and programs.

7. The Governor's Task Force on Centralized Bidder Registration

The Governor's Task Force on Centralized Bidder Registration was organized to develop recommendations addressing the "design, structuring, and procurement of systems necessary for implementation of a State automated and centralized bidder registration (CBR) System." The Task Force issued its Final Report in August 2005, which described additional state efforts to assist prospective bidders. The Final Report noted that the State does not have "a centralized mechanism for prospective bidders, (who) are interested in performing State contracts, to register their interest in being solicited to bid on State contracts." The Task Force created a vision for the CBR System based upon best practices from the federal, state and the private sector. It recommended that the State implement a single, centrally managed CBR system to be used by all State agencies and departments. According to the Final Report, a follow up State team will select and implement the final CBR System.

8. The Governor's Commission on Minority Business Enterprise Reform

The Governor's Commission on Minority Business Enterprise Reform was established by Executive Order 01.01.2003.16. Chaired by Lt. Governor Steele, the Commission was established to conduct a comprehensive assessment and develop a plan to overhaul the MBE Program. Governor Ehrlich also appointed 16 Commissioners representing business, advocacy groups and state legislators. The now-Special Secretary of GOMA served as Executive Director of the Commission. The now-Deputy Secretary of GOMA also served as senior staff.

The Commission formed committees to addressed six major areas: (1) GOMA strategy; (2) Business Development; (3) Procurement and Compliance; (4) Access to Capital and Credit; (5) Certification: and (6) Legislation. Each committee had an advisory team comprised of private sector representatives and an agency assistance team comprised of state agency employees. Commissioners also chaired each committee.

The Commission met twice a month and created a speakers series to provide the Commissioners with industry related information and an opportunity to interact with subject matter experts. It

gathered and analyzed data including conducting four statewide public hearings and receiving written testimony.

The Commission determined that about 60 percent of its recommendations could be implemented by a management initiative or an executive order. The remaining recommendations required some type of legislation. The following are the Commission's major recommendations:

a. Governor's Office of Minority Affairs Strategy

- Make GOMA a department and provide it with the staff and budget allocations needed to meet its statutory responsibilities for Program oversight, compliance, outreach, and the delivery of services.

- Ensure the Program comes into and remains in compliance with Maryland's MBE laws and procurement regulations by having MBE liaison officers report directly to GOMA.

- Continue the work of the Commission by creating the Governor's Council for Historically Under-utilized Businesses.

- Where efficient, move minority commissions (Women, Hispanic, Asian Pacific, etc.) to GOMA.

- Require GOMA to establish policies and procedures, and provide oversight and guidance, to all activities of the Governor's Office of Business Advocacy and other state agencies that impact small and minority businesses.

b. Business Development

- Create a "one-stop shop" Internet portal, developed and managed by GOMA, for small and minority businesses.

- Reinforce the role of GOMA as the agency ultimately accountable for ensuring that the State complies with the law.

- Establish consistent, uniform management performance evaluations that include accountability and responsibility for achieving MBE goals.

- Establish an Ehrlich-Steele Minority Business Impact Report Card.

- Designate GOMA as the agency responsible for the oversight and scrutiny of the use of bundled contracts.

- Establish small business procurements that are targeted only to minority and small businesses

- Remove the $750,000 personal net worth cap.

- Create a statewide mentor/protégé program that encourages business-to-business relationships where large businesses can link, advise, and partner with small businesses.

c. Procurement and Compliance

- Immediately acquire and implement software system to accurately measure and manage the performance of all Program participants. This will require all vendors and contractors to be tracked via a unique vendor I.D.

- Develop and implement a statewide Program handbook for use by all agencies to guide their implementation of the Program, made a part of COMAR by reference.

- List all State procurement notices over $2,500, at no charge to the public, on *eMaryland Marketplace*. Enhance *eMaryland Marketplace* to provide email alerts to businesses based on accurate and easily understood lists of contractor and solicitation services and products.

- Require a procurement plan from each agency that will list quantitatively the procurement and MBE participation goals.

- Allow GOMA to develop MBE goal setting guidelines for State contracts based on the differences in the availability of MBEs by industry, product and service categories.

- Help address Program shortcomings documented in the 2002 Legislative Audit of the Program by implementing the following changes for MBE liaison officers and procurement officers:

  - Make Program training a part of all State procurement training and require procurement training for MBE liaisons.

  - Include consistent adherence to all procedures, policies, and guidelines for implementing the Program as part of the procurement officer's and MBE liaison's annual performance appraisals.

  - Supply a career path for MBE liaisons that reflects their primary job responsibility as contract compliance officers.

  - Create incentives and provide training to encourage procurement officers to use MBE prime contractors.

- Eliminate the 10-day waiting period before naming MBEs and make the contract or partnering agreement between contractors and subcontractors a part of the bid package submitted to the State.

- Give MBE liaisons the same level of review authority as procurement officers on solicitations and contracts.

- Enforce regulations to establish standards and sanctions that ensure the prompt payment of subcontractors.

- Establish a Commercial Non-discrimination Statute that will make it unlawful for any firm that is engaged in business with the State, or seeking to be engaged in such business, to discriminate on the basis of race or gender in the solicitation, selection, or treatment of any of its contractors, vendors, suppliers, or commercial customers.

- Extend COMAR 21.07.02.08 to require liquidated damages from contractors that breach their agreed MBE goals.

- Enforce contract sanctions for default, up to and including termination, when the contractor has violated the contract terms, conditions and applicable regulations.

- Enforce the requirement to report violations of the Program to the Attorney General for possible investigation/prosecution and/or initiation of suspension/debarment actions.

- When awarding contracts, give consideration to a contractor's documented minority business program performance on prior contracts.

- Reward/reprimand agencies and companies for their success at meeting and exceeding the MBE participation goals.

d. Access to Capital and Credit

- Mandate that the State's Pension Review Board consider applying socio-economic policy to support pension fund investments in MBEs.

- Allocate a portion of new and existing gaming revenues to fund an existing or new pool of risk-capital funds with "patient" money to support investment in MBEs.

- Start a Certified Capital Company (CAPCO) as a method of allocating tax credits to encourage and leverage private venture capital firms certified under the legislation.

- Set a goal for the percentage of loans granted to MBEs from each of the State's revolving loan funds.

- Coordinate and consolidate the State's discretionary funding and ensure it benefits minority businesses.

- Create additional funding sources for micro-enterprise lending.

- Create a "Linked Deposit" program in statute that will establish certain reporting requirements for the State's banking institutions regarding commercial loan applications and that will leverage the State's deposits and/or investments in financial institutions and funds to promote more aggressive lending practices and greater access to capital with respect to MBEs.

- Develop a revolving loan fund to be capitalized from the proceeds of taxable bond issuances.

- Increase existing loan program efficiencies by reducing the turnaround time between application submittal and closing.

- Change the focus and emphasis of state eligibility and underwriting criteria from traditional "credit risk analysis" to evaluation of "long range outcomes."

- Establish a cohesive monitoring system to account for the number and amount of private loans and investments to MBEs and the outcomes of these loans at no less than three-month intervals.

- Initiate a change of management practices for State-funded financing programs and establish a monitoring system to account for the amount and outcomes of State loans and grants at no less than three month intervals.

- Establish an independent review and approval authority, overseen by GOMA, for financing programs, comprised of a diverse group of people representing small and minority business and community interests.

- Create programs to encourage innovation among State agencies involved in lending to small businesses and encourage local financial institutions to provide more access to capital for MBEs.

- Triple the level of funding for the Small Business Development Centers (SBDC).

- Consolidate all State small and minority business technical support programs that complement the SBDC.

- Evaluate the Procurement Technical Assistance Program (PTAP) to determine its value to the small and minority business community. Based on this evaluation, adjust the State's funding for the PTAP.

- Create a public information and public awareness campaign for the resources available to small and minority businesses. Provide adequate resources and staff to GOMA to create and monitor centralized access to minority business assistance services including, but not limited to, marketing and training resources in a one-stop shop format.

e. Certification

- Remove the non-federal certification process from the MDOT and place it in GOMA as part of creating the one-stop shop for MBEs.

- Allow state agencies to permit *prime* minority contractors and minority vendors to sign and submit, with a bid or offer of less than $250,000, a sworn affidavit attesting to the fact that the firm is a minority owned and controlled firm capable of MBE certification at that time. Require the firm to file a formal certification application with the State's certifying agency within 10 business days after being notified of contract award. If a firm fails to submit the required certification application in the time frame

required or if the firm is not certified by the State certification agency then the contract dollar amount cannot be reported as MBE participation.

- Initiate reciprocity agreements with local and/or federal government's MBE and/or Disadvantaged Business Enterprise certification programs of equal or greater stature as determined by the State certification agency.

- Require that any business certified as an MBE by the State's certification agency and that meets the criteria as identified in COMAR 21.01.02.01.B(80), shall automatically be placed on all DGS' and MDOT's small business vendor lists.

B. MBE Program Overview

The State's MBE Program seeks to provide opportunities for MBEs to participate fully and fairly in State contracting. State agencies are to attempt to achieve a goal of pending at least 25 percent of all contracting and procurement dollars directly or indirectly with certified MBEs.[235] Of that 25 percent, a minimum of 7 percent of the total dollar value of each agency's procurements is to be spent with Black-owned MBEs and a minimum of 10 percent of the total dollar value of each agency's procurements is to be spent with women-owned MBEs. MDOT must also structure its construction procurements to achieve the participation of Disadvantaged Business Enterprises (DBEs) in its federally-assisted transportation contracts, as contained in its annual DBE goal setting submitted to the U.S. Department of Transportation, pursuant to 49 CFR Part 26.

1. History of the MBE Program

The General Assembly enacted the State's first MBE law in 1978, based upon hearings and testimony regarding the underutilization of minorities in State procurement.[236] The General Assembly found that minority-owned businesses had experienced the effects of past discrimination in the awarding or letting of contracts and/or subcontracts for the purchase of materials, supplies, equipment and services for the benefit of the State. The effect of such discrimination may have been to impede the economic development and expansion of minority business. The first MBE law required that 10 percent of the dollar value procurements for the USM, DGS, MDOT, the Food Center Authority, and the Interagency Committee on Public School Construction (IAC) be awarded to MBE prime contractors and subcontractors.[237] This first enactment served merely as a policy directive to the Executive Branch and was enforceable only through the legislature's oversight function.

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[235] COMAR 21.11.03.01(A)(3).

[236] Article 41, Governor, Executive and Administrative Departments, Section 14F, Annotated Code of Maryland.

[237] The IAC operates differently than any other agency. It provides matching funds for school construction to 24 school districts. Where state funds are provided, good faith efforts to obtain MBE participation are required. MBE goals are set at 25 percent. Although the State sets the MBE goal, it is up to the school district to implement and enforce the goal. In many cases, particularly in the more rural parts of the state, districts leave it up to the prime contractors to identify MBEs. While in some cases, the IAC spearheads the MBE effort, the agency only reports the State's proportionate share of MBE dollars for school district projects.

In 1981, the MBE statute was repealed and reenacted, with amendments providing for sanctions for firms that misrepresented themselves as MBEs.[238]

In 1983, the MBE law was broadened to include all departments or agencies. The Department of Budget and Management was added to the list of designated agencies, and the Board of Public Works was given the authority to draft regulations consistent with the Program's objectives.[239]

In 1988, the State set a goal for certain departments of 10 percent MBE participation and adopted regulations to implement the Program.

The Program was reviewed and reenacted in 1990 in response to *City of Richmond v. Croson*.[240] Coopers & Lybrand completed a Minority Business Utilization Study in 1990 that determined that based upon the 1978 investigative hearings, Maryland possessed a sufficient compelling interest in continuing the MBE Program.

NERA was commissioned by the State to conduct an MBE utilization study in 1994. In 1995, the legislature repealed and reenacted the MBE statute, and increased the MBE goal from 10 percent to 14 percent.

NERA was again retained in 1999 to conduct a new study of the State's MBE Program, issued in January 2001. The 2001 NERA Study found that marketplace discrimination makes it harder for MBEs to compete for business from the State and its prime contractors, and that while prime contractors use MBEs on public sector projects with MBE goals, they seldom or never use them on projects without such goals. The Study found that while 17 percent of contracts were awarded to MBEs in State fiscal year 2000, the availability of firms in the State's geographic and procurement markets was 26.9 percent.

Based in part upon the 2001 NERA Study, the legislature enacted a revised MBE statute.[241] The MBE goal was increased from 14 percent to 25 percent. Under current law, an MBE is defined as a legal entity that is at least 51 percent "owned and controlled by one or more individuals who are socially and economically disadvantaged" and also includes "a not-for-profit entity organized to promote the interests of physically or mentally disabled individuals."[242] An economically disadvantaged individual is a "socially disadvantaged individual whose ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same or similar line of business who are not socially

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[238] House Bill 751 (1981), codified at Article 41, Governor, Executive and Administrative Departments, Section 14F, Annotated Code of Maryland.

[239] House Bill 259 (1983), codified at Article 21, Procurement, Section 8-601, Annotated Code of Maryland.

[240] House Bill 1450 (1990), codified at State Finance and Procurement Artic, Section 14-301 *et seq*., Annotated Code of Maryland.

[241] House Bill 306 (2001), codified at State Finance and Procurement Artic, Section 14-301 *et seq*., Annotated Code of Maryland

[242] COMAR 21.01.02.01B(54)(a-b).

disadvantaged."[243] In 2001, the State imposed a personal net worth limit on MBE Program eligibility of $750,000, similar to the cap imposed on eligibility for the USDOT DBE Program administered by MDOT for its federal-aid contracts.[244] The limit was raised to $1,500,000 in 2004. The Program's sunset date is July 1, 2006.

In 2002, a Performance Audit of the MBE Program was completed by the Office of Legislative Affairs. The report identified three primary problems with the Program:

- MBE utilization data were often not supported, accurate or consistent with reporting guidelines;
- Actual payments to MBEs were not used as the evaluation measure of Program success; and
- State agencies did not adequately monitor MBE participation on contracts.

In response, the position of GOMA Director was elevated to cabinet status, and an Executive Order created the Governor's Commission on MBE Reform. The Commission was chaired by the Lieutenant Governor and staffed by GOMA. In addition, two important Program changes were adopted in 2004:

- All prime contractors must identify their proposed MBE utilization at the time of bid, rather than within 10 days after the contract has been awarded (the "10 day rule"); and
- 22 State agencies must reserve 10 percent of their contracting dollars for small businesses (the Small Business Reserve Program).

2. MBE Program Operations

The MBE goal is implemented differently across agencies. In general, designated agencies must attempt to achieve the overall State goal of spending 25 percent with MBEs. In addition, MDOT is required to structure its construction procurement to try to achieve participation of at least 25 percent of the dollar value of contracts in excess of $50,000 by certified MBEs, either on the prime contract or subcontract level. All other agencies not designated by statute are to structure procurement procedures to attempt to provide a fair share of procurement contracts to certified MBEs.[245]

In coordination with GOMA, designated units are also responsible for Program outreach. Procurement officers may notify MBEs of new opportunities by meetings, seminars, etc.[246] If

[243] COMAR 21.11.03.03B(5)(a).

[244] House Bill 483 (2004); *see* 49 CFR §26.67(a)(2)(i).

[245] COMAR 21.11.03.01.

[246] COMAR 21.11.03.07.

known certified MBEs can provide the entire contract, State departments and agencies may solicit the qualified MBEs directly as part of the solicitation process being employed for the business community in general. All solicitations issued by designated units for construction contracts in excess of $50,000 must contain a certified MBE subcontract participation goal expressed as a percentage of the dollar value of the contract. In addition, a designated unit may establish a certified MBE subcontract participation goal for a particular construction contract of $50,000 or less, or any supply, maintenance, service, construction-related service, architectural service, or engineering service contract. The names of prime contractors requesting or purchasing solicitation documents for construction contracts are provided on request to any certified MBE whose specialty suggests an interest in subcontracting.[247]

To be considered responsive, each bid or offer submitted must be accompanied by an MBE utilization affidavit.[248] A designated unit may waive any or all of the MBE subcontract goal whenever the apparent successful bidder has, by reasonable demonstration, shown that (1) it could not obtain certified MBE participation or (2) such participation could not be obtained at a reasonable price. In determining whether to grant or deny a waiver, the designated unit's head may consider engineering estimates, catalogue prices, general market availability and availability of certified MBEs in the area in which the work is to be performed, other bids or offers and subcontract bids or offers substantiating significant variances between certified MBE and non-MBE cost of participation, their impact on the overall cost of the contract to the State, and any other relevant factors.[249]

Certification is conducted by the Office of Minority Business Enterprises (OMBE), which is within MDOT's Office of the Secretary. OMBE is charged with certifying MBE firms and developing an MBE Directory for use by all State agencies. Within MDOT, the Minority Business Enterprise Advisory Committee makes recommendations concerning certification and recertification of MBEs. Certification consists of a review and evaluation of the "Disclosure Affidavit" and supporting documentation submitted by the firm and includes site visits to the firm's offices to review its operations, management, and financing as well as selected job sites on which the firm is working at the time of the eligibility investigation. Certifications are effective for one year, subject to annual review for continuing eligibility.

GOMA acts as a clearinghouse that notifies MBEs and organizations of State procurement opportunities. State agencies are currently required to notify GOMA of any procurement above $100,000 and of any changes to these procurements. In some cases, procurements below $100,000 are also reported. When reporting procurement opportunities, agencies usually send an accompanying list of media and organizations to which the Request for Proposal or Invitation for Bid has been sent.

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[247] COMAR 21.11.03.09(B); COMAR 21.11.03.09(C)(1); 21.11.03.09(C)(4).

[248] COMAR 21.11.03.10A(4).

[249] COMAR 21.11.03.11B.

The MBE Program is relatively decentralized across State agencies, with the exception of certification, review and some outreach functions of the program. Each agency is responsible for designating an MBE Liaison Officer to administer the agency's MBE Program. The MBE Liaison Officer then reports directly to the Secretary, Deputy Secretary or agency head. The MBE Liaison Officer is responsible for reviewing contracting procedures, assuring contract compliance with the MBE law, submitting MBE utilization reports to GOMA, coordinating MBE outreach efforts and assisting with dispute or complaint resolutions.

To meet the overall 25 percent goal, each agency reviews and evaluates upcoming procurement opportunities and MBE availability and sets agency-specific goals for particular goods and services. In addition, goals can vary depending on the geographic region within which the goods/services will be procured. For example, DGS typically sets a 20 percent MBE requirement for projects in Baltimore and Prince George's County. Goals can be further set on a contract by contract basis to reflect the particular needs of the project, the opportunities for subcontracting, and MBE availability.

When a solicitation includes a stated MBE goal, all bidders/proposers must complete and submit an MBE utilization affidavit acknowledging the MBE participation goal and committing their firm to making good faith efforts to achieve the goal. Since 2004, prime contractors must identify proposed MBE participation at the time of the submittal, rather than within 10 days, as had been the prior rule. Failure to submit the affidavit will result in the bidder/proposer being determined to be non-responsive. If the bidder/proposer has made good faith efforts to achieve the MBE goal but has been unable to do so, the bidder/proposer may request a waiver. To receive a waiver, the bidder/proposer must submit a statement of the work allocated to MBE participation and the efforts made to identify and negotiate with MBEs capable of completing the work. If a waiver is granted, a copy of the waiver must be sent to GOMA.

If the solicitation documents expressly permit, in the event of two or more offers in which the offerors' technical and price proposals are determined by the procurement officer to be equally most advantageous to the State, a procurement agency may award a contract to a certified MBE or to a person whose offer otherwise reflects the greater amount of certified MBE or minority participation.

Each agency is required to maintain records of MBE utilization on the contracts the agency has awarded. At the end of each fiscal year, the agencies submit MBE Utilization Reports to GOMA. Reports are based on dollars awarded and paid to MBE prime contractors and subcontractors, not on dollars paid. GOMA compiles the data reported by each agency and submits an annual report to the Governor, summarizing the MBE participation achieved by each agency and for the State as a whole.

C. Maryland's MBE Program Feedback Interviews

In order to assess the effectiveness of the State's race- and gender-neutral programs, as well as the MBE Program, we conducted extensive interviews with MBEs, non-MBEs and State officials. We conducted 22 group interviews around the State. We met with 239 business owners from the building and highway construction, design, other professional services, information

technology and supply industries. Firms ranged in size from large international businesses to new start-ups. We also interviewed 72 State procurement officials and MBE liaisons. From all participants, we sought feedback about the Program, as well as suggestions for improvements and new initiatives. Below are summaries of those interviews, arranged by important topics. Summaries are representative of the views expressed by many interviewees over multiple sessions. Quotations are in italics.

1. Program Eligibility

A necessary element of meeting strict constitutional scrutiny is narrowly tailoring Program eligibility. As discussed fully in Chapter II, the remedy must accrue only to those persons who have suffered the effects of discrimination. We therefore explored with participants the nature of any barriers experienced by the various racial and ethnic groups and women currently covered by the MBE statute to highlight which groups might be included as presumptively socially disadvantaged for purposes of Program participation..

No one questioned the need to include Blacks in the Program, including non-MBEs. To the contrary, a number of White males questioned the need to include other ethnic groups in the preference. Several non-MBE construction contractors mentioned that they thought the MBE program had become too broad, by including persons other than Blacks. They noted that White women have access to family connections, management resources and capital, such that they now own most of the MBEs in highway construction. A White male commented that

> *[t]he most disappointing thing to me in the whole program is that, other than trucking, there has been almost no benefit to African Americans. They just get nothing out of the program.*

Non-MBE engineering firms echoed this issue. When asked whether they are seeing an increase in the number of MBEs in design, there was general agreement that while the ranks of minority and female firms are growing overall, the situation of Black-owned firms was still poor.

> *[C]learly, there are a number of Asian, Indian, and other Pakistanian [sic], other minority firms that are out there that have been formed over the years. And there are quite a few women-owned firms that have been formed. But the problem that we have here in the state is lack of African-American firms. And the lack of formation of African-American firms. And that problem is only going to get worse.*

Majority firms performing construction specialty trades were particularly vocal about what they perceive to be White women's advantages. They stressed that competitors had transferred long-standing and successful majority-owned businesses to female relatives, who now are considered "disadvantaged."

> *How is she disadvantaged? Her family's been in business a lot longer than mine, and she probably makes more money than I do.*

> *My three major competitors, all White women-owned, two of them do more billing than I do a year, and the other one does a little less. They are not the suppressed [sic] anymore, they just happen to be White women-owned minority.*

The concern was also expressed by some minority owners that White women no longer needed the Program.

On the other hand, White women felt that they still suffer discrimination, particularly in the construction industry, and need the continued assistance of goals in order to be included in State work.

Non-MBE highway subcontractors urged the adoption of a time limit on Program eligibility, similar to that in the U.S. Small Business Administration's (SBA) 8(a) Program.

> *Non-DBE's die a slow death as they surrender their markets to the new DBE firms that enjoy an edge and maintain that edge indefinitely as long as they manage their finances to stay within the guidelines. Why can't we have a time limit: 5 years? 7 years? 10 years?*

A few construction MBEs had graduated from the USDOT's Disadvantaged Business Enterprise (DBE) Program. The DBEs no longer received business from prime contractors because goal credit was not available. This was devastating for firms whose areas of work are usually subcontracted. Given the difficulty of obtaining work as prime contractors, recently graduated firms were not yet able to compete against the large established firms. Graduated firms often experienced severe financial problems, leading them to become eligible for the DBE Program the next year, as their revenues plummeted. This "revolving door" was felt to serve neither the DBE subcontractors' nor the prime contractors' interests.

2. MBE Certification Process

In general, there were few criticisms about the certification process. There was general agreement that MDOT's certification process is usually rigorous; in fact, some female owners stated that they had been unable to qualify as MBEs because of their husband's involvement in the business. There was the common understanding that high standards and thorough investigations are necessary to ensure Program integrity. The frustration was usually with the length of time from application to certification.

However, several minority- and majority owned firms mentioned that they believed that many women-owned firms were "fronts," where the putative women owner is merely a figurehead.

> *I know companies that did that as well, where the wife come in, do a small role, secretary or something because they figure minorities are cutting into the pie. So let's put the company in our wife's name and get over the hurdle like that.*

Some MBEs described their difficulties expanding their areas of specialty for certification. For example, a design firm felt that the certification officials had overly rigid and unrealistic ideas about what it takes to supervise an engineering firm that provides multiple specialties within the engineering discipline. An equipment rental firm owner stated that she had trouble expanding her certification to include trucking, even though the firm owned the trucks and employed the drivers, because she did not have a commercial driver's license in her own name.

3. MBE Contract Goal setting

In response to judicial decisions that have held set-asides and quotas based upon race and gender to be unconstitutional, MBE programs nationally have devolved into primarily efforts to set and enforce subcontracting goals. While Maryland sets annual, overall goals for aggregated State purchasing, the means to achieve those overall targets is through the use of subcontracting goals. We therefore sought feedback from MBEs and non-MBEs about the State's goal setting process, the first step in implementing the overall MBE policy.

Goal setting experiences varied from agency to agency, often tied to the industry of the project, e.g., building construction; highway and bridge work; IT procurements; design services, etc. In many respects, construction is the industry in which subcontract goal setting has been most successful. This is because public contracting affirmative action programs are largely based upon the bidding and service delivery methods of construction contracts, where large general contractors hire subcontractors for various specialty trades. MBE contract goals can be set based upon the anticipated and usual scopes of subcontracting, and the availability of certified firms to perform those scopes.

Thus, firms in the construction industry are familiar with the idea of segmenting work into subcontracts, and hiring others to perform pieces of a project. In contrast, other industries work on very different models. Professional services firms, while they may sometimes form alliances, generally do not subcontract work to others in their same areas of expertise. Suppliers have few opportunities for subcontracting, even for very large orders. Manufacturers purchase raw materials to produce products, but usually do not hire subcontractors either. The expansion of MBE initiatives to these non-construction areas poses challenges for all agencies operating affirmative action contracting programs. Maryland proved to be no different.

Not surprisingly, MBEs and non-MBEs often had different perspectives. Non-MBE highway and building contractors felt that the goals are too high, particularly for larger contracts. Some highway prime contractors felt that the State personnel setting goals were not sufficiently familiar with the actual work of various types of contracts, and so set unrealistic targets. Further, several mentioned that it was often very difficult to meet the Black goal of 7% because of the lack of availability of those firms. Non-MBE design firms agreed that the goal for Black engineering firms is unrealistic; overloading the few existing firms leads to quality issues, which then feeds the perceptions that Blacks are not competent. Some participants suggested that a mentor-protégé program might help to create more Black engineers and reduce supply problems on particular projects.

Many non-MBEs believed that they should not have to subcontract work that they would prefer to perform in house. While numerous general contractors and professional services owners expressed this view, this was especially true of highway specialty trade contractors, who felt that goals should not be set for guardrails and landscaping scopes, which have few subcontracting opportunities and where there were many competitive MBEs.

Non-MBE specialty trade contractors were adamant they are actively disadvantaged by the MBE and DBE Programs. They noted that on highway contracts, the prime contractor must self-perform at least 50 percent of the contract, and typically self-performs an even greater share.

This leaves a relatively small percentage for meeting the MBE subcontracting goal. They urged the State to examine whether a subcontracting trade has an "overconcentration" of MBEs, defined as whether one or two MBEs have received the majority of the work of a specialty trade, to the exclusion of non-MBEs. Several stated that because there are many successful MBEs in their areas of work no subcontracting goals should be set. Some recounted having to subcontract to direct competitors, who had also bid against them as prime contractors on the same job.

> *[W]hen you deal with a specialty contract where they have developed the minority contractors that can compete at the general contract level, then you need to change the rules for those contracts.*

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> *Specialty contracting "prime contracts" for items like guard rail should not include DBE goals. This is one of the rare market opportunities for the non-DBE to survive because the primary subcontract segment of a non-DBE's market is already tilted against us.*

On the other hand, those non-MBE prime contractors countered that not applying contract goals to these specialties would mean cutting into their share of the work as the State seeks to meet its overall annual goals.

Prime firms in all procurement areas were concerned that there are not enough MBEs to fulfill the goals. Some cited problems with timely performance by MBEs, which they speculated might be caused by MBEs taking on more work than small firms could deliver.

General contractors across industries often spent considerable time and money proving that there were insufficient subcontracting scopes to meet the State's overall MBE goals.

> *We put together a manual- literally, it was about five inches thick- and turned it over to the [State agency] and with an explanation. They went through that and saw just what you were saying before. Within certain industries, there are severe limitations as to what you can do. We even went to our competitors … none of them are minority-owned. All of the equipment that we buy- we are large enough that we can buy directly from manufacturers. We had looked at subcontracting and going through minority owned businesses to make the purchases, even though we would lose money in doing so because we can buy cheaper through the manufacturers*

There were also objections to setting goals- especially separate goals for Blacks, women and other ethnic minorities- on small contracts for which there are few if any subcontracting opportunities. This leads to either seeking waivers, with the attendant costs in time and money, or meeting the small dollar amount of the goals by purchasing minor supplies (*e.g.*, safety vests, office supplies, etc.).

> *[I]f I have to bring in someone, and it is a $50,000 [contract] to start with, it is not worth it to bid. So let's put a dollar value that is realistic for a prime to be able to actually afford to have an MBE requirement.*

Unlike the construction firms, there is a conflict between the design industry's model of mostly full service firms and the Program's focus on subcontracting. One minority owner who now owns his own engineering firm, described his experience:

> *Prior to this company, I was an engineer for a contractor with NASA, and we provided all of the services…. We had to hire [MBEs] to do what we do, and the fear was that now I have another company with my customer and you get a little nervous about that.*

MBEs and non-MBEs in design stressed that an unintended consequence of the focus upon subcontracting goals is the relegation of MBEs to ancillary aspects of the design project, which does not support their growth and development into prime consultants able to compete fully for State projects. Increased use of the Small Business Reserve Program was one suggestion to address this concern, although many owners considered the size standards to be too low. Another was to give some type of credit to design firms for promoting women and minorities in their manager and partner ranks. This approach would reflect that employment before ownership is the route to starting new design firms by minorities and women, as well as industry consolidation that is putting small firms of all ownerships at increasing competitive disadvantage except for niche work.

Non-MBE design firms expressed universal concern that the State does not set goals on design contracts on a contract basis; rather, it uses the statutory goals regardless of the type of project and the availability of MBEs to perform on those scopes. Moreover, there are often not three scopes for subconsultant participation, so it is difficult to meet the separate goals for Black, women and other ethnic minorities. The lack of Black engineers was cited as a serious and growing problem. One recommendation was to give extra credit somehow for using Black-owned firms.

Newer firms found it difficult to obtain work because the large prime consultants want to work with firms with whom they have previously worked. This barrier is exacerbated by the State's evaluation criterion that the prime consultant and subconsultant demonstrate a prior working relationship. New entrants suggested that perhaps firms could receive extra points for using a recently certified MBE.

The Asian-American design firms expressed frustration with the separate goals for Blacks and women. They felt that the USDOT model of a single DBE goal should be used. On the other hand, Blacks were concerned that they would receive little or no work if a unitary goal could be met solely through the participation of Asian- or women-owned firms.

> *They'll use anybody but a Black male.*

4. Bid Evaluation and Good Faith Efforts to Meet Goals

As with goal setting, the views of non-MBEs and MBEs were often radically different. Prime construction highway bidders complained that it is often difficult to get MBEs to submit quotes. They described sending "hundreds" of faxes, with few responses, prior to bid date. After they were declared the apparent low bidders, then MBEs who had ignored earlier requests called to submit quotes. Some prime contractors felt that MBEs increase their prices because they can.

> *They know we have to use them.*

According to one non-MBE prime contractor,

> *[When] the minority subs start realizing that you are going to negotiate with them, they are going to throw out any number they want.*

Many non-MBE general contractors felt that waivers are actively discouraged at many agencies. Few were willing to take the chance that the waiver request would be denied, unless they could not find any MBE to perform the subcontract or the prices were prohibitively high. A few firms had successfully obtained waivers but felt that the process was too slow, burdensome and arbitrary. According to one non-MBE subcontractor,

> *The consequence of good faith waivers being difficult to obtain is general contractors give up actively participating in the waiver process and learn to take the path of least resistance. They dismiss non-DBE specialty contractor quotes unless there is a significant disparity in price, causing disproportionate negative impact on non-DBE subcontractors.*

Some suggested that numerical standards should be set, *e.g.*, a price more than 10% higher than the lowest subcontractor quote received would be a reasonable good faith basis for rejecting the MBE's bid. There was also concern that fax or email communications were not sufficient; personal contact through telephone calls and written sign offs by MBEs on their decisions not to submit subcontracting quotes were believed to be necessary to satisfy State officials.

Non-MBE prime construction contractors stated that the requirement that the apparent low bidder must negotiate with MBEs if they failed to meet the goals amounted to post-submission bid shopping. The elimination of the 10 day rule did not address this contention, because a low bidder who failed to meet the goals was told to continue to negotiate with MBEs after bid opening. They reported that not only does this violate stated industry practice but also leads to delays in project completion, with the possibility of the State assessing liquidated damages against the prime contractor for failure to complete the job on time. Further, a MBE might agree to do the job for the price of the lower non-MBE subcontractor but then be unable to make money because his costs are higher. Non-MBEs acknowledged that MBEs often cannot obtain the same prices from suppliers that long established and larger non-MBEs are offered. To rectify this problem, it was suggested that utilization plans not be amended after bid opening. This would eliminate post-submission bid shopping, as well as force MBEs to provide "good numbers" upon which bidders can rely.

On the other side, MBEs in construction doubted that there was ever a lack of qualified firms to meet the goals.

> *And there is no logical excuse that they can say about not being able to find them, because if you want to look for them, and the place to find them, this is a fertile area right here.*

Many MBEs felt that the reasons for waivers should be published. More procurement transparency is needed.

There was agreement amongst many firms, non-MBEs and MBEs alike, that the State's certification lists were unwieldy and often vague and outdated. MBEs reported that they were often incorrectly coded. For example, an engineering firm repeatedly gets solicitations for construction work; despite numerous attempts to get the State to correct his listing, he continues to receive the irrelevant solicitations. Poor lists also increase the burden on prime contractors of making good faith efforts to meet the goals. Several suggested that more complete information on certified firms be accessible via the Internet, akin to firm profiles. General industry codes were felt to be too broad to permit targeted solicitations and negotiations. Highway prime bidders further sought a targeted list of construction firms that work on road and bridge projects, as a subset of the construction list.

Amongst non-MBE highway contractors, there was this very strong sentiment:

> *The State is basically setting it up to play "gotcha." And what we need instead is we want a "how to" list. And that ties back to the database where, if we go through all of the steps we will meet the goal by finding the folks we need, or we will be able to say, here is what we did, and we didn't meet it.*

MBEs in construction also concurred that more definitive standards for evaluating good faith efforts would bring more certainty and enforceable expectations to the Program. MBEs and non-MBEs in construction stated that the MDOT modes need one set of compliance documents; each one is different now. It would also be helpful if the other agencies tried to standardize their forms and procedures.

Meeting goals on task order contracts or indefinite delivery/indefinite quantity (ID/IQ) contracts is particularly problematic for both prime contractors and subcontractors. Because there are no concrete specifications in place at bid time, the prime bidder cannot fully and accurately develop its MBE utilization plan. Moreover, the MBEs listed have no guarantee of any amount of work and so cannot plan their own schedules. Many reported that they received little or no work in ID/IQ contracts. Further, prime contractors often had no significant subcontracting opportunities on a particular task, making it very difficult to meet overall contract goals. The very large State-wide Technical Services Procurement and Consulting Services Procurement contracts were notably frustrating for MBEs, who must market to all of the primes with no guarantees that they will ever receive work, even if they are successful in being added to those primes' subcontractor rosters.

One suggestion as to increase the amount of subcontractor participation that is "undesignated" at the time of bid, so that the prime contractor may apportion MBE participation as the project develops. One non-MBE recognized that

> *[A] year and a half from now when you are finally awarded the job, you get the task, and then six months after that when you finally have some work for an MBE to do, it is now two years later. You know, a start-up firm can't sit there two years with no money and expect to survive. So if it was undesignated dollars, we could call up and say, [MBE], I need you on this job, come on out. That would help.*

Another suggestion is to set aside single discipline smaller task order contracts for competition only amongst small firms (the Small Business Reserve Program's ceiling on firm size were felt to be too low for this purpose).

5. Efforts to Seek Work as Prime State Contractors

All small firms agreed that the size of many state procurements prevents them from competing. Everyone thought that "unbundling" contracts would help, over and above those solicitations selected for inclusion in the Small Business Reserve Program. Contracts could be broken out by region, for example. This would reduce the number of task order contracts, for which MBEs are mostly only able to participate as subcontractors.

> *[W]hen they bundle the contracts, they definitely impede the ability of a small business getting any work because now you have to go to this prime contractor, a [large firm], and try to establish a relationship. And even after you establish a relationship, it doesn't necessarily mean that they are going to give you the work.*

Several MBEs questioned accepted procurement professional wisdom that awarding contracts to large firms and bundling contracts results in savings to the State based upon economies of scale.

> *There is no money being saved. And I think that's why some of us are a little bit cynical on the small business side, too, because we know it's a joke. I could have done something for $60 that they were billing for $100 and some.*

Increased contract "bundling" or "strategic sourcing" by the State has hurt MBEs' chances to obtain prime contracts. This has made the MBE Program even more important.

> *[The Program] is coming up more now because of the bundling, because you can't go directly to these agencies, the state agencies, and market like you used to. So all these contracts are being bundled for all state agencies to go to, so that is how the MBE stuff comes up because these big companies that have the contracts, and they have a requirement.*

Many MBEs, and a good number of non-MBEs, believed that the State sets unreasonably high experience thresholds, bonding requirements, especially for non-construction projects, and insurance minimums. All these criteria seriously hamper their ability to compete as prime contractors, and as subcontractors when primes push down the State's bonding and insurance requirements. That small businesses often must pay more for bonds and insurance than larger established firms adds to the problem..

> *Most of those [experience] requirements were imposed because the majority contractors were looking for ways to hinder new entrants into the industry. So, they imposed those requirements. If a seven-year requirement, for example, is mandated, I am pretty sure with a five-year requirement you can competently and satisfactorily perform your job.*
>
> ***
>
> *I talked to 10 bonding companies. They're like, why would somebody put a bond on a computer programmer. It's not like you're doing a whole system. I was like, I don't*

know. This is what they want… But I don't have an issue if you are doing a system or if you have a large job. If you have one programmer and your client is asking you to bond them, I mean, come on. That's just ridiculous.

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[Insurance requirements] is something that the state can do something about. It does not depend on contractors.

The reliance on on-call design contracts was another factor felt to impede the success of MBEs in becoming prime consultants.

One of the things it does with the minority firms, particularly with engineering, is that you do a little piece of this or a little piece of that. You do the wetlands or the water resources on this project, but you never get to do the entire environmental impact statement or the entire process for anything.

MBEs providing IT services often stated that, despite their capabilities to perform as prime consultants, they were relegated to subcontracting work so that large majority prime consultants could meet their MBE goals.

What is happening now is when you are a minority business you are put in this bucket … and now, instead of competing for the whole pie, you are competing for a percentage. And for us that was tough. So we did a couple more state deals, but most of our business—probably now less than 10 percent of my business is with the state. And honestly, with the terms and conditions, the bundling, the bonding requirements, the blah, blah, blah, it really doesn't seem advantageous for us to go after it; for the amount of effort that it takes to go after this for the small piece of the pie. Once we started working with [State agency] we ended up having to go through their prime. Once we were certified as a minority business. And the prime told us we don't pay for 60 to 90 days, when I knew the customer paid them before we started the job. And as a small business you cannot afford you know, I can't pay people.

Given that the subconsultant work in design is often ancillary, those MBEs that want to work as prime consultants receive little value from the Program. They thought that the Small Business Reserve Program would be more useful, so long as the contracts are not very small and ceiling for Program eligibility is increased.

Accessing human capital was seen as a greater problem than accessing financial capital for design and professional services firms. Given the competition for engineering graduates, small firms have a hard time attracting and retaining good engineers. One firm expressed concern that large firms learn who on her staff provides quality work, and then hire them away with more money and benefits, because design is a very transparent industry.

Another problem for MBE professional services firms structured as partnerships is how to provide opportunities for people to move up without diluting the minority or female ownership to the point where the firm is no longer eligible for certification as a MBE.

One suggestion was that because MBEs may be charged higher interest rates than non-MBEs, the cost of financing the project be included as an allowable expense for design contracts.

Some design MBEs felt that the size standards in the Small Business Reserve Program are too low. In their opinions, $2M in annual revenue is just too small for engineering firms to grow into prime consultants on non-set-aside contracts. This was felt to be particularly problematic because MDOT issues very large on call design contracts that small firms cannot perform.

On non-construction contracts, some MBEs had been successful in partnering with other MBEs to form a larger team. This permitted them to pursue contracts that would have been beyond their reach as single entities.

Those MBEs seeking work as prime contractors suggested that the State follow the DBE Program regulations that permit certified firms to count their self-performance towards meeting the goals.[250]

IT firms in particular mentioned the need for more standardized contracting procedures.

One long established and successful minority construction firm owner wondered whether emergency procurements were being abused. He questioned whether MBEs are even contacted by agency personnel for sole source and emergency contracts.

> *There are no required goals on an emergency contract. So my point is the MBE loses out as a prime, and therefore, also loses out as a sub.*

Small firms stated that they need more access to information about how to file inquiries and bid protests. COMAR is seen as being very complicated. One suggestion was to appoint a small business ombudsman for each agency who would facilitate MBE participation, in addition to the MBE Liaisons.

6. Efforts to Obtain Private Sector Contracts

The great majority of MBEs reported that they achieved little success in receiving private sector work as prime contractors or as subcontractors. A few IT and construction firms had obtained contracts outside of government on smaller projects. Further, MBEs seldom or never were solicited or hired to perform on private sector contracts without affirmative action goals. Even prime contractors with which they had repeatedly done work on State projects did not contact them for non-goals work. MBEs saw the private sector as generally closed to them.

7. Contract Performance and MBE Program Enforcement

All types of firms and all types of owners believed that better coordination is needed between the State's project managers and the MBE program personnel.

[250] 49 CFR §26.55(a).

> *Neither one cares about the other. And these [prime contractors] are caught in the middle.*

MBEs pointed to substitutions of subcontractors by prime contractors as an area where lack of coordination hampered the Program. Some MBEs complained that there is little follow up by the State about whether the MBE listed as the subcontractor in fact is used on the project.

> *The onus is on the MBE, not on the prime or the state, and I'm just saying whatever MBE is on that contract, by golly they should stay there and the state should make sure they stay there because if you don't, you're going to have this flipping thing going on.*

A minority owner reported that when he was dropped from a subcontract by a very large prime contractor, he sought help from the State but the MBE liaison was not able to assist. No sanctions were taken against the prime contractor by the State. Another reported that

> *[W]hen it comes down to compliance, the minority people who are in charge they don't even have a copy of the [sub]contract. I mean, the basic thing. No copy of everything. They are supposed to be here talking about, well, we'll see if we get minorities in there and we will work with you and see whether or not you get it. But they don't even know what I am talking about.*

One suggestion was for the State to have a system to notify the subcontractors listed in the MBE utilization plan of the terms of the contract and when the notice to proceed was issued to the prime contractor.

Further, there was some skepticism about the State's monitoring of whether the MBEs serve commercially useful functions on projects, particularly for highly specialized subcontracting work. Several MBEs reported being asked to act as "front" companies, where their firm would be included with the bid but they would do little or no work for a small percentage of the contract price.

> *They meet their goals because there is really nobody enforcing and making sure that these contractors that they put down are doing the work or actually the ones they're using as opposed to just being named.*

On the other hand, some non-MBE prime highway contractors felt it is too difficult to substitute a non-performing MBE. Time lost to substitutions has resulted in liquidated damages assessed against the general contractor.

A non-MBE prime construction contractor stated that they are concerned about the ambiguous nature of compliance on task order contracts.

> *And so we are trying to, from a business standpoint, figure out if they cannot give us task orders under these open ends where we can use these MBEs they had us put on the contract, how are we going to suffer if we don't meet that percentage? And we are not really sure how that is.*

Some agencies were reported to do a better job than others at Program monitoring. Among those mentioned were the University of Maryland, the Judicial Information System, MAA, MPA and MTA. Some MBEs reported that MDOT has supported them in seeking design work.

Several MBEs stated that they have seen improvement since the Lieutenant Governor's Task Force made recommendations for improvement to the MBE Program. They recognized that these changes will take time to make a difference.

Most MBE construction firms supported the change to the "10 day rule," whereby bidders must submit their utilization plans within 10 days of notification of being the apparent lower bidder. So did many non-MBE prime bidders, with the caveat that utilizations plans should not be amended to increase MBE participation after submission at bid time.

In the end, all MBEs agreed that better monitoring is crucial.

> *You can pass the laws that you want to say you are doing this, you can set all the programs, gather statistics and all of that, but if the program is not monitored, it tells you that the people that are in legislation are not interest in stopping any type discrimination or disparity against small businesses or whatever. They are not interested.*

Electronic data reporting and tracking systems that increase the State's capacity to monitor contracts, as well as the transparency of the process, would be major improvements.

8. Support services for MBEs

There was broad consensus that MBEs need more assistance. This includes support for bonding, financing, safety compliance, quality control, estimating, marketing, accounting, and legal services. White male construction owners focused specifically on increasing MBEs' proficiency in estimating prices and negotiating contract terms. They recognized that construction is largely a family-owned industry, and that minorities, particularly Blacks, lack the human capital of role models and mentors provided by family members and associates.

Minority and majority firms across all industries repeatedly agreed that one stop shopping for services and information for MBEs would help; MBEs should be "besieged" with information. State purchasing is broadly diffused, and more help navigating through the bureaucracy was needed. Few firms were aware of the Governor's Office of Business Advocacy's efforts to assist businesses to contract with the State.

> *It's almost like it's stuff all over the place, but you can't compete successfully.*

While many firms had some familiarity with eMaryland Marketplace, many were confused about whether there is a cost if they are successful bidders and what they felt is the complexity of the process. There was also some confusion about which procurement opportunities are posted there. MBEs also mentioned the need to identify to whom to market their services in each agency. The MBE liaisons were not considered to be very knowledgeable in all cases about overall procurement policies and procedures.

Minority and majority firms felt that mentor-protégé initiatives would be helpful. The State has instituted a program for construction, and non-construction firms felt that this approach should be expanded to other industries. It was remarked, however, that the initiative is likely to work best if the mentors are very large firms, who have little to fear from MBEs, rather than mid-sized firms that may well be reluctant to grow their potential competition. In any event, significant incentives to participate will probably be needed, *e.g.*, credit towards meeting MBE goals, reimbursement for participation costs, etc.

Some non-MBE general construction contractors believed that to be certified, MBEs should be required to create business development plans, similar to those mandated for participation in the SBA 8(a) Program. While some MBEs agreed such plans would be useful, most opposed instituting such a requirement, especially for mature firms possessing extensive credentials.

Mobilization funds are a problem for many MBEs. The need to purchase supplies or equipment to begin work hampered their ability to submit prime bids or to perform as subcontractors. They supported a program to award mobilization funds from the first few progress payments.

9. Payment

Most firms complained about slow payment from the State. Even the large prime contractors experienced significant delays, which flowed down to their MBE subcontractors. According to one large general contractor,

> *I think a lot of it is due to the inexperience or the lack of training of a lot of their project managers. They just get your work, they push you to get the job done and once they get that done they feel their hands are clean. They are through. And I say what about my invoices that are coming in and what not? Oh, you want to get paid? I mean, they look at me like I'm pestering or something and so forth, and then they constantly throw work on you. And you hate to turn the work down because it is good work.*

This description was in stark contrast to many federal agencies that now pay through electronic funds transfers. The State has recently adopted electronic funds transfers for its payments; however, vendors appeared to be unaware of this change.

MBE subcontractors working outside of MDOT complained about late payments by prime contractors, and their inability to obtain assistance from the State.

> *[E]very month we had to submit a status report on our payments, on our invoicing and payments, to the MBE office of a particular department. We were six months behind in payments and they were still getting—every month we would send this thing…. We got into five and six months where sometimes we would submit this form, and it was only just supposed to be the date of your invoice, the amount of your invoice, that sort of thing, and the invoice number. We got to the point one time where we had three or four pages of this report that we were submitting with single lines of invoices that we had submitted that were unpaid. And nobody from the office, the contractor officer or whatever or, you know, the MBE person in that department, never once called that prime into question about it, as to why they were so far behind on payments…. [W]e were basically playing*

> *bank for this prime…. [F]ortunately for us we wouldn't be in business today if we hadn't gotten credit to finance our receivables… But even then, it costs us an inordinate amount of money because the interest that we are paying on that financing was significant because we couldn't control when the prime would pay that money off.*

There was praise for the State Highway Administration's recently created website that allows subcontractors to track the status of payments to their prime contractors. In fact, the MDOT modes were seen to do a better job of responding to payment problems than other agencies. However, non-MBE subcontractors felt that they did not receive the same level of concern as MBEs about payment.

Retainage was often mentioned as a particular problem for MBEs. Even when they have completed their portion of the work, the prime contractors will not pay the full amount because the State is holding the prime contractors' retainage, which includes the subcontractors' portions as well. The suggestion was made that the State release all the retainage if the subcontractor's portion of the job has been completed and accepted by the agency.[251]

Some MBEs found the monthly forms confirming payments to them as subcontractors to be too burdensome when their portion of the project was completed or had yet to start.

10. Discrimination complaints

Few MBEs had attempted either to file formal complaints with the State or to pursue legal action about discrimination. They were deeply concerned that little would be accomplished, and that they would likely suffer retaliation from the prime contractor or State personnel or both.

> *I am going to very, very concerned and I am going to be very, very careful in terms of how I tread on that.*

A MBE who did complain to the agency's purchasing director remained fearful that he would suffer as a result.

> *I don't know if doing this process now our company is black marked because of my efforts, because I took it to Annapolis.*

11. State Personnel's Roles and Responsibilities

We also interviewed MBE Liaisons and other agency procurement personnel about their experiences with the Program, and their roles and responsibilities. In general, MBEs reported that the MBE Liaisons could be more effective. The Liaisons' lack of involvement in the management of the contract reduces their ability to address Program issues. The overall consensus was that the MBE Liaisons lack the authority to resolve problems.

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[251] *See* 49 CFR §26.29(b) ("You must ensure prompt and full payment of retainage from the prime contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed.").

> *There is no resource. You tell them, they already know, you sit down; it's just like a show to go through the process, but nothing comes out of it." One construction subcontractor reported that she "had two meetings with the oversight committee. They know the situation. We had correspondence back and forth. And still, I walk onto that site where my contract is a four-year contract, two years of it has gone, people are putting up signs that I did not put up and nothing is done.*

Liaisons and agency procurement staff generally agreed with that assessment. Some Liaisons performed other procurement functions, especially in the smaller agencies and universities. This lessened the focus upon MBE issues and compliance. Some reported that one person is responsible for everything related to the Program, including goal setting, vendor outreach, pre-bid conferences, bid or proposal reviews, site visits, data tracking, and reporting to oversight agencies. Some fair practices offices further are responsible for compliance with the Americans with Disabilities Act, employee assistance programs, drug testing, equal employment opportunity compliance, and other issues. This overload was reported to lead to less than effective contract compliance monitoring and staff burnout.

> *We really don't do compliance because we don't have the staff to do compliance. We're very reactive. If we get a complaint, we will investigate the complaint. But as far as being proactive to make sure that what is said was going to be done is done, we don't have the staff for that.*
>
> *The resources or the people are just not there when it comes to the compliance part. I mean, it is barely there for your goal recommendations, goal setting, keeping all of the data together and keeping those numbers straight. But when you come to the part where you really have to deal with the contract once it is awarded, then that is where your fears come in because you know you cannot keep up with the abundance of contracts that an agency might have.*

Even the larger agencies like MDOT have insufficient resources. A single compliance officer cannot process the volume of agency contracts.

> *[W]e have 1200 contracts and we have one chief compliance officer, and if that person did compliance reviews all day every day, there is no way possible that that one person could do all of the compliance reviews. What we have been able to do to supplement that is, one, we are reactive. We identify a lot of red flags, and we also lean on other team members and other partners, as far as our project engineers and our project managers.*

A lack of good compliance monitoring software further weakened the Liaisons' effectiveness.

> *I think the biggest challenge that I'm dealing with is compliance with payments and tracking the paperwork and getting both the primes and the subs to submit the paperwork in a timely way to keep us informed of the payments.*

There was consensus that a software system that holds prime contractors payments until all compliance documents are presented with the pay application would instantly create greater compliance and ease staff burdens. This would help to address the fact that the project managers who approve payments are not the people responsible for the MBE Program. Further, any data

tracking system must interface with the agencies' non-standardized financial managements systems.

> *It takes weeks, literally weeks of manual time on our end, and I know my colleagues will say the same thing, to get a report out of your financial management system and just to make it make sense. So, it is very labor intensive and it is not simple to do the administration of the [MBE] report.*

Liaisons were particularly concerned about their effectiveness on non-construction contracts. Purchasing cards issued to senior agency staff were very difficult to monitor, such that those purchases often seemed beyond the reach of MBE compliance.

University officials responsible for concession contracts expressed frustration that they were held to meeting goals for MBE participation but those dollars are not "credited" to them as part of MBE reporting. Concessionaires' payments to the State are not counted in the agencies' dollars spent, and they suggested that concession dollars be tracked and reported.

> *[B]ecause of the way the MBE Program is structured, even if we had, say, a 25 percent MBE goal on a McDonald's operation that was on campus, since there are little to no university dollars actually going into that, what we report back to MDOT in our Minority Business reports are – our spend is what the university expended. And then we measure MBE dollars against that, Well, if we didn't spend the money, you now, it doesn't do anything for the Program. At least, on paper.*

Concession goals were further difficult to meet for campuses that performed most of their services, including food service, with in–house employees. MBES were sometimes perturbed that the universities have so few subcontracting opportunities and felt that privatization of many services should be explored.

There was also a widely shared perception that most agency personnel do not believe they are responsible for the success of the MBE Program; it is the Liaisons' problem.

> *MBE is your Program. That is your responsibility. You need to take care of that and how do you really get the project managers or the people [in the agency] that is using the P-cards, or whatever their responsibility is as far as purchasing goes, to remember that MBE Program and to really take what we are teaching them and utilize it?… [A]ccountability has got to be more than just an MBE liaison.*

Outside of MDOT, there was concern from State personnel that Liaisons were too far removed from senior management to effectively advocate for MBEs. Moreover, MBE staff did not routinely sign off on contract awards, prime contractor payments or contract closeouts.

Liaisons reported spending a great many hours trying to locate MBEs for their often specialized projects. eMaryland Marketplace's database is not merged with the MDOT MBE database, and the two do not use the same procurement codes. One participant gave this example of the difficulties in using existing data sources:

> *We are doing a procurement to buy a portal; just off-the-shelf software. The MDOT database has hundreds, almost 1000 companies, that have some kind of IT software product description that they provide. There is no way to use that database to find your set of companies to bid. We can put it on E-Maryland Marketplace, but we also want to encourage MBEs as primes. We want to seek them out. How do you find them to include them on your list? What I chose to do was I contacted probably 20 people in the State and said we have this procurement coming out. Can you help me? And then they sent me back firms. I couldn't use the tools that are provided by the State, and that is labor intensive. You can't do that for every procurement.*

Firms suggested that more training in the agencies' substantive area as well as State procurement policies and regulations was needed. Liaisons, on the other hand, thought they needed more training in the various reports they must generate. There was also some frustration over why certain information was required in reports and to what ultimate objective. Staff felt that they were not consulted about reporting systems, data and purposes.

Many officials urged that each agency have a MBE goal based upon the types of purchases it makes, akin to contract goal setting. Thus, for example, a university that buys highly specialized equipment for which there is little or no MBE availability should not be held to the State's overall goal of 25 percent. Utility payments were also frequently mentioned as large expenditures for which MBEs are not available. Some officials felt they were being penalized for procurements over which they have no control, especially where meeting the Statewide goal is part of their personal performance appraisals.

Without exception, Liaisons and procurement staff urged the provision of more State supportive services to increase MBE capacities. In addition, more efforts to certify eligible firms must be made.

12. Maryland's Race- and Gender-Neutral Programs

a. Small Business Assistance

Many MBEs were virtually unaware of the State's extensive programs to assist small businesses. Given the need for increased supportive services for MBEs, greater dissemination of information about existing help would facilitate the development of MBEs across industries.

Few firms had any familiarity with the State's small business lending programs. However, two MBEs had received surety bonding through Maryland's Small Development Financing Authority. While the process was "tedious," they were successful and able to perform on projects. Another business had used successfully the Authority's programs.

> *[Our firm] would not have made it if it hadn't been for MSBDFA, because when you can't get a line of credit at banks, nobody wants to talk to you, if it wasn't for them backing [the owner] and making sure she could meet her payrolls and stuff like that, I don't think she would have made it.*

b. Small Business Reserve Program

There was overall support for the recent creation of the Small Business Reserve Program. Some MBEs stated that more monitoring of the self-certification process is needed. There was concern about the possibility for fraud, in reports of firm size as well as the creation of affiliates of large firms to take advantage of the set-aside. It will hurt MBEs if ineligible firms are able to take away work that should have gone to a legitimate small firm.

State personnel raised a different issue. Some contended that an unintended drawback of the Program as it currently exists is that a large majority of firms on the State's vendor listing qualify as "small," thereby reducing the utility of the effort to assist firms that encounter barriers to State contracting while increasing the administrative burden. Some suggested lowering the size standards to more precisely target very small businesses.

On the other hand, many MBEs felt that the size ceiling for the Reserve Program was too low to allow them to grow in their industries. Businesses that have grown beyond the "micro" stage also sought protection from head to head competition with large and long established firms, particularly in the construction, design and IT industries.

X. Recommendations for Revised Contracting Policies and Procedures

As detailed above, we conducted a through examination of the evidence regarding the experiences of minority- and women-owned firms in Maryland's geographic and procurement market places. To meet strict scrutiny, we have analyzed evidence of such firms' utilization by the State on its prime contracts and subcontracts, as well MBEs' experiences in obtaining contracts in the public and private sectors. We gathered statistical and anecdotal data to provide the State with the evidence necessary to consider whether it has a compelling interest in remedying identified discrimination in its market place, and if so, how to narrowly tailor any race- and gender-based remedies adopted. Based upon our results, we make the following recommendations. Many of these suggestions were contained in the2002 Legislative Audit and the Report of the Governor's Commission on Minority Business Enterprise Reform.

A. Implement Race- and Gender-neutral initiatives

1. Continue the Small Business Reserve Program

Maryland should continue to implement this important race- and gender-neutral program. As discussed in the focus groups, there was general support for this new initiative, and firm owners and State personnel recognized that it will take time to achieve results. Some State personnel felt that there was inadequate publicity when the Program was inaugurated, and that they had to personally encourage vendors to sign on. They expect that as more firms learn about the set-aside more will become certified; some predicted a drop in MBE participation when that occurs.

To support small businesses' success as prime vendors, Maryland should provide additional support with payment issues, increased mobilization payments to prime contractors and a "linked deposit" initiative whereby small prime contractors awarded contracts through the Program could use State contracts are collateral for loans from the State's depository institutions at lower interest rates and reduced credit standards.

The State should also consider raising the size standards for Program eligibility. The ceilings of 25-100 employees, depending upon the industry, and overall average gross sales of $7,000,000 for construction and $2,000,000 for all other industries are so low that only the smallest firms can participate. Yet, firms greater than these threshold are often not able to compete against much larger firms that dominate their industries, and so receive little benefit. The SBA size standards, also applicable to the DBE Program for federally-assisted transportation contracts, could serve as the basis for evaluation of Maryland's limits.

Finally, it is important that race and sex data be collected on firms participating in the Program. This will facilitate the next study of the MBE Program, which should include review of the effectiveness of the Small Business Reserve Program in remedying disparities on a race- and gender-neutral basis, and the effect, if any, of the small business set-aside on participation in the MBE Program.

2. Increase Contract "Unbundling"

While Maryland has made strides to segment contracts to facilitate bidding by MBEs and small firms, further efforts should be made. This approach was endorsed by MBEs and non-certified prime contractors. In conjunction with reduced insurance and bonding requirements, smaller contracts should assist firms to move from quoting solely as subcontractors to bidding as prime contractors.

3. Review Surety Bonding and Insurance Requirements

Maryland should review surety bonding and insurance requirements to ensure that amounts are no greater than necessary to protect the State's interests. There was widespread agreement amongst MBEs, non-MBEs and State staff that more particularized requirements would greatly assist all firms. This might include reducing or eliminating insurance requirements on smaller contracts, adopting standard professional liability insurance limits, and removing the cost of the surety bonds from the calculation of lowest apparent bidder on appropriate solicitations. There was also some support for owner controlled insurance programs for large projects, wherein the State would purchase an insurance policy for a project that would provide umbrella coverage for all businesses working on that project.

4. Enhance EMaryland Marketplace and Facilitate Firms' Registration and Bidding

Maryland should enhance eMaryland Marketplace to provide email alerts to businesses based on accurate and easily understood lists of contractor and solicitation services and products. Small firms reported that is was difficult to access information on potential opportunities and information was too scattered. Waiving the registration fee or other costs for small firms would also facilitate their participation.

The recommendations of the Governor's Task Force on Centralized Bidder Registration should be given serious consideration. The creation of a single central place where vendors can register their interest in bidding state contracts would assist all firms, but particularly those too small to have dedicated marketing staff.

5. Review Prequalification and Experience Standards

There was some support for adding an evaluation criterion of compliance with affirmative action policies, especially for professional services firms engaging in qualifications based selection processes. This would include the applicant's employment of minorities and women, especially as owners and managers, utilization of MBEs on State contracts, and solicitation and utilization of such firms on non-goals projects. While not tied to a contract goal, emphasizing diversity was thought to assist MBEs by creating the employment opportunities that can lead to entrepreneurship.

Some construction and design MBEs believed that the State sets unreasonably high experience thresholds that eliminate their ability to compete. These standards were viewed as anti-competitive and drafted for the benefit of big firms already doing State work. Maryland should

review qualification requirements to ensure that MBEs and small firms are not unfairly disadvantaged and that there is adequate competition for State work.

6. Review Bidding Procedures

Several State officials recommended simplifying the bidding process. One concrete suggestion is to increase the threshold for informal bids. This will encourage smaller firms to submit bids as well as reduce government paperwork and contract lead times.

7. Ensure Prompt Payments

All firms complained about slow payment by the State. Change orders were especially problematic. An electronic contract tracking system, whereby contractors and subcontractors could see where the prime contractor's invoice is in the process, would be helpful. It would also facilitate subcontractors' ability to know whether and when their prime contractor has been paid. This addresses the complaint by subcontractors that prime contractors often withhold payment unnecessarily, despite the requirement that prime contractors "pay when paid."

8. Ensure Bidder Non-Discrimination

Many MBEs voiced concerns that prime contractors were not soliciting their subcontractor quotes in good faith on State projects, and failed to solicit them at all on non-goals projects. To investigate this, Maryland could require bidders to submit all of the subcontractor quotes received on larger projects. The prices and scopes can then be compared to ensure that bidders are in fact soliciting and contracting with subcontractors on a non-discriminatory basis. A similar approach was part of the court-approved DBE plan for the Illinois Department of Transportation.[252]

9. Adopt a Commercial Non-Discrimination Statute

An important race-neutral measure is the creation of a statute outlawing discrimination on the basis of the firm owner's membership in a protected class in the solicitation, award or performance of a public or private contract. To be most effective, such a law should include an administrative scheme, similar to that for employment claims, that can provide more streamlined and timely relief than traditional litigation. It would also be useful to create a right of enforcement by the Attorney General independent of the private right of action.

10. Provide Business Development Assistance and Contract Training

There was broad consensus that offering additional business development assistance to MBEs and small contractors is necessary. Management, technical, technology and financial services, with defined performance measures, are crucial to the overall objective of increasing these firms' competitiveness and market access. In addition, numerous primes and State staff reported that

[252] *Northern Contracting II*, at 87 ("IDOT requires contractors seeking prequalification to maintain and produce solicitation records on all project … Such evidence will assist IDOT in investigating and evaluating discrimination complaints.").

MBEs need training in how to bid State work and administer contracts. Many problems could be avoided or lessened if smaller firms better understood Maryland's requirements for bidding, invoicing, processing change orders, closing out projects, etc. Perhaps workshops could be offered by the State or individual agencies about how best to conduct business.

More efforts to publicize the State's extensive existing programs for small businesses should be made, as most MBEs were unaware of the services they can currently access.

11. Adopt an Internship Program

The State could implement an internship program for young adults, particularly those interested in the construction and design industry. Participants would work with State agencies to learn about the relevant skills, develop personal networks for mentoring, and become conversant with government procurement policies and procedures. Perhaps agencies could collaborate with the Universities and local educational institutions to provide course credit for participation. While open to all, such an initiative would target underrepresented minorities and women.

B. Implement Race- and Gender-Conscious Remedies

Based upon this Study, Maryland has a firm basis in evidence to implement a race- and gender-based program. This record establishes that minorities and women in the Maryland marketplace continue to experience statistically significant disparities in their access to private sector contracts and to those factors necessary for business success, leading to the inference that discrimination may be the cause of those disparities. Further, individuals recounted their experiences with discriminatory barriers to their full and fair participation in the State's contracting activities as well as in the private sector. The Study provides the statistical and anecdotal evidence to answer in the affirmative the question whether there is strong qualitative evidence that establishes Maryland's compelling interest in remedying race and gender discrimination. There is ample evidence that affirmative intervention to dismantle the vestiges of the private sector system of racial and gender exclusion. To the contrary, continuing the use of MBE goals would clearly not be motivated by the illegitimate racial stereotypes or bias, or blatant racial politics, that strict constitutional scrutiny seeks to "smoke out." Unless it takes action, Maryland will likely be a passive participant in a discriminatory marketplace.

In adopting a new MBE statute, Maryland should revive the general outlines of the prior Program and consider the following new approaches.

1. Review Program Eligibility Criteria and Processes

In general, there was praise for the State's certification process and staff. Most firm owners understood that the strict application of rigorous standards was necessary for Program integrity. There were assertions that "front" companies still slip through the process, especially those owned by white women with family ties to the industry. Vigilance must be maintained to ensure that only those truly disadvantaged by their race or gender receive the benefit of the preference.

The State should also review its guidelines for adding areas of specialty to a firm's certification. Overly rigid categories and tests can impede a MBE's ability to grow and succeed.

There was agreement amongst many firms, non-MBEs and MBEs alike, that the State's certification lists were unwieldy and often vague and outdated. Poor lists also increase the burden on prime contractors of making good faith efforts to meet the goals. It would be useful to provide more complete information on certified firms via the Internet, akin to firm profiles, listing the industry codes and capabilities of MBEs.

Finally, additional outreach to uncertified minority- and women-owned firms is critical. The Study identified many businesses owned by minorities and women that are not State certified. This gap makes it difficult for agencies to meet goals reflecting estimated MBE availability with currently certified firms. More targeted contract goal setting, based upon the certified list, will help to alleviate this problem in the short term, but the State should aggressively pursue firms certified with other governments (cities, counties, etc.), as well as those identified through the Study, to encourage applications.

2. Refine MBE Goal Setting

a. Set Overall, Annual Aspirational MBE Goals

The Study's estimates of the availability of M/WBEs in Maryland's construction and design market place are provided in Chapter IV. These form the starting point for consideration of setting overall, annual aspirational targets for State spending with MBEs. This snapshot of firms doing business in Maryland's geographic and procurement market place does not *per se* set the level of MBE utilization to which the State should aspire. As discussed in Chapters V and VI, current MBE availability is depressed by the effects of discrimination. A case can be made for setting goals that reflect a discrimination-free market place rather than the results of a discrimination infected market place.[253] However, since Maryland's utilization of MBEs is much below the estimates of current headcount, the most narrowly tailored and achievable approach is to use those estimates as the basis for overall targets.

To meet the State's overall goals, it would be helpful for each agency to develop an annual plan for projected MBE utilization. This plan would detail the anticipated procurements and the level of MBE participation the agency will seek to achieve.

b. Set Contract Specific Goals

Regardless of whether and on what basis the State adopts overall, annual aspirational targets, the courts insist that governments set goals on particular contracts much more narrowly. Contracts goals cannot simply be the rote application of the annual goals. Contract goals must be based upon the demonstrated availability of MBEs to perform the anticipated weighted scopes of the project's subcontracting, as well as the agency's progress towards meeting its overall, annual goals. While it is certainly easier to apply the statutory goals to each contract, to do so may be

[253] *See* 49 CFR §26.45(d)(DBE goal must reflect the recipient's "determination of the level of DBE participation you would expect absent the effects of discrimination").

held to be constitutionally fatal. It also increases the burden on bidders and State personnel of compliance reviews on unrealistic targets. Narrowly tailored contract goals will also reduce vendors' temptation to use brokers, who add little value to the transaction other than goal credit or to make contractual commitments that will not be kept.

This Study's availability estimates provide an objective starting point for contract goal setting. Contract goals may be higher or lower than the annual goals. Indeed, if there are few or no subcontracting opportunities, no goals should be set. Particular attention should be paid to contracts involving special trades or services in which there are few subcontracting opportunities and plentiful MBE availability, to ensure that bidders are not being asked to make good faith efforts to subcontract to their direct competitors..

In addition, the size of the contract is relevant to goal setting: if the subcontracting opportunities are small, perhaps a goal should not be set, as the costs of compliance outweigh any benefits to MBEs. Another approach would be to aggregate the usual statutory goals into one or two goals, to provide a larger subcontracting portion on projects without three distinct scopes of potential subcontracting A comprehensive data tracking and contracts monitoring system will ease the burdens of contract goal setting. If the State finds that it is meeting or exceeding its annual goals, it should consider reducing the use of contract goals to ensure that the Program's implementation remains narrowly tailored.

Further, State staff recommended that the MBE Liaisons be included as early as possible in the contracting process, This will facilitate consideration of MBE issues and provide earlier opportunities to reduce contracting barriers for such firms.

It is often difficult to set goals on "on call" or "task order" contracts because the scope of the work is not fully developed, prohibiting a complete MBE utilization plan. Moreover, the MBEs listed have no guarantee of any amount of work and so cannot plan their schedules. Prime contractors acting in good faith often had no significant subcontracting opportunities on a particular task, making it very difficult to meet overall contract goals and creating ambiguity about contract compliance. One suggestion was to increase the amount of subcontractor participation that is "undesignated" at the time of bid, so that the prime contractor may apportion MBE participation as the project develops. Another suggestion was to set aside smaller single discipline task order contracts for competition only amongst small firms (the Small Business Reserve Program's ceiling on firm size were felt to be too low for this purpose).

Finally, Maryland should bid some contracts it determines have significant opportunities for MBE participation without goals. These "control contracts" will illuminate whether MBEs are used or even solicited in the absence of goals. Such unremediated markets data will be probative of whether Maryland still needs to implement MBE goals to level the playing field for its contracts.

3. Review Contract Award Procedures

Once goals have been set on a contract, it is critical that standards for contract award be clarified, standardized and enforced.

a. Determination of Commercially Useful function

All proposed MBE utilization must be carefully evaluated to determine whether the firm is serving a commercially useful function. Even a firm that is legitimately owned by a minority or woman can be used as a "pass through" or "front" on a specific contract. Commercially useful function means responsibility for the execution of a distinct element of the work of the contract and carrying out the MBE's responsibilities by actually performing, managing, and supervising the work involved, or fulfilling its responsibilities as the joint venture partner. Some MBES and non-MBEs stated that brokers are often used to meet goals, particularly in industries with little subcontracting. It should be noted that the setting of contract goals based upon the real subcontractable scope of work should reduce the incentives to claim credit for work that is not commercially useful to meet artificial goals.

b. Good Faith Efforts reviews

The courts have categorically held that strict scrutiny's flexibility test requires that waivers of goals be available to a bidder who made good faith efforts. A bidder who makes good faith efforts must be treated the same as one who met the goals. To do otherwise— that is, to favor utilization above good faith efforts— will likely be held to be an impermissible race- and gender-based quota. That so few waivers were granted by the City of Chicago was a major cause of its M/WBE Program's constitutional infirmity.

Many non-MBEs reported that they believed that waivers were not available, especially on professional services contracts. This misperception needs to be corrected and accurate information about the waiver standards and process fully disseminated.

Maryland should consider revising the "10 day rule" governing the submission of utilization plans to prohibit post-submission changes to the plan. Prime contractors, especially in construction, felt that this encouraged bid shopping in contravention of standard industry practices because an otherwise low and responsible bidder who failed to meet the goal(s) is encouraged to continue to try to obtain participation after bid opening. They also asserted the MBEs will sometimes raise quotes once the low bidder is identified. Some State personnel also felt that this practice was counterproductive, because it encourages prime bidders to low ball their MBE participation in hopes of being the low bidder and after bid opening "beat up" the MBEs to lower their prices, or to propose questionable participation to meet the goals.

c. Counting MBE Participation

The State should consider new approaches to granting credit towards meeting contract goals, in conjunction with current policies. At least four recommendations from the focus groups merit serious attention. First, MBEs, especially in construction, are too often concentrated in less profitable and more precarious subcontracting trades, such as trucking and demolition. This also burdens non-MBEs who compete for these subcontracts. To partially address this outcome of the capital and other constraints faced by MBEs, Maryland could award extra credit towards meeting a contract goal for the use of MBEs in non-traditional or less utilized scopes of subcontracting.

Second, newer firms found it difficult to convince prime contractors to use them to meet goals. Extra credit towards a contract goal could be given for the one time use of a newly certified MBE or a MBE with which the prime contractor has not previously done business.

Third, some programs provide credit towards meeting a government's contract goal for utilization of MBEs on private sector contracts. While difficult to monitor, it would help to create opportunities for MBEs in the private sector, where they face the greatest barriers to full and fair participation and where profit margins are often higher and bureaucratic burdens are lower.

Finally, for professional services contracts, the State could review a proposer's employment of minorities and women in ownership and senior positions, and give some credit towards a contract goal for exemplary internal affirmative action. This recognizes the reality that tomorrow's entrepreneurs are today's senior managers, and that successful minority and women partners and principals may have the capital and networks to invest in businesses started by other minorities and women. It also provides the broad experience that could lead to the creation of full service firms, beyond the niche markets created to respond to subconsulting goals. Given that in the short term there is low availability of minorities, especially Blacks and Hispanics, in many professions, this concept, while longer term, may yield results.

4. Monitor Contract Performance

Once a contract with MBE commitments has been awarded, it is crucial that those commitments be monitored and that sanctions for non-conformance with the contract be credible. Perhaps the most common criticism of the operations of the MBE Program (excluding MDOT) is the lack of consistent contract monitoring. MBE Liaisons are too overwhelmed to conduct thorough ongoing compliance audits, and contract closeout is very late in the process to determine that a prime contractor has failed to utilize MBEs or that firms have not been paid. The implementation of the planned comprehensive data tracking and monitoring system is a necessary element of a successful Program. Further, MBEs and other subcontractors need access to information on when the prime contractor received the notice to proceed and when progress payments have been made.

5. Enhance Program Administration

Many focus group respondents described what they felt was the lack of training for MBE Liaisons in procurement policies and procedures, and the lack of training for procurement officials in the intricacies of the Program. The increased use of purchasing cards exacerbated the problem of accountability. More education and information will make for better Program outcomes, as well as reduce frustrations for vendors and state personnel. The State should consider centralizing oversight of the Program in GOMA, with staff responsible for a group of agencies and interfacing with their MBE Liaisons.

Liaisons sought the same level of authority to review contracts as other procurement officials, to enable them to promote the Program's objectives and troubleshoot problems with MBE issues. Better coordination between the MBE officials and the project mangers was mentioned by all types of firms and all types of owners as vital to Program success.

Minority and majority firms across all industries repeatedly agreed that one stop shopping for services and information for MBEs would help; MBEs should be "besieged" with information. State purchasing is broadly decentralized, and more help navigating through the bureaucracy is needed. Several owners suggested that GOMA should serve the clearinghouse function for MBEs and prime contractors,

An enhanced MBE Program cannot be implemented without additional resources. GOMA will require more staff to conduct outreach and disseminate information, and to monitor contractor performance and agencies' progress towards meeting the overall annual goals. Liaisons strongly urged that they be provided with more resources to effectively administer the Program; many had too many roles and responsibilities to devote the time needed for quality administration.

6. Develop Performance Measures for Program Success

Virtually all focus group participants agreed that greater support to develop and grow M/WBEs is needed. While recognizing the systemic barriers faced by minorities and women in the construction industry, developing quantitative performance measures for certified firms and overall Program success would provide benchmarks for evaluating the Program. Possible benchmarks are the achievement of business development plans similar to those used in the Small Business Administration's 8(a) Program, including revenue targets for certified firms; increased prime contracting by MBEs; and increased graduation rates. It will be important to track the progress of graduated firms to evaluate whether they succeed without the Program, and if not, why not.

7. Periodically Review the Program

Maryland should include the longstanding and prudent legislative requirement that the Program be reviewed every five years, and that only if there is strong evidence of discrimination should it be continued. The Program's goals and operations must also be evaluated to ensure that they remain narrowly tailored to current evidence. A sunset date for the statute providing that the Program will end unless reauthorized should be included.

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NERA
Economic Consulting

NERA Economic Consulting
1006 East 39th St.
Austin, Texas 78751
Tel: +1 512 371 8995
Fax: +1 512 371 8996
www.nera.com