COLETTE HOLT
& ASSOCIATES

THE STATUS OF MINORITY- AND WOMEN-OWNED BUSINESS ENTERPRISES RELEVANT TO CONSTRUCTION ACTIVITY IN AND AROUND COOK COUNTY, ILLINOIS

SUBMITTED BY
COLETTE HOLT & ASSOCIATES
NERA ECONOMIC CONSULTING

JUNE 22, 2010

1730 NORTH CLARK STREET
SUITE 4007
CHICAGO, IL 60614
312.846.1438
COLETTE.HOLT@MWBELAW.COM

PROJECT TEAM

COLETTE HOLT, J.D., COLETTE HOLT & ASSOCIATES

JON WAINWRIGHT, PH.D., VICE PRESIDENT, NERA ECONOMIC CONSULTING

KIM STEWART, M.S., RESEARCH ANALYST, NERA ECONOMIC CONSULTING

J. WESLEY STEWART, RESEARCH ASSISTANT, NERA ECONOMIC CONSULTING

Table of Contents

List of Tables

I.   Executive Summary

A.   Introduction

Cook County's Office of Contract Compliance commissioned this Study on the status of Minority- and Women-Owned Business Enterprises ("M/WBEs") relevant to construction activity in and around Cook County.   The Study addresses the requirements of strict constitutional scrutiny applicable to race- and gender-conscious contracting programs, and was mandated by the Minority- and Women-Owned Business Enterprise Construction Interim Ordinance, effective in 2007. The County retained Colette Holt & Associates, in conjunction with NERA Economic Consulting, to provide statistical and anecdotal information on the availability of M/WBEs to perform County construction prime contracts and subcontracts, and the operations of the interim M/WBE Construction Program. The Study presents evidence relevant to the County's consideration of whether to implement renewed M/WBE policies that comply with the requirements of the courts and to the County's assessment of the extent to which previous efforts have assisted M/WBEs to participate on a fair basis in the County's construction contracting and procurement activities. We were also asked to make recommendations for Program revisions and future data collection.

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

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

Chapter III: What is the relevant geographic market for Cook County and how is it defined?

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

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

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

Chapter VII: What is the history of the County's race- and gender-based contracting programs? How effective have these efforts been in remedying

discrimination and providing opportunities to M/WBEs? What were some of the most frequently encountered comments from M/WBEs and non-M/WBEs concerning the County's contracting affirmative action programs?

Chapter VIII: How should the County revise its M/WBE construction initiatives?

In assessing these questions, we present in Chapters III through VII a series of quantitative and qualitative assessments that compare minority and/or female outcomes to non-minority male outcomes in all of these business-related areas. The Executive Summary, above, provides a brief overview of our key findings and conclusions, and Chapter VIII, below, presents our recommendations for a revised M/WBE construction program for Cook County.

B.   Legal Standards for Government Affirmative Action Contracting Programs

To be effective, enforceable, and legally defensible, a race- and gender-based program must meet the judicial test of constitutional "strict scrutiny." Strict scrutiny requires current "strong evidence" of the persistence of discrimination, and any remedies adopted must be "narrowly tailored" to that discrimination. Applying these terms to government affirmative action contracting programs is complex and constantly shifting, and cases are quite fact specific. Over the last 21 years, federal appellate and district courts have developed parameters for establishing a county government's compelling interest in remedying discrimination and evaluating whether the remedies adopted to address that discrimination are narrowly tailored.

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

C.   Defining the Relevant Geographic Market for Cook County Construction Projects

Chapter III describes how the relevant geographic market was identified for this Study. Cook County prime contract and subcontract records for construction projects initiated between 2001 and 2007 were analyzed to determine the geographic radius around Cook County that accounts for at least 75 percent of aggregate contract and subcontract spending.

Although significant gaps in the County's own prime contract and subcontract records precluded us from making more extensive use of this data source than would have been the case in the absence of these limitations, we were able to identify the County's relevant geographic market to a reasonable degree of certainty.[1]

---

[1] These data limitations are described below in Chapter VIII.A.4.

The County's relevant geographic market area was determined to be the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area, which includes the Illinois counties of Cook, DeKalb, DuPage, Grundy, Kane, Kendall, Lake, McHenry, and Will.

The relevant geographic market was then used to focus and frame the quantitative and qualitative analyses in the remainder of the Study.

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

Chapter IV estimates the percentage of firms in the County's relevant market area that are owned by minorities and/or women. For each detailed industry category, M/WBE availability is defined as the number of M/WBEs divided by the total number of businesses in the County'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) identifying all listed M/WBEs in the relevant market; (2) verifying the ownership status of listed M/WBEs; and (3) estimating the number of unlisted M/WBEs in the relevant market.

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

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

Detailed Industry	African-American (%)	Hispanic (%)	Asian (%)	Native American (%)	MBE (%)	Non-minority Female (%)	M/WBE (%)	Non-M/WBE (%)
CONSTRUCTION	3.43	4.29	1.28	0.73	9.74	10.19	19.93	80.07

Notes: (1) Estimates are not weighted by County prime contract and subcontract spending within each two-digit NAICS code. See also, fn. 152; (2) For this study, "Black" or "African American" refers to a person having origins in any of the Black African racial groups; "Hispanic" refers to a person of Mexican, Puerto Rican, Dominican, Cuban, Central or South American, of either Indian or Hispanic origin, regardless of race; "Asian and Pacific Islander" or "Asian" refers to a person having origins in any of the Far East countries, South East Asia, the Indian Subcontinent, or the Pacific Islands; "Native American" refers to a person having origins in any of the original peoples of North America; and "White" or "non-minority" means a non-Hispanic person having origins in Europe, North Africa, or the Middle East.

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

Chapter V demonstrates that **current M/WBE availability levels in the Cook County market area, as measured in Chapter IV, are substantially lower than those that we would expect to observe if commercial markets operated in a race- and gender-neutral manner. These levels are statistically significant.**[2] In other words, minorities and women are substantially and

---

[2] Typically, for a given disparity statistic to be considered "statistically significant" there must be a substantial probability that the value of that statistic is unlikely to be due to chance alone. *See also fn.* 162

significantly less likely to own their own businesses as the result of marketplace 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 non-minority males, whether they work as employees or entrepreneurs.

In particular, we found that annual average wages for African-Americans (both sexes) in 2006–2008, were 33 percent lower in the Cook County market area than for non-minority males who were otherwise similar in terms of geographic location, industry, age, and education. These differences are large and statistically significant. Large, adverse, and statistically significant wage disparities were also observed for Hispanics, Asians, Native Americans, persons of mixed race, and non-minority women. These disparities are consistent with the presence of market-wide discrimination. Observed disparities for these groups ranged from a low of -20 percent for Hispanics to a high of -33 percent for non-minority women. Similar results were observed when the analysis was restricted to Construction and Construction-related industries. That is, large, adverse, and statistically significant wage disparities were observed for all minority groups and for non-minority women. All wage and salary disparity analyses were then repeated to test whether observed disparities in the Cook County market area were different enough from elsewhere in the country or the economy to alter any of the basic conclusions regarding wage and salary disparity. They were not.

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

Next, we analyzed race and sex disparities in business owner earnings. We observed large, adverse, and statistically significant business owner earnings disparities for African-Americans, Hispanics, Asians, Native Americans, and non-minority women consistent with the presence of discrimination in these markets. Large, adverse, and statistically significant business owner earnings disparities were observed overall as well as in Construction and Construction-related industries. As with the wage and salary disparity analysis, we enhanced our basic statistical model to test whether minority and female business owners in the Cook County market area differed significantly enough from business owners elsewhere in the U.S. economy to alter any of our basic conclusions regarding disparity. They did not.

As was the case for wage and salary earners, minority and female entrepreneurs earned substantially and significantly less from their efforts than similarly situated non-minority male entrepreneurs. These disparities are a symptom of discrimination in commercial markets that directly and adversely affects M/WBEs. Other things equal, if minorities and women cannot earn remuneration from their entrepreneurial efforts comparable to that of non-minority males, growth

rates will slow, business failure rates will increase, and as demonstrated in this Chapter, business formation rates will decrease. Combined, these phenomena result in lower M/WBE availability levels than would otherwise be observed in a race- and gender-neutral marketplace.

Next, we analyzed race and gender disparities in business formation. As with earnings, in almost every case we observed large, adverse, and statistically significant disparities consistent with the presence of discrimination in these markets in the overall economy, in Construction and Construction-related industries, and in the Goods and Services sector. In almost every instance, business formation rates for African-Americans, Hispanics, Asians, Native Americans, and females were substantially and statistically significantly lower than the corresponding non-minority male business formation rate.

Finally, as a further check on the statistical findings in this Chapter, we examined evidence from the Census Bureau's *Survey of Business Owners and Self-Employed Persons* (SBO).[3] These data show large, adverse, and statistically significant disparities between M/WBEs' share of overall revenues and their share of overall firms in the U.S. as a whole, and in the State of Illinois. The size of the disparities facing minority- and female-owned firms in Illinois is striking. For example, although 7.36 percent of all firms in Illinois are owned by African Americans, they earn only 1.17 percent of all sales and receipts. African-American employer firms are 1.87 percent of the total but earn only 0.98 percent of sales and receipts. Disparities for women and for other minority groups are also very large in Illinois.

F.   Statistical Disparities in Credit and Capital Markets

In Chapter VI, we analyzed current and historical data from the Survey of Small Business Finances, conducted by the Federal Reserve Board and the U.S. Small Business Administration, along with data from nine customized matching mail surveys we have conducted throughout the nation since 1999. This data examines whether discrimination exists in the small business credit market. Credit market discrimination can have an important effect on the likelihood that M/WBEs will succeed. Moreover, discrimination in the credit market might even prevent such businesses from opening in the first place. This analysis has been held by the courts to be probative of a public entity's compelling interest in remedying discrimination. We provide qualitative and quantitative evidence supporting the view that M/WBE firms, particularly African-American-owned firms, suffer discrimination in this market.

The results are as follows:

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

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

---

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

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

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

- A greater share of minority-owned firms believes 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 SSBF, there is no reason to believe that evidence of discrimination in the market for credit is different in the Cook County market area than in the nation as a whole. The evidence from NERA's own credit surveys in a variety of states and metropolitan areas across the country is entirely consistent with the results from the SSBF.

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

G.   G.   Cook County's Revised Minority- and Women-Owned Business Enterprise Construction Program

Chapter VII provides a history of the County's prior M/WBE initiatives and reported results, and the results from in-depth personal interviews conducted with M/WBE and non-M/WBE construction owners in the Cook County market area. The County first adopted a program in 1988 and commissioned a disparity study in 1992. The 1992 Study found that there had been pervasive historical discrimination against M/WBEs in the Chicago area economy. It also concluded that certain aspects of the County's procurement practices, as well as actions by the County's prime contractors, posed significant barriers to M/WBE participation on County contracts. There was substantial evidence supporting the enactment of a M/WBE ordinance with overall goals of 30 percent MBE participation and 10 percent WBE participation in County construction contracts. Based on 1992 Study, the ordinance was amended in 1993. The construction program was enjoined by the federal court in 2000, and the County ceased placing M/WBE goals on construction projects. In 2007, based upon a new Report on the utilization of M/WBEs after remedial action was prohibited, the County adopted an interim ordinance to address the dramatic drop off in M/WBE participation and authorize this Study.

This Chapter next presents the results of interviews with construction owners about the operations of the Interim Program, continuing barriers to the full and fair participation of M/WBEs as prime bidders and subcontractors and suppliers on County contracts and economy-wide, and eliciting recommendations for a new Program. Topics included the effectiveness of M/WBE programs in remedying discrimination; meeting County M/WBE project goals; contract performance monitoring; and payment. Recommendations were also discussed for Program revisions, including the use of a small, local target market to set aside small bids on a race- and gender-neutral basis; establishing a mentor-protégé program; and bonding assistance. The interviews provide anecdotal evidence that, especially in conjunction with the Study's extensive statistical evidence, the courts have found to be probative of whether, without affirmative

interventions, Cook County would be a passive participant in a discriminatory local marketplace and relevant for narrowly tailoring new initiatives.

H.   Recommendations for a Revised M/WBE Construction Program

Based upon the statistical and anecdotal evidence, we make recommendations for a revised M/WBE Construction Program. To meet the narrow tailoring requirement of strict scrutiny, the County must use race- and gender-neutral measures to the maximum feasible extent. These should include:

- Ensuring prompt payments by the County and its prime contractors;

- Adopting a Small Local Business Target Market Program to set aside smaller contracts for bidding only by small local firms;

- Partnering with other agencies to implement a Guaranteed Surety Bonding and Financing Program;

- Improving contracting and procurement data collection and retention procedures; and

- Gathering additional evidence of the County's compelling interest in remedying discrimination through review of contracting policies an procedures, gathering additional anecdotal evidence through surveys and new focus groups and analyzing the County's own prime contracting and related subcontracting and supplier activities once the County's data is in a format that will allow such an analysis to be properly performed.

We further recommend that the County adopt a Revised M/WBE Construction Program. The new program should:

- Review eligibility standards to ensure they remain inclusive;

- Set contract goals based on the results of this Study;

- Review Program implementation, including good faith efforts reviews and waivers, and the determination of subcontractors' and suppliers' commercially useful functions on individual projects;

- Increase contract performance monitoring;

- Develop performance measures for Program success; and

- Mandate Program review and sunset.

I.   Conclusion

As summarized above, and based on the detailed findings below, we conclude that there is strong evidence of large, adverse, and statistically significant disparities facing minority-owned and

women-owned business enterprises and their owners within Cook County's relevant geographic market area in the Construction Industry. We further conclude that these disparities cannot be explained solely, or even mostly, by differences between M/WBE and non-M/WBE business populations in factors untainted by discrimination, and that these differences therefore give rise to a strong inference of the presence of discrimination.

II. Legal Standards for Government Affirmative Action Contracting Programs

A. General Overview of Strict Scrutiny

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

This area of constitutional law is complex and constantly shifting, and cases are quite fact specific. Over the last 21 years, federal appellate and district courts have developed parameters for establishing a county 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 and program development issues Cook County must consider in evaluating its M/WBE Program and future initiatives.

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

City of Richmond v. J.A. Croson Co.[4] established the constitutional contours of permissible race-based public contracting programs. Reversing long established law, the Supreme Court for the first time extended the highest level of judicial examination from measures designed to limit the rights and opportunities of minorities to legislation that benefits these 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 Plan that required prime contractors awarded City construction contracts to subcontract at least 30 percent of the project to MBEs. A business located anywhere in the country which was at least 51 percent owned and controlled by "Black, Spanish-speaking, Oriental, Indian, Eskimo, or Aleut" citizens was eligible to participate. The Plan was adopted after a public hearing at which no direct evidence was presented that the City had discriminated on the basis of race in awarding contracts or that its prime contractors had discriminated against minority subcontractors. The only evidence before the City Council was: (a) Richmond's population was 50 percent Black, yet less than one percent of its prime construction contracts had been awarded to minority businesses; (b) local contractors' associations were virtually all White; (c) the City Attorney's opinion that the Plan was constitutional; and (d) general statements describing widespread racial discrimination in the local, Virginia, and national construction industries.

---

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

Legal Standards for Government Affirmative Action Contracting Programs

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 strict scrutiny seeks to expose racial stigma; 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]

---

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

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

[7] 488 U.S. at 493.

[8] *Id*. at 499.

Richmond's evidence was found to be lacking in every respect. The City could not rely upon the disparity between its utilization of MBE prime contractors and Richmond's minority population because not all minority persons would be qualified to perform construction projects; general population representation is irrelevant. No data were presented about the availability of MBEs in either the relevant marketplace or their utilization as subcontractors on City projects. According to Justice O'Connor, the extremely low MBE membership in local contractors' associations could be explained by "societal" discrimination or perhaps Blacks' 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 minorities. "The random inclusion of racial groups that, as a practical matter, may have never suffered from discrimination in the construction industry in Richmond, suggests that perhaps the City's purpose was not in fact to remedy past discrimination."[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

---

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

O'Connor rejected the argument that individualized consideration of Plan eligibility is too administratively burdensome.

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

> Nothing we say today precludes a state or local entity from taking action to rectify the effects of identified discrimination within its jurisdiction. If the City of Richmond had evidence before it that non-minority contractors were systematically excluding minority businesses from subcontracting opportunities, it could take action to end the discriminatory exclusion. Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise. Under such circumstances, the City could act to dismantle the closed business system by taking appropriate measures against those who discriminate based on race or other illegitimate criteria. In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion….Moreover, evidence of a pattern of individual discriminatory acts can, if supported by appropriate statistical proof, lend support to a local government's determination that broader remedial relief is justified.[13]

2.   Strict Scrutiny as Applied to Federal Enactments

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

> [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]

---

[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, 1569-1570 (D. Colo. 1997), *rev'd*, 228 F.3d 1147 (2000) ("*Adarand IV*"); *see also Adarand III*, 515 U.S. at 227.

Legal Standards for Government Affirmative Action Contracting Programs

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

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 the County about the types of evidence necessary to establish its compelling interest in adopting a local affirmative action contracting program and how to narrowly tailor a program.

Congress had strong evidence of widespread race discrimination in the construction industry.[19] Relevant evidence before Congress included:

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

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

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

- Various types of overt and institutional discrimination by prime contractors, trade unions, business networks, suppliers and sureties against minority contractors.[20]

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

> spent decades compiling evidence of race discrimination in government highway contracting, of barriers to the formation of minority-owned construction businesses, and of barriers to entry. In rebuttal, [the plaintiffs] presented evidence that the data were susceptible to multiple interpretations, but they failed to present

---

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

[17] 49 C.F.R. 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); *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2004 U.S. Dist. LEXIS 3226 at *64 (N.D. Ill., Mar. 3, 2004) ("*Northern Contracting I*").

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

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

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. 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.

- The presumption of social disadvantage for racial and ethnic minorities and women is rebuttable, "wealthy minority owners and wealthy minority firms are excluded, and certification is available to persons who are not presumptively disadvantaged but can demonstrate actual social and economic disadvantage."

- Exemptions and waivers from any or all Program requirements are available.[23]

These elements have led the courts 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 Eighth Circuit held that while "[n]arrow tailoring does not require the exhaustion of every

---

[21] *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d. 964, 970 (8th Cir. 2003), *cert. denied*, 541 U.S. 1041 (2004); *see also Adarand VII*, 228 F.3d at 1175 (Plaintiff has not met its 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.").

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

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

conceivable race-neutral alternative…it does require serious, good faith consideration of workable race-neutral alternatives."[24]

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 recipient may terminate race-conscious contract goals 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*…."[25]

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."[26]

DBE programs based upon a methodology similar to that for this Study for Cook County, 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 non-minority males, have been held to be narrowly tailored in their application of Part 26. The Minnesota Department of Transportation relied upon a Study conducted by NERA and Colette Holt & Associates to set its DBE goal. 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 of race-conscious and race-neutral methods as the year progressed, as the DOT regulations require.[27]

Likewise, the Seventh Circuit Court of Appeals affirmed the district court's trial verdict that the Illinois Department of Transportation's application of Part 26 was narrowly tailored based in large part upon the report and expert trial testimony of NERA and

---

[24] *Id*. at 972.

[25] *Id.*

[26] *Id*. at 973.

[27] *Id*.

CHA.[28] IDOT had a compelling interest in remedying discrimination in the marketplace for federally-funded highway contracts, and its DBE Plan was narrowly tailored to that interest and in conformance with the regulations.

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

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

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

- Expert reports relied upon by an earlier trial court in holding that the City of Chicago had a compelling interest in its minority and women business program for construction contracts;[30]

- Expert reports and anecdotal testimony presented to the Chicago City Council in support of the City's revised M/WBE Procurement Program ordinance;

- Anecdotal evidence gathered at IDOT's public hearings on the DBE program;

- Data on DBE involvement in construction projects in markets without DBE goals[31]; and

---

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

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

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

[31] "Also of note, IDOT examined the system utilized by the Illinois State Toll Highway Authority, which does not receive federal funding; though the Tollway has a DBE goal of 15 percent, this goal is completely voluntary -- the average DBE usage rate in 2002 and 2003 was 1.6 percent. On the basis of

- IDOT's "zero goal" experiment, where DBEs received approximately 1.5 percent of the total value of the contracts. This was designed to test the results of "race-neutral" contracting policies, that is, the utilization of DBEs on contracts without goals, which several courts have held to be highly relevant and probative of the continuing need for race-conscious remedies.

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

> 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.[32]

Most recently, the district court in a challenge to New Jersey Transit's DBE program took a somewhat similar approach and applied *Sherbrooke, Northern Contracting* and *Western States* to dismiss plaintiff's argument that New Jersey must independently establish its compelling interest in implementing the federal regulations as a "red herring."[33] It held that a recipient's constitutional duty under Part 26 is to narrowly tailor its program; it "does not need to justify establishing its DBE program, as it has already been justified by the [federal] legislators."[34]

---

all of this data, IDOT adopted 22.77 percent as its Fiscal Year 2005 DBE goal." *Northern Contracting III,* 473 F.3d at 719.

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

[33] *GEOD Corp. v. New Jersey Transit Corp.*, 2009 U.S. Dist. Lexis 74120, *11 (D. N. J. Aug. 20, 2009),.

[34] *Id*. at *12.

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

In 2009, the Federal Circuit Court of Appeals struck down the Department of Defense (DOD) program for Small Disadvantaged Businesses (SDBs) in *Rothe Development Corporation v. U.S. Department of Defense.*[35] The program set an overall annual goal of five percent for DOD contracting with SDBs and authorized various race-conscious measures to meet the goal.

The court held that Section 1207,[36] which, among other remedies, provided a 10 percent bid preference to SDBs, violated strict constitutional scrutiny because Congress did not have a "strong basis in evidence" upon which to conclude that DOD was a passive participant in racial discrimination in relevant markets across the country. The six local disparity studies upon which DOD primarily relied for evidence of relevant discrimination did not meet the compelling interest requirement—and in any event were not "before" Congress when it reenacted the program in 2006—and other statistical and anecdotal evidence did not rise to the heavy constitutional burden.[37]

In 2006, Congress amended the statute to reduce the burden on SDBs by, among other changes, ensuring that no particular industry would bear a disproportionate share of the contracts awarded to attain the five percent goal; a minority owner must establish that his or her personal net worth is less than $750,000; and a disappointed bidder may protest the SDB status of the successful bidder.

The opinion discusses in detail the evidence that Congress considered in the 2006 reenactment. This consisted of:

- o   Six disparity studies of state or local contracting in the cities of Dallas,[38] Cincinnati,[39] and New York;[40] in Cuyahoga County, Ohio,[41] and Alameda County, California;[42] and in the Commonwealth of Virginia;[43]

---

[35] 545 F.3d 1023 (*Fed. Cir.* 2008) ("*Rothe VII*").

[36] 10 U.S.C. § 2323.

[37] *Rothe VII* was the latest iteration of an 11-year-old challenge by a firm owned by a white female to DOD's award of a contract to an Asian American–owned business despite the fact that plaintiff was the lowest bidder. Since the case began in 1998, Congress has reenacted Section 1207 a number of times, the district court has rendered judgment three times, and the appellate court has remanded the case twice. *Rothe VII* ends this litigation, as DOD did not appeal the judgment. The statute would have expired on its terms at the end of federal fiscal year 2009.

[38] "City of Dallas Availability and Disparity Study," Mason Tillman Associates, Ltd. (2002).

[39] "City of Cincinnati Disparity Study," Griffin & Strong, PC (2002).

[40] "City of New York Disparity Study," Mason Tillman Associates, Ltd. (2005).

[41] "Ohio Multi-Jurisdictional Disparity Studies," Mason Tillman Associates, Ltd. (2003).

[42] "Alameda County Availability Study," Mason Tillman Associates, Ltd. (2004).

[43] "Procurement Disparity Study of the Commonwealth of Virginia," MGT of America, Inc. (2004).

o A September 2005 document issued by the United States Commission on Civil Rights (USCCR) titled "Federal Procurement After *Adarand*";

o Letters from individual business owners describing incidents of perceived discrimination in state, local, and private contracting;

o Various anecdotes regarding discrimination recounted by members of Congress in floor statements or remarks;

o Testimony by small business owners before the House Small Business Committee in 2001 and 2004; and

o Three studies from the Small Business Administration regarding the ownership and success rates of small businesses.

The primary focus of the opinion was the six disparity studies. The court reaffirmed that such studies are relevant to the compelling interest analysis. It then turned to Rothe's first argument and rejected the position that data more than five years old must be discarded. The court "decline[d] to adopt such a *per se* rule here.… [The government] should be able to rely on the most recently available data so long as that data is reasonably up-to-date."[44]

While the studies were sufficiently current, the court held that they were not sufficiently before Congress to be relied upon to meet strict scrutiny. "The six studies were not discussed at any congressional hearings. And because Congress made no findings concerning these studies, we cannot even broach the question of whether to defer to Congress in any respect regarding them."[45]

Despite finding that Congress did not rely upon the studies, the court chose to review them *de novo* anyway, and held that "we need not decide whether these six studies were put before Congress, because we will hold in any event that the studies do not provide a substantially probative and broad-based statistical foundation necessary for the 'strong basis in evidence' that must be the predicate for nationwide, race-conscious action."[46]

The district court held that Rothe's failure to offer any expert reports to rebut the studies did not meet its burden of persuasion to demonstrate that Congress lacked compelling evidence because the studies were irrelevant or flawed.[47] The appellate court disagreed,

---

[44] 545 F.3d at 1038–1039.

[45] *Ibid.*

[46] *Ibid.* at 1040.

[47] *Rothe Development Corp. v. U.S. Department of Defense et al*, 499 F.Supp.2d 775, 847 (W.D. Tex. 2007) ("*Rothe VI*"): "Rothe did not submit an expert report attacking the data, methodology, or conclusions of the New York Study…. The Court rejects Rothe's objections to the data or reliability of the six disparity studies, including the New York Study, because those objections are not supported by an expert report or other competent summary judgment evidence…. General criticism of disparity studies, as opposed to particular evidence undermining the reliability of the particular study, is of little persuasive value."

saying the studies should have been examined by the district court on its own without the plaintiff's participation despite the lack of a trial record because the type of general objections raised by Rothe was of the "same general character" as that voiced by Justice O'Connor in *Croson*. Without addressing later cases that have given substance to *Croson*'s broad comments in the context of actual studies by establishing that generalized objections are not sufficient, and despite the lack of expert reports or the testimony of the studies' authors to guide its consideration of complex statistical issues, the Federal Circuit stated that "the potential pitfalls of race-conscious legislation are far too great for a court to dismiss such objections as incompetently offered, rather than to address them on their merits."[48] Rather than remand the case to the district court for development of a factual record, the appeals court reached to consider the merits of the studies for the first time.

In the absence of expert testimony about accepted econometric models of discrimination, the court was troubled by the failure of five of the studies to account for size differences and "qualifications" of the minority firms in the denominator of the disparity analysis,[49] or as the court terms it, "relative capacity."[50] The court was concerned about the studies' inclusion of possibly "unqualified" minority firms and the failure to account for whether a firm can perform more than one project at a time in two of the studies.[51] In the court's view, the combination of these perceived deficits rendered the studies insufficiently probative to meet Congress' burden.

The appellate court ignored the cases upholding the USDOT Disadvantaged Business Enterprise Program and the City of Denver's local affirmative action contracting program where the fallacy of "capacity" was debunked, all of which were cited extensively by the district court. It relied instead on a report from the USCCR, which adopts the views of anti-affirmative action writers, including those of Rothe's consultant.[52]

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

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

---

[48] 545 F.3d at 1040.

[49] There is no explanation why similar concerns should not be raised about non-minority-owned firms included in the denominator.

[50] 545 F.3d at 1042.

[51] *Ibid.*

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

studies insufficient to form the statistical core of the "strong basis in evidence" required to uphold the statute.[53]

Finally, the additional statistical evidence relied upon by the district court was held to be insufficiently current, or was not "before" Congress, or failed to account for "capacity".[54]

The Federal Circuit concludes its analysis of compelling interest by "stress[ing] that our holding is grounded in the particular terms of evidence offered by DOD and relied on by the district court in this case, and should not be construed as stating blanket rules, for example, about the reliability of disparity studies."[55]

Given the holding that Congress lacked a strong basis in evidence for Section 1207, the court did not rule on whether its provisions were narrowly tailored. The lack of "strongly probative statistical evidence makes it impossible" to determine whether the five percent goal reflects "the share of contracts minorities would receive in the absence of discrimination."[56] It did note, however, its prior rulings that the program is flexible, limited in duration, and not unduly burdensome to third parties, and that the program has tended to narrow the reach of its remedies over time.

The question of broad application of *Rothe VII* to local M/WBE programs is whether disparity studies must somehow control for "capacity" without reference to the impact of discrimination on the variables usually cited. First, the absence of expert testimony may have influenced the court's analysis. Where reports have been proffered by highly qualified experts, judges have understood that variables such as firms' size and experience are adversely affected by discrimination. In fact, the Federal Circuit alludes to this fact, noting "that a minority owned firm's capacity and qualifications may themselves be affected by discrimination," without seeming to understand the implications for econometric modeling of discrimination.[57] Had DOD presented expert testimony, Section 1207 might have been upheld as has the USDOT DBE program.

Next, claims that the availability measure in the disparity statistic does not factor in "capacity" or, stated another way, that availability statistics may include firms that are not "qualified, willing, and able" to perform particular contracts are arguably unwarranted and unscientific. Adjusting statistical evidence in disparity studies for so-called "capacity" measures will prevent accurate measurement of the existence of the "market failure" of discrimination.[58] Many, if not all, "capacity" indicators are themselves impacted by discrimination. Therefore, it is not good social science to limit availability measures by factors such as firm age, revenues, or numbers of employees.

---

[53] 545 F.3d at 1045 (quoting from Justice Scalia's dissent in *Concrete Works V*, 540 U.S. 1027, 1032 [2003]).

[54] *Id.* at 1047–1048.

[55] *Id.* at 1049.

[56] *Id.* at 1049–1050.

[57] 545 F.3d at 1045.

[58] *Builders Association v. Chicago*, 298 F.Supp.2d at, 737.

Further, the reality is that large, adverse statistical disparities between minority-owned or women-owned businesses and non-minority male-owned businesses have been documented in numerous research studies and reports since *Croson*.[59] Business outcomes, however, can be influenced by multiple factors, and it is important that disparity studies examine the likelihood of whether discrimination is an important contributing factor to observed disparities.

Moreover, terms such as "capacity," "qualifications," and "ability" are not well defined in any statistical sense. Does "capacity" mean revenue level, employment size, bonding limits, or number of contracts bid or awarded? Does "qualified" or "able" mean possession of a business license, certain amounts of training, types of work experience, or the number of contracts a firm can perform at a given moment? What mix of business attributes properly reflects "capacity"? Does the meaning of such terms differ from industry to industry, locality to locality, or through time? Where and how might such data be reliably gathered?

Even if capacity is well-defined and adequate data are gathered, when measuring the existence of discrimination, the statistical method used should not improperly limit the availability measure by incorporating factors that are themselves impacted by discrimination, such as firm age, revenues, bonding limits, or numbers of employees.

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

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

Therefore, focusing on the "capacity" of businesses in terms of employment, revenue, bonding limits, number of trucks, and so forth is simply wrong as a matter of economics because it can obscure the existence of discrimination. A truly "effective" discriminatory system would lead to a finding of no "capacity," and under the "capacity" approach, a finding of no discrimination. Excluding firms from an availability measure based on their

---

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

"capacity" in a discriminatory market affirms and rewards the beneficiaries of the results of discrimination. A capacity requirement would preclude the County from doing anything to rectify its passive participation through public dollars in a clearly discriminatory system. In fact, to do so means the more effiicne and complete the exclusion, the less the government can do to stop it. The capacity argument fails to acknowledge that discrimination has prevented the emergence of "qualified, willing, and able" minority firms. Without such firms, there can be no statistical disparity.

Further, in dynamic business environments, and especially in the construction sector, such "qualifications" or "capacity" can be obtained relatively easily. It is well known that small construction companies can expand rapidly as needs arise by hiring workers and renting equipment, and many general contractors subcontract the majority of a project. Firms grow quickly when demand increases and shrink quickly when demand decreases. Subcontracting is one important source of this elasticity, as has been noted by several academic studies.[60] Other industry sectors, especially in this era of Internet commerce and independent contractors, can also quickly grow or shrink in response to demand.

Finally, even where "capacity"-type factors have been controlled for in statistical analyses, results consistent with business discrimination are still typically observed. For example, large and statistically significant differences in commercial loan denial rates between minority and non-minority firms are evident throughout the country, even when detailed balance sheet and creditworthiness measures are held constant.[61] Similarly, economists using decennial census data have demonstrated that statistically significant disparities in business formation and business owner earnings between minorities and non-minorities remain even after controlling for a host of additional relevant factors, including educational achievement, labor market experience, marital status, disability status, veteran status, interest and dividend income, labor market attachment, industry, geographic location, and local labor market variables such as the unemployment rate, population growth rate, government employment rate, or per capita income.[62]

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

---

[60] Clinton C. Bourdon and Raymond E. Levitt, *Union and Open-Shop Construction, Compensation, Work Practices, and Labor Markets* (Lexington, MA: Lexington Books, 1980); *see also* Robert G. Eccles, "Bureaucratic versus Craft Administration: The Relationship of Market Structure to the Construction Firm," *Administrative Science Quarterly*, v.26, 1981; *and* Frederick Elliot Gould, "Investigation in Construction Entrepreneurship," Masters Thesis, MIT, May 1980.

[61] *See* "Discrimination Facing Small Minority Owned and Women-Owned Businesses in Commercial Credit Markets," Testimony of Jon S. Wainwright before the Committee on Small Business and Entrepreneurship, U.S. Senate, September 11, 2008.

[62] Jon S. Wainwright, "Racial Discrimination and Minority Business Enterprise, Evidence from the 1990 Census," *Studies in Entrepreneurship Series*, Edited by S. Bruchey, New York, NY: Garland Publishing, 2000.

Supreme Court.[63] Most courts have applied intermediate scrutiny to preferences for women,[64] and then upheld or struck down the female preference under that standard.[65] This is probably a distinction without meaningful difference, as only one post-*Croson* court has upheld WBE provisions while striking down M/WBE measures.[66] Further, as observed by the Seventh Circuit Court of Appeals, applying intermediate scrutiny to gender "creates the paradox that a public agency may provide stronger remedies for sex discrimination than for race discrimination; it is difficult to see what sense that makes."[67] Therefore, the County 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.[68] There is no need of formal legislative findings,[69] nor "an ultimate judicial finding of discrimination before [a local government] can take affirmative steps to eradicate discrimination."[70] When the statistical information is sufficient to support the inference of discrimination, the plaintiff must prove that the statistics are flawed.[71] A plaintiff cannot rest upon general criticisms of studies or other evidence; it must carry the case that the government's proof is inadequate to meet strict

---

[63] *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).

[64] *See, e.g., Associated Utility Contractors of Maryland, Inc. v. Mayor and City Council of Baltimore et al*, 83 F.Supp.2d 613, 620 (D. Md. 2000).

[65] *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. 1994); *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) (*"Baltimore I"*); *but see Brunet v. City of Columbus*, 1 F.3d 390, 404 (6th Cir. 1993) (applying strict scrutiny).

[66] *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).

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

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

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

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

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

scrutiny, rendering the legislation or governmental program illegal.[72] The determination whether a plaintiff has met this burden is a question of law, subject to *de novo* review.[73]

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

Much of the discussion in the case law has revolved around what type of evidence is sufficiently "strong" to establish the continuing existence and effects of economic discrimination against minorities resulting in diminished opportunities to do business with the government. Proof of the disparate impacts of economic factors on M/WBEs and the disparate treatment of such firms by actors critical to success is necessary to meet strict scrutiny. Discrimination must be shown using statistics and economic models to examine the effects of systems or markets on different groups, as well as by evidence of personal experiences with discriminatory conduct, policies or systems.[74] Specific evidence of discrimination or its absence may be direct or circumstantial, and should include economic factors and opportunities in the private sector affecting the success of M/WBEs.[75]

1. Definition of Cook County'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.[76] This Study empirically establishes the geographic dimensions of the County's Construction and Construction-related contracting marketplace in order to ensure that the evidence is narrowly tailored.[77]

2. Examining Disparities between M/WBE Availability and Utilization

Next, statistical examination of the availability of minorities and women to participate in an agency's projects and the history of utilizing M/WBEs as prime contractors and utilizing M/WBEs as subcontractors by the government and its prime contractors is

---

[72] *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).

[73] *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).

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

[75] *Id*.

[76] 488 U.S. at 508.

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

required as part of a disparity study.[78] Simple disparities between an area's overall minority population and the and its prime contractors' utilization of minority- and women-owned firms are not enough.[79] The primary inquiry is whether there are statistically significant disparities between the availability of M/WBEs and the utilization of such firms.

> Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise.… In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion.[80]

This is known as the "disparity index" or "disparity ratio." This index is calculated by dividing the utilization of M/WBEs by the availability of M/WBEs. Courts have looked to disparity indices in determining whether *Croson's* evidentiary foundation is satisfied.[81] An index less than 100 percent indicates that a given group is being utilized less than would be expected based on its availability.

Calculations of the availability of minority- and women-owned firms are therefore the crucial foundation for examining the government's compelling interest in pursuing affirmative action in contracting.[82] 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.[83]

The agency 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

---

[78] An availability study is a subset of a disparity study, in that statistical evidence of disparities between the difference of availability of M/WBEs and their utilization as prime contractors and subcontractors is not included.

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

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

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

[82] *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).

[83] *Webster,* 51 F.Supp.2d at 1372; *see Northern Contracting II,* 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).

who must prove by a preponderance of the evidence that such proof does not support those inferences.[84]

It is also the case that if M/WBEs are overutilized under the entity's program, that does not end the inquiry. Where the government has been implementing affirmative action remedies M/WBE 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."[85]

3.   Unremediated Markets Data

It is also useful to measure M/WBE participation in the absence of affirmative action goals, if such evidence is available. Evidence of race and gender discrimination in relevant "unremediated"[86] markets provides an important indicator of what level of actual M/WBE participation can be expected in the absence of government mandated affirmative efforts to contract with M/WBEs.[87] The courts are clear that the government has a compelling interest in not financing the evil of private prejudice with public dollars.[88] If M/WBE utilization is below availability in unremediated markets, an inference of discrimination may be supportable. The virtual disappearance of M/WBE participation after programs have been enjoined or abandoned strongly indicates substantial barriers to minority subcontractors, "raising the specter of racial discrimination."[89] Unremediated markets analysis addresses whether the government has been and continues to be a "passive participant" in such discrimination, in the absence of affirmative action remedies.[90] The results of non-goals contracts can help to demonstrate that, but for the interposition of remedial affirmative action measures, discrimination

---

[84] *Concrete Works, Inc. v. City and County of Denver,* 321 F.3d, 950, 971 (10th Cir. 2003), *cert. denied*, 540 U.S. 1027 (2003) (*"Concrete Works IV"*).

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

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

[87] *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).

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

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

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

would lead to disparities in government contracting. The "dramatic decline in the use of M/WBEs when an affirmative action program is terminated, and the paucity of use of such firms when no affirmative action program was ever initiated," has been held to be proof of the government's compelling interest in employing race- and gender-conscious measures.[91] Evidence of unremediated markets "sharpens the picture of local market conditions for MBEs and WBEs."[92] It is particularly useful for Cook County, in view of the loss of its construction program for almost 7 years.[93]

4.   Anecdotal Evidence

Anecdotal evidence of experiences with discrimination in contracting opportunities is relevant because it goes to the question of whether observed statistical disparities are due to discrimination and not to some other non-discriminatory cause or causes.[94] As observed by the Supreme Court, anecdotal evidence presented in a pattern or practice discrimination case can be persuasive because it "brought the cold [statistics] convincingly to life".[95]Testimony about discrimination by prime contractors, unions, bonding companies, suppliers, and lenders has been found relevant regarding barriers both to minority subcontractors' business formation and to their success on governmental projects.[96] 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."[97] "[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."[98]

There is no requirement that anecdotal testimony be verified or corroborated, as befits the role of evidence in legislative decision-making as opposed to judicial proceedings. "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

---

[91] *Builders Association v. Chicago*, 298 F. Supp.2d at 737; *see also Concrete Works IV*, 321 F.3d at 987-988.

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

[93] *See* Chapter VIII, *infra*, for the discussion of unremediated markets, including Cook County, in *Northern Contracting, Inc. v. Illinois Department of Transportation*.

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

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

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

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

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

or to relate their own perceptions on discrimination in the Denver construction industry."[99]

C. Narrowly Tailoring a Minority-Owned and Women-Owned Business Enterprise Procurement Program for Cook County

The following factors must be considered in determining whether any race- and gender-based remedies that might be adopted by the County are narrowly tailored to achieve their purpose:

- The efficacy of race-neutral remedies at overcoming identified discrimination;

- The relationship of numerical benchmarks for government spending to the availability of M/WBEs and to subcontracting goal setting procedures;

- The flexibility of the program requirements, including the provision for good faith efforts to meet goals and contract specific goal setting procedures;

- The congruence between the remedies adopted and the beneficiaries of those remedies;

- Any adverse impact of the relief on third parties; and

- The duration of the program.[100]

The Fourth Circuit Court of Appeals has described the narrow tailoring requirements as follows:

> The preferences may remain in effect only so long as necessary to remedy the discrimination at which they are aimed; they may not take on a life of their own. The numerical goals must be waivable if qualified minority applications are scarce, and such goals must bear a reasonable relation to minority percentages in the relevant qualified labor pool, not in the population as a whole. Finally, the preferences may not supplant race-neutral alternatives for remedying the same discrimination.[101]

---

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

[100] *United States v. Paradise*, 480 U.S. 149, 171 (1987); *see also Sherbrooke*, 345 F.3d at 971972; *Drabik*, 214 F.3d at 737-738.

[101] *Maryland Troopers Association, Inc. v. Evans*, 993 F.2d 1072, 1076-77 (4th Cir. 1993) (citations omitted).

Legal Standards for Government Affirmative Action Contracting Programs

1. Race- and Gender-Neutral Remedies

Race- and gender-neutral approaches have become a necessary component of a defensible and effective M/WBE program.[102] 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.[103] Difficulty in accessing procurement opportunities, restrictive bid specifications, excessive experience requirements, and overly burdensome insurance and/or bonding requirements, for example, might be addressed by the County without resort to using race or gender in its 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.[104] At a minimum, entities must track the utilization of M/WBE firms as a measure of their success in the bidding process, including as subcontractors.[105]

However, strict scrutiny does not require that every race-neutral approach must be implemented and then proven ineffective before race-conscious remedies may be utilized.[106] While an entity must give good faith consideration to race-neutral alternatives, "strict scrutiny does not require exhaustion of every possible such alternative…however irrational, costly, unreasonable, and unlikely to succeed such alternative might be…. [s]ome degree of practicality is subsumed in the exhaustion requirement."[107]

2. Targeted Goal Setting

Numerical goals or benchmarks for M/WBE participation must be substantially related to their availability in the relevant market.[108] It is settled case law that goals should reflect the particulars of the contract, not reiterate annual aggregate targets; goals must be contract specific. For example, in the second challenge to Baltimore's M/WBE Program by the Associated Utility Contractors, the court specifically noted that the 2000

---

[102] *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).

[103] *See* 49 CFR § 26.51.

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

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

[106] *Grutter*, 529 U.S. at 339.

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

[108] *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.

ordinance, in contrast to an earlier program struck down as unconstitutional, specifically requires that goals be set on a contract-by-contract and craft-by-craft basis.[109]

One unanswered question is whether goals or benchmarks for overall agency contracting may be set higher than estimates of actual current availability. To freeze the goals at current head counts would set the results of discrimination — depressed M/WBE availability — as the marker of the elimination of discrimination. It therefore should be reasonable for the government to seek to attempt to level the racial and gender playing field by setting targets somewhat higher than current headcount. For example, 49 C.F.R. Part 26[110] requires recipients to determine the availability of DBEs in their marketplaces absent the presence of discrimination, that is, "but for" discrimination.[111] 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.).[112]

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

---

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

[110] 49 CFR Part 26 governs New York's receipt of U.S. Department of Transportation funds.

[111] 49 CFR § 26.45.

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

stands in stark contrast to the program struck down in *Croson.*"[113] "On the other hand, sheer speculation cannot form the basis for an enforceable measure."[114]

Goals can be set at various levels of particularity and participation. The entity may set an overall, aspirational goal for its annual, aggregate spending. Specific projects must be subject to subcontracting goals based upon availability of M/WBEs to perform the anticipated scopes of subcontracting. Not only is this legally mandated,[115] 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 of Goals and Requirements

It is imperative that remedies not operate as fixed quotas. A M/WBE program must provide for contract awards to firms who fail to meet the subcontracting goals but make good faith efforts to do so. Further, firms who meet the goals cannot be favored over those who made good faith efforts. In *Croson*, the Court refers approvingly to the contract-by-contract waivers used in the USDOT's DBE program.[116] This feature has been central to the holding that the DBE program meets the narrow tailoring requirement.[117]

4.   Program Over-inclusiveness and Under-inclusiveness

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

First, the groups to include must be based upon the evidence.[119] The "random inclusion" of ethnic or racial groups that may never have experienced discrimination in the entity's marketplace may indicate impermissible "racial politics."[120] Similarly, the Seventh Circuit, in striking down Cook County's program, remarked that a "state or local

---

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

[114] *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).

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

[116] 488 U.S. at 508; *see also Adarand VII*, 228 F.3d at 1181.

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

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

[119] *Philadelphia II*, 6 F.3d at 1007 (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, 660-661 (1993) (new ordinance narrowed to Blacks and women).

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

government that has discriminated just against blacks may not by way of remedy discriminate in favor of blacks and Asian-Americans and women."[121] However, at least one court has held some quantum of evidence of discrimination for each group is sufficient; *Croson* does not require that each group included in the ordinance suffer equally from discrimination.[122]

The level of specificity at which to define beneficiaries is the next question. Approaches range from a single M/WBE or DBE goal that includes all racial and ethnic minorities and non-minority women,[123] to separate goals for each minority group and women.[124] 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.[125]

Third, program remedies should be limited to those firms that 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 TEA-21 creates a rebuttable presumption that members of certain racial minorities fall within that class, the presumption is 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."[126] Moreover, anyone can challenge the disadvantage of any firm.[127]

The U.S. Court of Appeals for the Second Circuit addressed an interesting permutation of this element of narrow tailoring. An Hispanic-owned firm whose owner was not Latin American challenged the State's limitation of MBE program eligibility to Hispanics from Latin America as violative of strict scrutiny. The court held that whether a race-conscious program is under-inclusive is subject only to rational basis scrutiny, not strict scrutiny.[128]

> We conclude that the narrow-tailoring requirement allows New York to identify which groups it is prepared to prove are in need of affirmative action without

---

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

[122] *Concrete Work IV*, 321 F.3d at 9761.

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

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

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

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

[127] 49 CFR §26.87.

[128] *Jana-Rock Construction, Inc. v. New York State Department of Economic Development*, 438 F.3d 195 (2nd Cir. 2005).

demonstrating conclusively that no other groups merit inclusion.… [T]he state need not bear the burden of persuasion to justify its decision not to extend affirmative action to other groups.… The plaintiffs, in effect, are asking us to declare that the fit in Article 15-A is too tight -- that equal protection requires it to be expanded to include other racial and ethnic groups that may have been discriminated against. Such a requirement would have no limit.… If it instituted any affirmative action program for some groups with a history of discrimination, the state would be required to prove a negative -- to show that no other group had also been discriminated against. We doubt that the Supreme Court had such court-ordered expansions of affirmative action programs in mind when it decided *Croson* and *Adarand*.[129]

The court also rejected the argument that the exclusion of persons whose origins were in Spain violates strict scrutiny. While

the fact that a particular governmental decision to use classifications based on race or national origin in a particular context passes strict scrutiny does not relieve those categories of their possible arbitrariness and unreliability as bases for classifying specific individuals.… Once it has been established that the government is justified in resorting to the "highly suspect tool" of racial or national origin classifications, strict scrutiny has little utility in supervising the government's definition of its chosen categories. The purpose of the test is to ensure that the government's choice to use racial classifications is justified, not to ensure that the contours of the specific racial classification that the government chooses to use are in every particular correct.[130]

Finally, the court held that there was no evidence of a discriminatory animus against Spanish speakers that would trigger strict scrutiny. "Without any indication of that sort of discriminatory purpose for the statute's exclusion of persons of Spanish descent, we evaluate the plaintiff's underinclusiveness claim using rational basis review."[131] That judicial opinions, federal statutes, and federal regulations have declared that Hispanics in general have suffered discrimination; the plaintiff has had personal experiences with discrimination; and the State's 1994 study of discrimination included all Hispanics for some analyses, was not enough to render New York's decision discriminatory or irrational. "[I]t was not irrational for New York to conclude that Hispanics of Latin American origin were in greater need of remedial legislation."[132]

5.   Sharing of the Burden by Third Parties

Failure to make "neutral" changes to contracting and procurement policies and procedures that disadvantage M/WBEs and other small businesses may result in a finding

---

[129] *Id*. at 206-07.

[130] *Id*. at 210.

[131] *Id*. at 212.

[132] *Id*. at 214.

that the program unduly burdens non-M/WBEs.[133] However, "innocent" parties can be made to share some of the burden of the remedy for eradicating racial discrimination.[134] "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."[135] Effective remedies are not costless.

6.   Duration and Review of Programs

"Narrow tailoring also implies some sensitivity to the possibility that a program might someday have satisfied its purposes."[136] It was the unlimited duration and lack or review that led to the City of Augusta, Georgia's DBE program's being enjoined.[137] Likewise, 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.[138] 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 racial classifications should not."[139] Cook County must provide to regular review of any new program and adopt a date by which the program will sunset unless there is a strong basis in evidence to continue it.

D.   Table of Authorities

1.   Cases

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

---

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

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

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

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

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

[138] *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).

[139] *Virdi*, at *18.

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

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

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

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

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

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

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

Builders Association of Greater Chicago v. County of Cook, 123 F.Supp.2d 1087 (N.D. Ill. 2000); *aff'd*, 256 F.3d 642 (7th Cir. 2001).

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

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

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

Cone Corporation v. Hillsborough County, 908 F.2d 909 (11th Cir. 1990).

Contractors Association of Eastern Pennsylvania v. City of Philadelphia, 6 F.3d 990 (3rd Cir. 1993) ("*Philadelphia II*").

Contractors Association of Eastern Pennsylvania v. City of Philadelphia, 91 F.3d 586 (3rd Cir. 1996) ("*Philadelphia III*").

Coral Construction Co. v. King County, 941 F.2d. 910 (9th Cir. 1991).

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

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

GEOD Corp. v. New Jersey Transit Corp., 2009 U.S. Dist. Lexis 74120, *11 (D. N. J. Aug. 20, 2009),.

Grutter v. Bollinger, 539 U.S. 306 (2003).

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

Maryland Troopers Association, Inc. v. Evans, 993 F.2d 1072, 1076-77 (4th Cir. 1993).

Northeastern Florida Chapter of the AGC v. Jacksonville, 508 U.S. 656 (1993).

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

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

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

O'Donnell Construction Co., Inc, v. District of Columbia, 963 F.2d 420 (D.C. Cir. 1992).

Rothe Development Corp. v. U.S. Department of Defense et al, 499 F.Supp.2d 775, 847 (W.D. Tex. 2007) ("*Rothe VI*").

Rothe Development Corporation v. U.S. Department of Defense, 545 F.3d 1023 (*Fed. Cir.* 2008) ("*Rothe VII*").

Sherbrooke Turf, Inc. v. Minnesota Department of Transportation, 345 F.3d. 964 (8th Cir. 2003), *cert. denied*, 124 S.Ct. 2158 (2004).

Thompson Building Wrecking Co., Inc. v. City of Augusta, Georgia, 2007 U.S. Dist. Lexis 27127 (S.D. Ga. 2007).

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

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

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

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

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

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

Wygant v. Jackson Board of Education, 476 U.S. 267 (1986).

2. Statutes

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

3. Regulations

49 C.F.R. Part 26.

4. Reports

Bourdon, Clinton C. and Raymond E. Levitt. 1980. *Union and open-shop construction, compensation, work practices, and labor markets.* Lexington Books: Lexington, Massachusetts.

Eccles, Robert G. 1981. "Bureaucratic versus Craft Administration: The Relationship of Market Structure to the Construction Firm." *Administrative Science Quarterly*. 26.

Enchautegui, Maria E., Michael Fix, Pamela Loprest, Sarah von der Lippe, Douglas Wissoker. 1996. *Do minority-owned businesses get a fair share of government contracts?* Washington, DC.: The Urban Institute.

Gould, Frederick Elliot. 1980. "Investigation in Construction Entrepreneurship" Masters Thesis, MIT, May.

Wainwright, Jon S. 2000. *Racial discrimination and minority business enterprise, evidence from the 1990 Census*, *Studies in Entrepreneurship Series*. Edited by S. Bruchey. New York, Garland Publishing.

III.   Defining the Relevant Market

A.   Introduction

The U.S. Supreme Court in *Croson* indicated that the U.S. Congress' *national* findings of minority business discrimination in construction and related industries were not specific enough, 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."[140] 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."[141]

The first step, therefore, in our evaluation of the status of M/WBEs in and around Cook County is to define the relevant geographic market area for the County's Construction procurement.[142] For this Study, we define the County's market area based on a review of its own available historical contracting and subcontracting records. We define the geographic market dimension by calculating from zip code data where the majority of the County's prime contractors and subcontractors are located.

Once the geographic parameters of the County'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 helps to narrowly tailor our findings to the County's specific contracting circumstances.

B.   Cook County Construction Contracting Data

With assistance from the County, we attempted to collect prime contract subcontract data for the County's Construction contracts that were active between January 2001 and December 2007 (FY 2001–2007).

For each identified construction contract awarded in the study period, we obtained available data from the County including the prime contractor name and address, contract description, contract number, contractor gender and ethnicity, contract award date, and total contracted dollar amount, total amount paid, as well as comparable information for all associated subcontracts and supplier contracts.

---

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

[141] *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 DBE 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.

[142] *See*, for example, Areeda, Phillip, and Louis Kaplow, *Antitrust Analysis: Problems, Text, Cases*, New York: Aspen Publishers, 6th Edition, 2004.

We identified a total of 299 prime construction contracts awarded during the study period, with a value slightly in excess of $800 million. We identified 2,407 subcontract and supplier contracts associated with these 299 prime contracts.

Unfortunately, we discovered significant gaps and limitations in the prime contract and subcontract records retained by the County that hindered our ability to build a comprehensive database of the County's construction activity during the study period. A summary of these gaps and limitations is provided below in Chapter VIII.A.4. We were, however, able to determine the relevant geographic market with a reasonable degree of certainty.

C.   Geographic Market Definition for Cook County Construction Contracting

To determine the geographic dimension of the County's construction contracting market, we used the data described in the previous section to obtain the zip codes and thereby the county and state for each contractor and subcontractor identified. Using this location information, we then calculated the percentage of the County's prime contract dollars and percentage of the County's subcontract dollars awarded to businesses according to geographic location during the study period.

As discussed above, the geographic market area is defined as that region which accounts for at least 75 percent of overall contracting and procurement spending by a given government entity. Contractors located within the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area account for the vast majority of contracting and procurement expenditures by Cook County and its prime contractors during the study period.

As shown in Table 3.1, the overall share of expenditures inside Cook County proper is 68.0 percent of dollars awarded to prime contractors and 51.3 percent of dollars awarded to subcontractors and suppliers. These are significant percentages, but below the threshold for market area definition. By contrast, the overall share of expenditures inside the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area is 99.0 percent of dollars awarded to prime contractors and 92.6 percent of dollars awarded to subcontractors and suppliers. For purposes of this Study, we therefore define the primary geographic market area to be the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area.[143]

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

---

[143]The Chicago-Naperville-Joliet, IL Metropolitan Division includes, in descending order according to general population size, Cook County, DuPage County, Will County, Kane County, McHenry County, DeKalb County, Kendall County, and Grundy County.

D.   Tables

Table 3.1. Distribution of Cook County Construction Contracting by Geographic Location

Location	Prime Contractors (%)	Subcontractors & Suppliers (%)
Inside Cook County	68.0	51.3
Outside Cook County	32.0	48.7
Inside Chicago-Naperville-Joliet Metropolitan Statistical Area (IL portion only)	99.0	92.6
Outside Chicago-Naperville-Joliet Metropolitan Statistical Area (IL portion only)	1.0	7.4
Inside Illinois	99.1	93.9
Outside Illinois	0.9	6.1

IV. M/WBE Availability in Cook County's Marketplace

A. Identifying Businesses in the Relevant Markets

At its simplest, M/WBE availability is defined as the number of M/WBEs divided by the total number of businesses (the "Baseline Business Universe") in the County's contracting market area.[144] Determining the total number of businesses in the relevant geographic market, however, is more straightforward than determining the number of minority- or women-owned businesses in that market. The latter task has three main parts: (1) identify all listed M/WBEs in the relevant market; (2) verify the ownership status of listed M/WBEs; and (3) estimate the number of unlisted M/WBEs in the relevant market. This section describes how these tasks were accomplished for Cook County.

It is important to note that our availability analysis is designed to be free from variables tainted by discrimination. Our approach recognizes that discrimination may impact many of the variables that contribute to a firm's success in obtaining work as a prime or a subcontractor. Factors such as firm size, time in business, qualifications, and experience are all adversely affected by discrimination if it is present in the marketplace. Despite the obvious relationship, some commentators argue that disparities should only be assessed between firms with similar "capacities."[145] However, the courts in our view have properly refused to make the results of discrimination the benchmarks for non-discrimination.[146] They have acknowledged that M/WBEs may be smaller, newer, and otherwise less competitive than non-M/WBEs because of the very discrimination sought to be remedied by race-conscious contracting programs. Racial and gender differences in these "capacity" factors are the *outcomes* of discrimination and it is therefore inappropriate as a matter of economics and statistics to use them as "control" variables in a disparity study.[147]

1. Estimate the Total Number of Businesses in the Market

We used data supplied by Dun & Bradstreet's Hoovers subsidiary to determine the total number of businesses operating in the County's relevant geographic market—the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area. Dun & Bradstreet produces the most comprehensive publicly available database of businesses in the U.S. This database contains over 15 million records and is updated continuously. Each record in Dun & Bradstreet represents a business or business establishment and includes the business name, address, telephone number,

---

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

[145] *See* Remarks of George LaNoue, U.S. Commission on Civil Rights, "Disparity Studies as Evidence of Discrimination in Federal Contracting," May 2006 (LaNoue was rejected as an expert witness by the court in *Gross Seed Company v. Nebraska Department of Roads*, No. 02-3016 (D. Neb. 2002)).

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

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

NAICS code, SIC code, business type, DUNS Number (a unique number assigned to each establishment by Dun & Bradstreet) and other descriptive information. Dun & Bradstreet gathers and verifies information from many different sources. These sources include among others annual management interviews, payment experiences, bank account information, filings for suits, liens, judgments and bankruptcies, news items, the U. S. Postal Service, utility and telephone service, business registrations, corporate charters, Uniform Commercial Code filings, and records of the Small Business Administration and other governmental agencies.

We used the Dun & Bradstreet database to identify the total number of businesses in each six-digit NAICS code to which we had anticipated assigning a product market weight. Table 4.1 shows the number of businesses identified in each NAICS sub-sector for selected Construction and Construction-related NAICS codes.

2.   Identify Listed M/WBEs

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

First, we completed an intensive regional search for information on minority-owned and woman-owned businesses in Illinois and surrounding states. Beyond the information already in Dun & Bradstreet/Hoovers, NERA collected lists of M/WBEs from Cook County as well as other public and private entities. Specifically, directories were included from:[148] City of Chicago, Chicago Minority Business Development Council, Association of Asian Construction Enterprises, DuPage County, Federation of Women Contractors of Chicago, Hispanic American Construction

---

[148] 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 Chicago Public Schools, Chicago Transit Authority, Illinois Department of Transportation, Illinois Tollway, METRA, PACE, Quad City International Airport, Abraham Lincoln Capital Airport, Boone County, Central Illinois Regional Airport, Champaign County, Chicago Midway International Airport, Chicago O'Hare International Airport, Chicago Rockford International Airport, Chicago State University, City of Champaign, City of Springfield, Decatur Airport, Greater Peoria Regional Airport, Kankakee County, Kendall County, La Salle County, Macon County, Marshall County, McHenry County, McLean County, Menard County, MidAmerica St. Louis Airport, Peoria County, Rock Island County, Sangamon County, St. Claire County, Stark County, Tazewell County, University of Illinois Willard Airport, Vermillion County, Will County, Williamson County Regional Airport, Woodford County, Metropolitan Pier and Exposition Authority, Ports of Indiana, Fort Wayne International Airport, Indiana Department of Transportation, Lake County, Newton County, Porter County, Capital City Airport, Delta County Airport, Cherry Capital Airport, City of Wyoming, Kalamazoo/Battle Creek International Airport, Kent County, Muskegon County, Muskegon County Airport, Newaygo County, Pellston Regional Airport of Emmet County, Sawyer International Airport, Milwaukee County, City of Milwaukee, Waukesha County, Wisconsin Department of Administration, Brown County, City of Appleton, City of Green Bay, City of Waukesha, Columbia County, Mead & Hunt, Outagamie County, Wisconsin Manufacturers & Commerce, City of Rhinelander, General Mitchell International Airport, Kenosha County, Milwaukee Urban Entrepreneur Partnership, Oneida County, Ozaukee County, Racine County, University of Wisconsin, State of Wisconsin Bureau of Procurement, Washington County, Waukesha County Airport/Crites Field, Austin Straubel International Airport, Central Wisconsin Airport, Outagamie County Regional Airport, Chippewa Valley Regional Airport, Dane County Regional Airport, La Crosse Municipal Airport, Rhinelander-Oneida County Airport, and American Indian Development Association.

Industry Association, Women's Business Development Center, Illinois State UCP, Illinois Department of Central Management Services, Madison County, City of Rockford, Women Construction Owners and Executives, African American Chamber of Commerce of Greater Milwaukee, American Indian Chamber of Commerce of Wisconsin, City of Madison, Great Lakes Inter-Tribal Council, Hispanic Chamber of Commerce of Wisconsin, Hmong Wisconsin Chamber of Commerce, National Association of Women Business Owners for Madison and for Milwaukee, Port of Milwaukee, Wisconsin Black Chamber of Commerce, Women Entrepreneurs of Wisconsin, Wisconsin Department of Commerce Minority Business Development, Wisconsin Department of Transportation, Indiana Department of Administration, City of Grand Rapids, State of Michigan Department of Transportation, Native American Business Alliance, Asian Women in Business, U.S. Women's Chamber of Commerce, Minority Professional Network, National Association of Women in Construction, U.S. Department of Commerce, National Center of American Indian Enterprise Development, United Indian Development Association, Women Business Enterprise National Council, Diversity Business.com, Business Research Services, Small Business Association Dynamic Small Business Search/Central Contractor Registry, and Diversity Information Resources.[149]

---

[149] A number of public and private organizations we contacted were unable or unwilling to provide relevant lists or directories. The entities that were unable to provide directories, either because they had no list or the list they had did not contain race/sex information included: Illinois Department of Commerce and Economic Opportunity, Chicago Black Pages, City of Arlington Heights, City of Cicero, City of Evanston, Asian American Institute, Chicago Women in Trades, North Business and Industry Council, Puerto Rican Chamber of Commerce, Rockford Black Pages, Chicago Community Ventures, City of Aurora, City of Elgin, City of Joliet, City of Naperville, City of Peoria, City of Schaumburg, Columbia College of Chicago, DeKalb County, Grundy County, Kane County, National Society of Hispanic MBA's-Chicago Chapter, Native American House, Seneca Port Authority, John Marshall Law School, Ball State University Center for Economic and Community Development, Charlevoix Municipal Airport, City of Gary, Indiana Economic Development Corporation, Purdue University Department of Building Construction Management, Barry County, Chippewa County International Airport, City of Portage, Fort Wayne, City of Hudson, City of Racine, City of Superior, City of West Allis, Douglas County, Pierce County, St. Croix County, Wisconsin Department of Natural Resources, Kalamazoo County, City of Kalamazoo, PAL Enterprises, Dane County, and the Hispanic SMB. Several entities that were repeatedly contacted failed to return our calls or emails, including: African American Contractors Association, Asian American Small Business Association, Aurora Hispanic Chamber of Commerce, City of Bloomington, Illinois Hispanic Chamber of Commerce, Mid-America Intermodal Authority Port District, National Association of Women Business Owners-Chicago Chapter, Quad County African American Chamber of Commerce, Society of Taiwanese Americans-Chicago Chapter, Black Chamber of Commerce of Lake County, Black Contractors United, Chicago Chinatown Chamber of Commerce, City of Decatur, City of Waukegan, Concordia University, Decatur Black Chamber of Commerce, DeVry University-Illinois, Enterpriz Cook County, Illinois State University, Kankakee Black Chamber of Commerce, Lake County, Latin American Chamber of Commerce, African American Black Business Association, Milwaukee Indian Economic Development Agency, National Association of Minority Contractors-Wisconsin Chapter, Latino Chamber of Commerce, Milwaukee Minority Business Opportunity Center, US Pan Asian Chamber of Commerce, Indiana Association of Chinese Americans, Indianapolis Black Chamber of Commerce, Indiana Minority Business Directory, Purdue University, Indianapolis International Airport, Northwest Indiana Hispanic Chamber of Commerce, Japan-America Society of Indiana, Jasper County, South Bend Regional Airport, Indo-American Chamber of Commerce, Bishop International Airport, Detroit Metropolitan Wayne County Airport, Evansville Regional Airport, Gerald R. Ford International Airport, Houghton County Memorial Airport, Ionia County, MBS International Airport, Van Buren County, and the Business Council. Some entities refused to provide the information we asked for including: Cosmopolitan Chamber of Commerce, Illinois State Black Chamber of Commerce, Peoria Black Chamber of Commerce, Bradley University Turner Center for Entrepreneurship, University of Illinois Extension Small Business Development Center, Winnebago County, Indiana Small Business Development Center, Indiana Regional

The M/WBEs identified in this manner are referred to as "listed" M/WBEs. Table 4.2 shows the number of listed M/WBEs identified in selected NAICS sub-sectors related to Construction.

If the listed M/WBEs identified in the Table 4.2 are in fact *all* M/WBEs and are the *only* M/WBEs among all the businesses identified in Table 4.1, then an estimate of "listed" M/WBE availability is simply the number of listed M/WBEs (taken from Table 4.2) divided by the total number of businesses in the relevant market (taken from Table 4.1). However, as we shall see below, neither of these two conditions holds true in practice and this is therefore *not* an appropriate method for measuring M/WBE availability.

There are two reasons for this. First, it is likely that some of the M/WBEs listed in Table 4.2 are not actually minority-owned or woman-owned. Second, it is likely that there are additional "unlisted" M/WBEs among all the businesses included in Table 4.1. Such businesses may not appear in any of the directories we gathered and are therefore not included as M/WBEs in Table 4.2. Additional steps are required to test these two conditions and to arrive at a more accurate representation of M/WBE availability within the Baseline Business Universe. We discuss these steps in Sections 3.A and 3.B below.

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

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

The second likelihood that must be addressed is that not all M/WBE businesses are necessarily listed—either in Dun & Bradstreet/Hoovers or in any of the other directories we collected. Such phenomena as geographic relocation, ownership changes, directory compilation errors, and limitations in M/WBE outreach could all lead to M/WBEs being unlisted. Other things equal, this type of error would cause our availability estimate to be biased downward from the actual availability number.

In our experience, we have found that both types of bias are not uncommon. For this Study, we corrected for the effect of these biases using statistical sampling procedures.

We applied survey responses from more than 15,000 firms drawn from the Dun & Bradstreet/Hoovers database designed to measure how often they were misclassified (or unclassified) by race and/or sex.[150] These surveys were not all performed at once. Rather, they

---

Minority Supplier Development Council, National Minority Business Council Inc., Hispanic Business and Professionals Association, Wisconsin Small Business Development Center, Wisconsin Women's Business Initiative Corporation, African American Contractors Association-Milwaukee Chapter, The Business Forum, and Wisconsin Iowa and Central Illinois Minority Supplier Development Council.

[150] 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:

are the combined results from 10 distinct surveys conducted throughout the country for different clients between 2005 and 2010.[151]

The first part of each survey tested whether the listed M/WBEs in the Baseline Business Universe were correctly classified by race and/or sex. The second part of each survey tested whether the unclassified firms in the Baseline Business Universe could all be properly classified as non-M/WBEs. Both elements of the survey are described in more detail below.

a.   Survey of Listed M/WBEs

Of more than 15,000 firms interviewed across our 10 surveys, approximately 6,000 were putatively classified as minority-owned or women-owned. The race and gender status of the listed M/WBEs in the Baseline Business Universe was changed, if necessary, according to the survey results for these approximately 6,000 putatively M/WBE firms. For example, for putatively non-minority female owned firms, we estimate the race and sex of their ownership based on the amount of misclassification we observed among the non-minority female owned firms that we interviewed.

For example, suppose that our surveys showed that 61 percent of the non-minority female owned firms interviewed in a particular NAICS code were indeed actually non-minority female-owned, 24 percent were actually non-minority male-owned, 7 percent are actually African-American owned, 6 percent are actually Hispanic-owned, and 2 percent are actually Asian-owned. In this example, we would assign each of the putative non-minority female firms in that NAICS code in the Baseline Business Universe a 61.0 percent probability of actually being non-minority female-owned, a 24 percent probability of actually being non-minority male-owned, a 7 percent probability of being African-American owned, a 6 percent probability of being Hispanic-owned, and a 2 percent probability of being Asian-owned. We then repeated this procedure for all putative race and sex categories and all NAICS codes.

Table 4.3 shows the misclassification percentages, by NAICS codes, used to produce the Cook County construction availability estimates.

b.   Survey of Unclassified Businesses

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

Sampling and Level of Effort Associated with Gaining Cooperation from Minority-Owned Business," *Proceedings of the Second International Conference on Establishment Surveys,* Buffalo, NY, June 17-21, 2000.

[151] The ten surveys included are New York State and the New York City Consolidated Metropolitan Statistical Area (2010), the Augusta-Richmond County, GA metropolitan statistical area (2009), the Austin, TX metropolitan statistical area (2008), the Memphis, TN-AR-MS metropolitan statistical area (2008), Utah (2008), the Baltimore, MD metropolitan statistical area (2007), Washington State (2007), the State of Maryland and the District of Columbia metropolitan statistical area (2006), the Denver, CO metropolitan statistical area (2006), and the State of Massachusetts (2006).

Of the more than 15,000 firms interviewed across our 10 surveys, approximately 9,000 were putatively unclassified by race or gender. The race and gender status of the unclassified firms in the Baseline Business Universe was changed, if necessary, according to the survey results for these approximately 9,000 putatively non-M/WBE firms.

As with the survey of listed M/WBEs, the race and gender status of unclassified businesses was changed, if necessary, according to the survey results. For the unclassified businesses in the Baseline Business Universe, we assigned probability values (probability actually non-minority male-owned, probability actually non-minority female-owned, probability actually African-American-owned, etc.) based on the interview responses from our 10 combined surveys. We again carried out the probability assignment for each NAICS code in the Baseline Business Universe.

Not surprisingly, a large majority of unclassified businesses in the Baseline Business Universe are indeed non-minority male-owned. Nevertheless, substantial numbers of firms in this group turned out to *not* be non-minority male-owned. Among the latter, the largest group was non-minority female-owned, with descending size shares accounted for by Hispanic-owned, African-American-owned, Asian-owned, and finally Native American-owned.

Table 4.4 shows the nonclassification percentages, by NAICS codes, used to produce the Cook County construction availability estimates.

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

Table 4.5 presents detailed estimates of M/WBE availability by race, sex, M/WBE status, and detailed NAICS industry within the Cook County Market Area. These estimates have been statistically corrected to adjust for misclassification and non-classification bias in the Baseline Business Universe as described in the previous section.[152]

---

[152] Ordinarily, we use a public entity's own historical contracting and subcontracting data to create a weight for each detailed industry, reflecting the total number of dollars awarded and/or paid to prime contractors, subcontractors, and suppliers in a given NAICS code. Due to the data limitations described below in Chapter VIII.A.4, however, we were not able to do this properly for Cook County. While the lack of weights has no effect on the detailed NAICS availability estimates, it does prevent us from creating aggregated, weighted, average availability estimates for the Construction and Construction-related industries as a whole. Table A, *supra*, presents availability estimates for the Construction and Construction-related industries as a whole in the County's geographic market area, but these estimates are unweighted. That is, they are simple averages of the underlying detailed availability estimates.

C.   Tables

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

NAICS Code	NAICS Description	Number of Estab-lishments
236115	New Single-Family Housing Construction (except Operative Builders)	9,203
236116	New Multifamily Housing Construction (except Operative Builders)	45
236117	New Housing Operative Builders	280
236118	Residential Remodelers	2,823
236210	Industrial Building Construction	256
236220	Commercial and Institutional Building Construction	1,489
237110	Water and Sewer Line and Related Structures Construction	331
237120	Oil and Gas Pipeline and Related Structures Construction	32
237130	Power and Communication Line and Related Structures Construction	54
237210	Land Subdivision	1,385
237310	Highway, Street, and Bridge Construction	588
237990	Other Heavy and Civil Engineering Construction	56
238110	Poured Concrete Foundation and Structure Contractors	932
238120	Structural Steel and Precast Concrete Contractors	98
238130	Framing Contractors	1,286
238140	Masonry Contractors	925
238150	Glass and Glazing Contractors	186
238160	Roofing Contractors	1,177
238170	Siding Contractors	221
238190	Other Foundation, Structure, and Building Exterior Contractors	48
238210	Electrical Contractors and Other Wiring Installation Contractors	2,895
238220	Plumbing, Heating, and Air-Conditioning Contractors	4,652
238290	Other Building Equipment Contractors	107
238310	Drywall and Insulation Contractors	619
238320	Painting and Wall Covering Contractors	2,547
238330	Flooring Contractors	689
238340	Tile and Terrazzo Contractors	321
238350	Finish Carpentry Contractors	155
238390	Other Building Finishing Contractors	193
238910	Site Preparation Contractors	794
238990	All Other Specialty Trade Contractors	2,501
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	793
423320	Brick, Stone, and Related Construction Material Merchant	331

NAICS Code	NAICS Description	Number of Estab-lishments
	Wholesalers	
423330	Roofing, Siding, and Insulation Material Merchant Wholesalers	112
423390	Other Construction Material Merchant Wholesalers	91
423510	Metal Service Centers and Other Metal Merchant Wholesalers	719
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	775
423710	Hardware Merchant Wholesalers	410
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	301
423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers	216
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	255
541310	Architectural Services	1,524
541320	Landscape Architectural Services	1,651
541330	Engineering Services	2,356
541340	Drafting Services	43
541350	Building Inspection Services	229
541370	Surveying and Mapping (except Geophysical) Services	15
541380	Testing Laboratories	95
541620	Environmental Consulting Services	97

Source: Dun & Bradstreet/Hoovers; M/WBE business directory information compiled by the authors.

Table 4.2. Construction—Number of Listed M/WBEs and Industry Weight, by NAICS Code, 2010

NAICS Code	NAICS Description	Number of Listed M/BE Establish-ments
236115	New Single-Family Housing Construction (except Operative Builders)	420
236116	New Multifamily Housing Construction (except Operative Builders)	4
236117	New Housing Operative Builders	20
236118	Residential Remodelers	135
236210	Industrial Building Construction	33
236220	Commercial and Institutional Building Construction	264
237110	Water and Sewer Line and Related Structures Construction	46
237120	Oil and Gas Pipeline and Related Structures Construction	5
237130	Power and Communication Line and Related Structures Construction	8
237210	Land Subdivision	59
237310	Highway, Street, and Bridge Construction	82
237990	Other Heavy and Civil Engineering Construction	5
238110	Poured Concrete Foundation and Structure Contractors	90
238120	Structural Steel and Precast Concrete Contractors	27
238130	Framing Contractors	75
238140	Masonry Contractors	85
238150	Glass and Glazing Contractors	21
238160	Roofing Contractors	81
238170	Siding Contractors	10
238190	Other Foundation, Structure, and Building Exterior Contractors	5
238210	Electrical Contractors and Other Wiring Installation Contractors	403
238220	Plumbing, Heating, and Air-Conditioning Contractors	328
238290	Other Building Equipment Contractors	24
238310	Drywall and Insulation Contractors	53
238320	Painting and Wall Covering Contractors	209
238330	Flooring Contractors	48
238340	Tile and Terrazzo Contractors	31
238350	Finish Carpentry Contractors	11
238390	Other Building Finishing Contractors	14
238910	Site Preparation Contractors	92
238990	All Other Specialty Trade Contractors	203
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers	65
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	30

NAICS Code	NAICS Description	Number of Listed M/BE Establish-ments
423330	Roofing, Siding, and Insulation Material Merchant Wholesalers	12
423390	Other Construction Material Merchant Wholesalers	14
423510	Metal Service Centers and Other Metal Merchant Wholesalers	66
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	113
423710	Hardware Merchant Wholesalers	59
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	29
423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers	25
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	20
541310	Architectural Services	189
541320	Landscape Architectural Services	149
541330	Engineering Services	371
541340	Drafting Services	5
541350	Building Inspection Services	14
541370	Surveying and Mapping (except Geophysical) Services	5
541380	Testing Laboratories	12
541620	Environmental Consulting Services	6

Source: See Table 4.1.

Table 4.3. Listed M/WBE Survey—Amount of Misclassification, by NAICS Code

NAICS Code	Misclassification (Percentage non-minority male)	Percentage Actually M/WBE-owned	Number of Businesses Interviewed
236115	20.2	79.8	35
236116	19.2	80.8	16
236117	12.0	88.0	37
236118	20.8	79.2	35
236210	28.9	71.1	26
236220	24.2	78.5	36
237110	30.1	75.5	25
237120	72.7	27.3	11
237130	23.6	76.4	23
237210	16.0	84.0	47
237310	27.0	76.2	26
237990	35.0	75.1	30
238110	26.5	75.3	69
238120	25.7	74.3	96
238130	30.6	71.4	68
238140	31.2	70.3	56
238150	29.3	70.7	67
238160	30.3	69.7	78
238170	21.1	78.9	54
238190	28.9	72.2	69
238210	27.0	74.6	65
238220	29.2	72.3	63
238290	18.2	81.8	55
238310	29.5	74.1	59
238320	30.0	72.4	73
238330	26.7	73.3	58
238340	29.4	70.6	77
238350	33.1	66.9	51
238390	27.6	72.4	56
238910	28.4	71.6	62
238990	25.6	74.4	65
423310	29.0	71.0	38
423320	20.5	79.5	22
423330	0.0	100.0	4
423390	18.5	81.5	92

423510	26.6	73.4	39
423610	27.7	72.3	37
423710	29.0	71.0	45
423720	24.6	75.4	54
423730	42.3	57.7	16
424720	13.8	86.2	57
541310	16.6	83.4	81
541320	20.7	79.3	103
541330	20.9	82.8	72
541340	9.5	90.5	59
541350	19.8	82.4	76
541370	22.8	77.2	47
541380	18.0	82.0	56
541620	12.0	88.5	105

Source: NERA telephone surveys, 2005-2010.

Table 4.4. Unclassified Businesses Survey — Amount of Nonclassification, by NAICS Code

NAICS Code	Percentage Actually non-minority male-owned	Percentage M/WBE	Number of Businesses Interviewed
236115	88.2	11.8	302
236116	86.1	13.9	205
236117	88.0	12.0	188
236118	87.7	12.3	276
236210	84.1	15.9	175
236220	87.7	12.4	173
237110	89.4	11.6	151
237120	85.0	15.0	90
237130	84.8	15.2	84
237210	80.2	19.8	335
237310	86.3	14.0	202
237990	89.0	11.9	191
238110	85.8	15.3	295
238120	82.8	17.2	166
238130	88.3	12.7	184
238140	85.6	14.8	265
238150	87.4	12.6	279
238160	84.1	15.9	286
238170	84.1	15.9	245
238190	82.3	17.7	174
238210	85.8	14.5	272
238220	85.3	14.9	266
238290	83.0	17.0	287
238310	85.4	15.3	352
238320	84.8	15.4	307
238330	87.0	13.0	169
238340	86.9	13.1	156
238350	82.8	17.2	123
238390	82.5	17.5	359
238910	86.3	14.6	301
238990	82.6	17.4	335
423310	88.3	11.7	115
423320	86.2	13.8	271
423330	92.7	7.3	110
423390	93.0	7.0	43

423510	85.6	14.4	123
423610	86.4	14.6	175
423710	84.6	15.4	144
423720	87.6	12.4	227
423730	80.7	19.3	363
424720	70.2	29.8	160
541310	88.1	11.9	259
541320	83.8	16.2	214
541330	87.9	12.2	266
541340	87.4	12.7	261
541350	87.4	12.7	261
541370	86.4	13.6	408
541380	88.0	12.0	279
541620	82.2	18.0	227

Source: NERA telephone surveys, 2005-2010.

Table 4.5. Detailed M/WBE Availability—Construction, 2010

Detailed Industry	African-American	Hispanic	Asian	Native American	MBE	Non-minority Female	M/WBE
New Single-Family Housing Construction (236115)	2.97	3.16	1.59	0.52	8.24	8.37	16.61
New Multifamily Housing Construction (236116)	3.34	5.77	0.89	0.80	10.80	9.32	20.12
New Housing Operative Builders (236117)	1.74	2.17	1.11	0.67	5.68	10.24	15.93
Residential Remodelers (236118)	3.81	2.05	1.09	0.59	7.54	9.14	16.68
Industrial Building Construction (236210)	2.03	3.62	1.23	0.35	7.23	13.67	20.90
Commercial and Institutional Building Construction (236220)	5.54	3.97	3.35	0.92	13.79	10.45	24.24
Water and Sewer Line and Related Structures Construction (237110)	3.15	2.49	1.18	0.55	7.37	12.00	19.37
Oil and Gas Pipeline and Related Structures Construction (237120)	6.10	1.64	0.99	0.34	9.06	13.85	22.91
Power and Communication Line and Related Structures Construction (237130)	3.94	1.17	0.75	0.24	6.10	12.78	18.88
Land Subdivision (237210)	4.14	3.65	1.88	0.82	10.50	11.59	22.09
Highway, Street, and Bridge Construction (237310)	3.88	4.11	1.30	0.52	9.81	10.59	20.40
Other Heavy and Civil Engineering Construction (237990)	3.40	1.85	0.63	0.55	6.42	10.59	17.01
Poured Concrete Foundation and Structure Contractors (238110)	3.04	5.88	1.01	0.88	10.82	11.42	22.23
Structural Steel and Precast Concrete Contractors (238120)	5.78	6.24	2.25	0.38	14.65	17.99	32.64
Framing Contractors (238130)	4.11	2.08	1.10	0.68	7.97	10.11	18.08
Masonry Contractors (238140)	4.21	5.46	0.77	0.84	11.28	10.59	21.87
Glass and Glazing Contractors (238150)	2.68	6.11	0.99	0.77	10.55	12.43	22.98
Roofing Contractors (238160)	3.22	5.58	0.98	0.73	10.51	9.62	20.13
Siding Contractors (238170)	2.56	6.94	0.57	0.99	11.05	9.24	20.29
Other Foundation, Structure, and Building Exterior Contractors (238190)	5.98	5.70	1.17	0.38	13.23	10.03	23.26
Electrical Contractors and Other Wiring Installation Contractors (238210)	3.79	5.43	1.19	0.92	11.33	13.10	24.43
Plumbing, Heating, and Air-Conditioning Contractors (238220)	3.14	5.18	0.95	0.85	10.13	10.20	20.33
Other Building Equipment Contractors (238290)	6.67	5.86	2.08	0.64	15.25	13.77	29.02
Drywall and Insulation	3.03	6.17	1.00	0.98	11.18	10.21	21.39

Detailed Industry	African-American	Hispanic	Asian	Native American	MBE	Non-minority Female	M/WBE
Contractors (238310)							
Painting and Wall Covering Contractors (238320)	2.84	5.42	0.89	0.84	9.99	11.03	21.02
Flooring Contractors (238330)	3.85	2.35	0.86	0.50	7.56	10.78	18.35
Tile and Terrazzo Contractors (238340)	4.78	2.44	1.02	0.62	8.86	10.51	19.36
Finish Carpentry Contractors (238350)	6.77	1.63	1.08	0.58	10.07	9.89	19.96
Other Building Finishing Contractors (238390)	1.53	7.53	0.64	0.97	10.67	10.49	21.16
Site Preparation Contractors (238910)	3.87	5.28	1.07	0.94	11.17	11.54	22.71
All Other Specialty Trade Contractors (238990)	3.08	6.96	0.89	0.99	11.91	10.62	22.53
Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers (423310)	5.85	1.48	3.62	0.18	11.13	13.08	24.21
Brick, Stone, and Related Construction Material Merchant Wholesalers (423320)	3.20	2.27	4.45	0.59	10.51	14.05	24.56
Roofing, Siding, and Insulation Material Merchant Wholesalers (423330)	2.50	0.11	1.96	0.13	4.70	10.25	14.96
Other Construction Material Merchant Wholesalers (423390)	4.44	1.39	1.62	0.30	7.75	10.08	17.83
Metal Service Centers and Other Metal Merchant Wholesalers (423510)	4.16	2.57	4.99	0.34	12.06	11.05	23.11
Electrical Apparatus and Equipment Merchant Wholesalers (423610)	4.98	2.80	4.74	0.47	12.99	14.10	27.08
Hardware Merchant Wholesalers (423710)	7.14	1.98	5.76	0.21	15.08	14.52	29.60
Plumbing and Heating Equipment and Supplies Merchant Wholesalers (423720)	4.69	2.22	3.91	0.38	11.20	12.99	24.19
HVAC Equipment and Supplies Merchant Wholesalers (423730)	5.95	3.02	5.21	0.64	14.82	12.67	27.49
Petroleum and Petroleum Products Merchant Wholesalers (424720)	4.29	4.61	2.79	0.60	12.29	12.49	24.78
Architectural Services (541310)	2.75	2.99	3.50	0.55	9.79	11.23	21.03
Landscape Architectural Services (541320)	2.79	4.71	1.39	0.55	9.44	12.95	22.39
Engineering Services (541330)	3.03	3.00	6.10	0.51	12.64	10.45	23.09
Drafting Services (541340)	6.67	5.11	4.25	0.46	16.49	13.87	30.35
Building Inspection Services (541350)	5.35	3.85	2.68	0.52	12.41	14.03	26.44
Surveying and Mapping (except Geophysical) Services (541370)	4.62	3.33	9.80	0.63	18.38	15.62	34.00
Testing Laboratories (541380)	1.53	2.22	3.37	1.30	8.41	12.29	20.70

Detailed Industry	African-American	Hispanic	Asian	Native American	MBE	Non-minority Female	M/WBE
Environmental Consulting Services (541620)	3.92	3.78	3.00	0.82	11.52	12.39	23.90

Source: See Table 4.1.

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

A. Review of Relevant Literature

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

After years of comparative neglect, research on the economics of entrepreneurship—especially upon self-employment—has expanded in the last twenty years.[153] There is a good deal of agreement in the literature on the micro-economic correlates of self-employment.[154] In the U.S., it appears that self-employment rises with age, is higher among men than women and higher among non-minorities than African-Americans. The least educated have the highest probability of being self-employed. However, evidence is also found in the U.S. that the most highly educated also have relatively high probabilities. On average, however, increases in educational attainment are generally found to lead to increases in the probability of being self-employed. A higher number of children in the family increases the likelihood of (male) self-employment. Workers in agriculture and construction are also especially likely to be self-employed.

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

---

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

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

and Davila 2006, Robles and Cordero-Gúzman, 2007),[155] immigration policy (Borjas and Bronars, 1989), and retirement policies (Quinn, 1980). Studies by Long (1982), and Blau (1987), and more recently by Schuetze (1998), have considered the role of taxes.[156] 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.[157]

Blanchflower, Oswald and Stutzer (2001) found that there is a strikingly large latent desire to own a business. There exists frustrated entrepreneurship on a huge scale in the U.S. and other Organization for Economic Co-operation and Development (OECD) countries.[158] In the U.S., 7 out of 10 people say they would prefer to be self-employed. This compares to an actual proportion of self-employed people in 2001 of 7.3 percent of the civilian labor force, which also shows that the proportion of the labor force that is self-employed has declined steadily since 1990 following a small increase in the rate from 1980 to 1990. This raises an important question. Why do so few individuals in the U.S. and OECD countries manage to translate their preferences into action? Lack of start-up capital is one likely explanation. This factor is commonly cited by small-business managers themselves (Blanchflower and Oswald, 1998). There is also econometric evidence that confirms this barrier. Holding other influences constant, people who

---

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

[156] 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.

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

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

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

One primary impediment to entrepreneurship among minorities is lack of capital. In work based on U.S. micro data at the level of the individual, Evans and Leighton (1989), and Evans and Jovanovic (1989), have argued formally that entrepreneurs face liquidity constraints. The authors use the National Longitudinal Survey of Young Men for 1966-1981, and the Current Population Surveys for 1968-1987. The key test shows that, all else remaining equal, people with greater family assets are more likely to switch to self-employment from employment. This asset variable enters econometric equations significantly and with a quadratic form. Although Evans and his collaborators draw the conclusion that capital and liquidity constraints bind, this claim is open to the objection that other interpretations of their correlation are feasible. One possibility, for example, is that inherently acquisitive individuals both start their own businesses and forego leisure to build up family assets. In this case, there would be a correlation between family assets and movement into self-employment even if capital constraints did not exist. A second possibility is that the correlation between family assets and the movement to self-employment arises because children tend to inherit family firms. Blanchflower and Oswald (1998), however, find that the probability of self-employment depends positively upon whether the individual ever received an inheritance or gift.[159] Moreover, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Work by Holtz-Eakin, Joulfaian and Harvey (1994a, 1994b), drew similar conclusions using different methods on U.S. data, examining flows into and out of self-employment and finding that inheritances both raise entry and slow exit. In contrast, Hurst and Lusardi (2004), citing evidence from the U.S. *Panel Study of Income Dynamics*, claim to show that wealth is not a significant determinant of entry into self-employment. In response, however, Fairlie and Krashinsky (2006) have demonstrated that when the sample is split into two segments—those who enter self-employment after job loss and those who do not—the strong correlation between assets and rate of entry business formation is evident in both segments.

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

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

---

[159] 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.

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

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

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

Bates (1989) finds strong supporting evidence that racial differences in levels of financial capital have significant effects upon racial patterns in business failure rates. Fairlie (1999, 2006) demonstrates, for example, that the African-American exit rate from self-employment is twice as high as that of non-minorities. An example will help to make the point. Two baths are being filled with water. In the first scenario, both have the plug in. Water flows into bath A at the same rate as it does into bath B -- that is, the inflow rate is the same. When we return after ten minutes the amount of water (the stock) will be the same in the two baths as the inflow rates were the same. In the second scenario, we take out the plugs and allow for the possibility that the outflow rates from the two baths are different. Bath A (the African-American firms) has a much larger drain and hence the water flows out more quickly than it does from bath B (the non-minority 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 non-minority-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 non-minority-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 non-minority 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 M/WBEs will be higher and M/WBE formation rates will be lower than would be observed in a race- and gender-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 helpful to examine this segment of the labor force since a key source of new entrepreneurs in any given industry is the pool of experienced wage and salary workers in similar or related industries (Blanchflower, 2000; 2004). Employment discrimination that adversely impacts the ability of minorities or women to succeed in the labor force directly shrinks the available pool of potential M/WBEs. In almost every instance examined, a statistically significant adverse impact on wage and salary earnings is observed— in the economy at large and in the construction and construction-related professional services sector.[160]

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

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

1.　　Methods

We used the statistical technique of linear regression analysis to estimate the effect of each of a set of observable characteristics, such as education and age, on an outcome variable of interest. In this case, the outcome variable of interest is earnings and we used regression to compare earnings among individuals in similar markets at similar points in time and with similar years of education and potential labor market experience to 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.

---

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

Regression also allows us to narrowly tailor our statistical tests to the County's relevant geographic market, and assess whether disparities in that market are statistically significantly different from those observed elsewhere in the nation. Starting from an economy-wide data set, we first estimated the basic model of earnings differences just described and also included an indicator variable for the Cook County Market Area (CCMA), which is defined as Cook County and the balance of the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area. This model appears as Specification (1) in Tables 5.1 through 5.12. Next, we estimated Specification (2), which is the same model as (1) but with the addition of indicator variables that interact race and sex with the CCMA indicator. Specification (3) represents our ultimate specification, which includes all the variables from the basic model as well as any of the interaction terms from Specification (2) that were statistically significant.[161]

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.[162]

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 used.

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

---

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

[162] 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.

The second source of data is the Annual Demographic File from the Current Population Survey (CPS).[163] 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 based on 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.

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 and Construction-related industries. Tables 5.1 and 5.4 are derived from the 2006–2008 ACS PUMS, Tables 5.2 and 5.5 are derived from the 1980–1991 March CPS files, and Tables 5.3 and 5.6 are derived from the 1992–2008 March CPS files. 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 non-minority males.

a.   Specification (1) - the Basic Model

For example, in Table 5.1 Specification (1) the estimated percentage difference in annual wages between African-Americans (both sexes) and non-minority males in 2006–2008 was -32.8 percent. That is, average annual wages among African-Americans were 32.8 percent lower than for non-minority 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.[164] In the example just used, the t-statistic of 173.50 indicates that the result is statistically significant.

Specification (1) in Tables 5.1-5.3 shows adverse and statistically significant wage disparities for African-Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and non-minority women consistent with the presence of discrimination in these markets. Observed disparities are large as well, ranging from a low of -12.8 percent for the "other race" category (primarily Asians and Native Americans) in Table 5.2 to a high of -32.8 percent for African-Americans in Table 5.1.

Specification (1) in Tables 5.4 through 5.6 shows similar results when the basic analysis is restricted to Construction and Construction-related industries. In this sector, large, adverse, and

---

[163] The Annual Demographic Survey of the CPS is conducted each March. It contains all the monthly CPS data plus additional data on work experience, income and earnings, noncash benefits, and migration. *See* King, Ruggles, et al. (2009).

[164] From a two-tailed test.

statistically significant wage disparities are once again observed for African-Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and non-minority women. A comparison of Tables 5.1 and 5.4 shows that for Hispanics and Asians the disparities in the Construction and Construction-related sector are somewhat smaller than those observed in the economy as a whole. For African-Americans and non-minority women, they are somewhat larger, and for Native Americans they are about equal.

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 and Construction-related industries.

For African-Americans between 1980 and 1991, the wage disparity in the economy as a whole was 30.4 percent, shrinking slightly to 28.2 percent in the 1992-2008 period. In Construction and Construction-related industries, the disparity was 35.4 percent in the earlier period. Although diminishing significantly in recent years, to 24.3 percent, the disparity remains substantial.

For Hispanics between 1980 and 1991, the wage disparity in the economy as a whole was 20.6 percent, shrinking only slightly to 19.9 percent in the 1992-2008 period. In Construction and Construction-related industries, the disparity was 15.9 percent in the earlier period, actually increasing to 17.0 percent in more recent years.

For Asians and Native Americans, tracking time trends is more difficult since in the earlier period these two groups were combined together in the CPS into the category "Other race." In the economy as a whole, the wage disparity for the "Other race" category in the 1980-1991 period was 12.8 percent. In the 1992-2008 period, the wage disparities worsened significantly: to 21.8 percent for Asians and 23.4 percent for Native Americans. In Construction and Construction-related industries, the "Other race" disparity in the earlier period was 13.0 percent, growing to 18.5 percent for Asians and 15.7 percent for Native Americans during the 1992-2008 period.

For non-minority women between 1980 and 1991, the wage disparity in the economy as a whole was 28.3 percent, shrinking to 21.7 percent in the 1992-2008 period. In Construction and Construction-related industries, the disparity was 30.2 percent in the earlier period. Though diminishing significantly in recent years to 20.7 percent, the disparity for this group also remains large.

b.   Specifications (2) and (3) - the Full Model Including CCMA-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 with a set of interaction terms added that test whether minorities and women in the CCMA differ significantly from those elsewhere in the U.S. economy. Specification (2) in Table 5.1, for example, shows a -32.6 percent wage difference that estimates the direct effect of being African-American in 2006–2008, as well as a statistically significant 8.8 percent wage decrement in that year that captures the indirect effect of residing in the CCMA and being African-American. That is, wages for African-Americans in the CCMA, on average, were 9.2 percent higher than for African-Americans in the nation as a whole

and 41.8 percent lower (-32.6 percent minus 9.2 percent) than for non-minority males in the CCMA.

Specification (3) simply repeats Specification (2), dropping any CCMA interactions that are not statistically significant. In Table 5.1, for example, the only interaction terms included in the final specification were for African-Americans, Asians and Pacific Islanders, Native Americans, and non-minority females. The net result of Specification (3) in Tables 5.1, 5.2 and 5.3 is evidence of large, adverse, and statistically significant wage disparities for all minority groups and for non-minority women. In Tables 5.4, 5.5 and 5.6, for Construction and Construction-related industries, there is evidence of large, adverse, and statistically significant wage disparities for all minority groups and for non-minority women as well.

c.   Conclusions

Clearly, minorities and women earn substantially and significantly less from their labor than do their non-minority male counterparts—even more so in the Cook County Market Area than in the nation as a whole. Such disparities are symptoms of discrimination in the labor force that, in addition to its direct effect on workers, reduces the future availability of M/WBEs by stifling opportunities for minorities and women to progress through precisely those internal labor markets and occupational hierarchies that are most likely to lead to entrepreneurial opportunities. These disparities reflect more than mere "societal discrimination" because they demonstrate the nexus between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. Other things equal, these reduced entrepreneurial opportunities in turn lead to lower M/WBE availability levels than would be observed in a race- and gender-neutral marketplace.

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

The patterns of discrimination that affect minority and female wage earners affect minority and female entrepreneurs as well. We turn next to the analysis of race and sex disparities in business owner earnings. Tables 5.7 through 5.9 focus on the economy as a whole and Tables 5.10 through 5.12 on Construction and Construction-related industries. Tables 5.7 and 5.10 are derived from the 2006–2008 ACS PUMS, Tables 5.8 and 5.11 are derived from the 1980–1991 CPS, and Tables 5.9 and 5.12 are derived from the 1992–2008 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 non-minority males.

a.   Specification (1) - the Basic Model

Specification (1) in Tables 5.7 through 5.9 shows large, adverse, and statistically significant business owner earnings disparities for African-Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and non-minority women consistent with the presence of discrimination in these markets. The measured difference for African-Americans ranges between 28 percent and 40 percent lower than for comparable non-minority males; for Hispanics, from 20 percent to 25 percent; for Asians, from 10 percent to 21 percent; for Native Americans, from 28 percent to 36 percent; and for non-minority women from 38 percent to 46 percent.

Turning to Construction and Construction-related industries, Specification (1) in Tables 5.10 through 5.12 shows large, adverse, and, with two exceptions, statistically significant business owner earnings disparities for African-Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and non-minority women consistent with the presence of discrimination in these markets.[165] The measured difference for African-Americans ranges between 24 percent and 43 percent lower than for comparable non-minority males; for Hispanics, 16 percent; for Asians, from 13 percent to 17 percent; for Native Americans, from 13 percent to 31 percent; and for non-minority women from 22 percent to 46 percent.

A comparison of Tables 5.8 and 5.9 shows changes in observed business owner earnings disparities over time for the economy as a whole. Tables 5.11 and 5.12 do the same for Construction and Construction-related industries.

For African-Americans between 1980 and 1991, the business owner earnings disparity in the economy as a whole was 33.9 percent, shrinking to 28.2 percent in the 1992-2008 period. In Construction and Construction-related industries, the disparity was 39.9 percent in the earlier period. Although diminishing significantly in recent years, to 23.6 percent, the disparity remains quite large.

For Hispanics between 1980 and 1991, the business owner earnings disparity in the economy as a whole was 20.0 percent, increasing to 24.9 percent in the 1992-2008 period. In Construction and Construction-related industries, the disparity has remained constant at 16.0 percent.

For Asians and Native Americans, in the economy as a whole, the business owner earnings disparity for the "Other race" category in the 1980-1991 period was 9.4 percent. In the 1992-2008 period, the business owner earnings disparities worsened significantly: to 21.5 percent for Asians and 28.1 percent for Native Americans. In Construction and Construction-related industries, the "Other race" disparity in the earlier period was only 0.2 percent, but grew to 13.2 percent for Asians and 12.6 percent for Native Americans during the 1992-2008 period.

For non-minority women between 1980 and 1991, the business owner earnings disparity in the economy as a whole was 45.6 percent, shrinking to 37.7 percent in the 1992-2008 period. In Construction and Construction-related industries, the disparity was 38.2 percent in the earlier period and, although diminishing significantly in recent years to 22.3 percent, the disparity remains large.

b. Specifications (2) and (3) - the Full Model Including CCMA-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 CCMA differ significantly from those elsewhere in the U.S. economy. Specification (3) drops any CCMA interaction terms that are not statistically significant.

---

[165] The earnings differential for "Other races" in Table 5.11 is not statistically significant.

For the economy as a whole in 2000, Table 5.7 shows that only the CCMA interaction term for "Other Races" is statistically significant, indicating that disparities for minorities in CCMA are no better or worse than in the nation as a whole, while disparities for the "Other Race" category are much better in the CCMA than in the nation as a whole. Table 5.8 for the 1980-1991 period, and Table 5.9 for the 1992-2008 period, shows that minorities and non-minority women face disparities in the CCMA that are no better or worse than those observed in the nation as a whole.

For Construction and Construction-related industries, Tables 5.10–5.12 show that the estimates for the CCMA are in general agreement with results for the nation as a whole.

c.   Conclusions

As was the case for wage and salary earners, minority and female entrepreneurs earn substantially and significantly less from their efforts than similarly situated non-minority male entrepreneurs. The situation is, in general, little different in the Cook County Market Area than in the nation as a whole. These disparities are a symptom of discrimination in commercial markets that directly and adversely affect M/WBEs. Other things equal, if minorities and women are prevented by discrimination from earning remuneration from their entrepreneurial efforts comparable to that of similarly situated non-minority males, then growth rates may slow, business failure rates may increase, and as demonstrated in the next section, business formation rates may decrease. Combined, these phenomena result in lower M/WBE availability levels than would be observed in a race- and gender-neutral marketplace.

C.   Race and Sex Disparities in Business Formation

As discussed in the two prior sections, discrimination that affects the wages and entrepreneurial earnings of minorities and women will ultimately affect the number of businesses formed by these groups as well. In the final section of this chapter, we turn to the analysis of race and sex disparities in business formation.[166] 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 non-minority males. We find that they are not as likely to do so and that minority and female business formation rates would likely be substantially and significantly higher if markets operated in a race- and gender-neutral manner.

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

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

---

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

similar capacities for other contractors, fewer by those who were employed instead as laborers. Similarly, discrimination in commercial capital and credit markets, as well as asset and wealth distribution, prevents minorities and women from acquiring the financial credit and capital that are so often prerequisite to starting or expanding a business. Other things equal, these phenomena would lead minority and female business formation rates to be lower than otherwise would be expected.

Further, discrimination by commercial customers and suppliers against M/WBEs, symptoms of which are evidenced in Section B.4 above and elsewhere, operates to increase input prices and lower output prices for M/WBEs. This discrimination leads to higher rates of failure for some minority- and women-owned firms, lower rates of profitability and growth for others, and prevents some minorities and women from ever starting businesses at all.[167] All of these phenomena, other things equal, would contribute directly to relatively lower observed rates of minority and female self-employment.

1. Methods and Data

To see if minorities or non-minority women are as likely to be business owners as are comparable non-minority males, we use a statistical technique known as Probit regression. Probit regression is used to determine the relationship between a categorical variable—one that can be characterized in terms of a "yes" or a "no" response as opposed to a continuous number—and a set of characteristics that are related to the outcome of the categorical variable. Probit regression produces estimates of the extent to which each characteristic is positively or negatively related to the likelihood that the categorical variable will be a yes or no. For example, Probit regression is used by statisticians to estimate the likelihood that an individual participates in the labor force, retires this year, or contracts a particular disease—these are all variables that can be categorized by a response of "yes" (for example, she is in the labor force) or "no" (for example, she is not in the labor force)—and the extent to which certain factors are positively or negatively related to the likelihood (for example, the more education she has, the more likely that she is in the labor force). Probit regression is one of several techniques that can be used to examine qualitative outcomes. Generally, other techniques such as Logit regression yield similar results.[168] In the present case, Probit regression is used to examine the relationship between the choice to own a business (yes or no) and the other demographic and socioeconomic characteristics in our basic model. The underlying data for this section is once again the 2006–2008 ACS PUMS, the 1980-1991 CPS, and the 1992-2008 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 2006–2008 by race and sex. A striking feature of both tables is how much

---

[167] See also the materials cited at fn. 160 *supra*.

[168] 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.

higher business ownership rates are for non-minority males than for all other groups. In the majority of cases, the disparities are larger in the CCMA than in the nation as a whole.

Table 5.13, for example, shows a 7.61 percentage point difference between the overall self-employment rate of Hispanics and non-minority Males in the CCMA (12.68 − 5.07 = 7.61). In the top panel of Table 5.14, for Construction and Construction-related industries, an even larger 11.13 percentage point difference is observed for Hispanics compared to non-minority males in the CCMA. As shown in the final column, this 11.13 percentage point gap translates into a Hispanic business formation rate in the CCMA's Construction and Construction-related industries that is 49.5 percent lower than the non-minority male business formation rate (*i.e.*, (11.34 − 22.47) ÷ 22.47 ≈ -49.5%). In the CCMA Services and Commodities sector, similarly large business formation rate disparities are observed for all minority groups and non-minority women, as shown in the bottom panel of Table 5.14.

For African-Americans nationally, the overall business formation rate is 62.2 percent lower than the non-minority male rate. In the CCMA, it is 57.0 percent lower. In the CCMA's Construction and Construction-related industries, the African-American rate is 11.7 percent lower, compared to 36.5 percent lower in the U.S. as a whole. In the CCMA Services and Commodities sector, the African-American rate is 55.0 percent lower, compared to 59.9 percent lower for the nation as a whole.

For Hispanics nationally, the overall business formation rate is 39.2 percent lower than the non-minority male rate. In the CCMA, it is 60.0 percent lower. In the CCMA's Construction and Construction-related industries, the Hispanic rate is 49.5 percent lower, compared to 44.2 lower percent for the nation as a whole. In the CCMA Services and Commodities sector, the Hispanic rate is 60.1 percent lower, compared to 36.2 lower percent for the nation as a whole.

For Asians nationally, the overall business formation rate is 25.6 percent lower than the non-minority male rate. In the CCMA, it is 30.4 percent lower. In the CCMA's Construction and Construction-related industries, the Asian rate is 50.1 percent lower, compared to 32.4 percent lower for the nation as a whole. In the CCMA Services and Commodities sector, the Asian rate is 20.1 percent lower than the non-minority male rate, compared to 14.4 percent for the nation as a whole.

For Native Americans nationally, the overall business formation rate is 39.2 percent lower than the non-minority male rate. In the CCMA, however, it is 3.2 percent higher. In the CCMA's Construction and Construction-related industries, the Native American rate is 47.5 percent lower, compared to 31.0 percent lower in the U.S. as a whole. In the CCMA Services and Commodities sector, the Native American rate is 20.7 percent lower, compared to 38.5 percent lower for the nation as a whole.

For minorities as a group, nationally, the overall business formation rate is 44.1 percent lower than the non-minority male rate. In the CCMA, it is 53.5 percent lower. In the CCMA's Construction and Construction-related industries, the minority rate is 43.6 percent lower, compared to 41.2 percent lower for the nation as a whole. In the CCMA Services and Commodities sector, the minority rate is 50.5 percent lower than the non-minority male rate, compared to 40.2 percent for the nation as a whole.

For non-minority women nationally, the overall business formation rate is 38.4 percent lower than the non-minority male rate. In the CCMA, it is 37.8 percent lower. In the CCMA's Construction and Construction-related industries, the non-minority female rate is 32.7 percent lower, compared to 41.4 percent lower for the nation as a whole. In the CCMA Services and Commodities sector, the non-minority female rate is 30.1 percent lower than the non-minority male rate, compared to 28.6 percent for the nation as a whole.

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 non-minority males. It is well known, for example, that earnings tend to increase with age (i.e. labor market experience). It is also true that the propensity toward self-employment increases with experience.[169] Since most minority populations in the United States have a lower median age than the non-Hispanic non-minority 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 or other factors such as education, geographic location, or industry preferences of minorities and non-minority women compared to non-minority males.

To do this, the remainder of this section presents a series of regression analyses that test whether large, adverse, and statistically significant race and sex disparities for minorities and women remain when these other factors are held constant. Tables 5.15 through 5.17 focus on the economy as a whole and Tables 5.18a through 5.20 focus on Construction and Construction-related industries and Goods and Services. As in previous sections, the first in each trio of tables is derived from the 2006–2008 ACS PUMS, the second from the 1980–1991 CPS, and the third from the 1992–2008 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 compared to similarly-situated non-minority males.

a.   Specification (1) - the Basic Model

Specification (1) in Tables 5.15 through 5.17 shows large, adverse, and statistically significant business formation disparities for African-Americans, Hispanics, Asians, Native Americans, persons reporting multiple races, and non-minority women consistent with the presence of discrimination in these markets. Specification (1) in Tables 5.18a through 5.20 shows large, negative, and statistically significant business formation disparities for every group in Construction and Construction-related industries as well as in the Goods and Services sectors.

Tables 5.16 and 5.17 for the economy as a whole, and Tables 5.19 and 5.20 for Construction and Construction-related industries, show changes in observed business formation disparities over time.

For African-Americans between 1980 and 1991, the business formation rate disparity in the economy as a whole was 3.7 percentage points, remaining essentially unchanged at 3.6 percentage points in the 1992-2008 period. In Construction and Construction-related industries,

---

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

the disparity was 12.2 percentage points in the earlier period, decreasing to 9.9 percentage points in the 1992-2008 period.

For Hispanics between 1980 and 1991, the business formation rate disparity in the economy as a whole was 2.2 percentage points, rising to 2.8 percentage points in the 1992-2008 period. In Construction and Construction-related industries, the disparity was 7.4 percentage points during 1980-1991, rising to 8.5 percentage points in the 1992-2008 period.

For Asians and Native Americans, in the economy as a whole, the business formation rate disparity for the "Other race" category in the 1980-1991 period was only 0.3 percentage points. In the 1992-2008 period, the business formation rate disparities worsened significantly: to 1.0 percentage points for Asians and 2.1 percentage points for Native Americans. In Construction and Construction-related industries, the "Other race" disparity in the earlier period was 7.9 percentage points, falling to 4.2 percentage points for Asians and 6.0 percentage points for Native Americans during the 1992-2008 period.

For non-minority women between 1980 and 1991, the business formation rate disparity in the economy as a whole was 3.3 percentage points, falling to 2.5 percentage points in the 1992-2008 period. In Construction and Construction-related industries, the disparity was 12.1 percent in the earlier period, falling to 8.7 percentage points in more recent years.

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

Several of the CCMA interaction terms included in Specification (2) were significant. The final results are in Specification (3) for Tables 5.15-5.20.

To summarize for the economy-wide results (Tables 5.15, 5.16 and 5.17):

- For African-Americans, business formation rates are between 2.2 and 2.9 percentage points lower than what would be expected in a race- and gender-neutral marketplace.

- For Hispanics, business formation rates are between 2.2 percentage points and 3.2 percentage points lower than what would be expected in a race- and gender-neutral marketplace.

- For Asians, business formation rates are between 0.6 percentage points lower and 1.2 percentage points higher than what would be expected in a race- and gender-neutral marketplace.

- For Native Americans, business formation rates are between 2.1 and 2.7 percentage points lower than what would be expected in a race- and gender-neutral marketplace.

- For non-minority women, business formation rates are between 2.5 and 3.3 percentage points lower than what would be expected in a race- and gender-neutral marketplace.

To summarize the results for Construction and Construction-related industries (Tables 5.18a, 5.19 and 5.20):

- For African-Americans, business formation rates are between 12.2 percentage points lower and 3.4 percentage points higher than what would be expected in a race- and gender-neutral marketplace.

- For Hispanics, business formation rates are between 7.4 and 8.5 percentage points lower than what would be expected in a race- and gender-neutral marketplace.

- For Asians, business formation rates are between 6.2 percentage points lower and 17.1 percentage points higher than what would be expected in a race- and gender-neutral marketplace.

- For Native Americans, business formation rates are between 5.9 and 7.9 percentage points lower than what would be expected in a race- and gender-neutral marketplace.

- For non-minority women, business formation rates are between 4.7 and 12.1 percentage points lower than what would be expected in a race- and gender-neutral marketplace.

c.   Conclusions

This section has demonstrated that observed M/WBE availability levels in the Cook County Market Area are substantially and statistically significantly lower in the majority of cases examined than those that would be expected to be observed if commercial markets operated in a race- and gender-neutral manner. Discrimination results in minorities and women being substantially and significantly less likely to own their own businesses than would be expected based upon their observable characteristics including age, education, geographic location, industry, and trends over time. As demonstrated in previous sections, these groups also suffer substantial and significant earnings disadvantages relative to comparable non-minority males whether they work as employees or as entrepreneurs.

D.   Expected Business Formation Rates—Implications for Current M/WBE Availability[170]

In Table 5.21, the Probit regression results from Tables 5.15, 5.18a, and 5.18b for the overall Cook County Market Area economy, the CCMA Construction and CRS sector, and the CCMA Services and Commodities sector, respectively, are combined with weighted average self-employment rates by race and sex from the 2006–2008 ACS PUMS (Tables 5.13 and 5.14) to determine the expected difference between baseline business formation rates and the business formations that would be expected to be observed in a race- and gender-neutral marketplace. These figures appear in column (2) of each panel in Table 5.21.

---

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

The combined business formation rate in the CCMA for minorities and women in Construction and Construction-related industries is 13.32 percent (see middle panel of Table 5.21, last row). According to the regression specification underlying Table 5.18a, however, that rate would be 19.0 percent, or 42.6 percent higher, in a race- and gender-neutral marketplace. Put differently, the disparity index of the actual business formation rate to the expected business formation rate is 70.1. With few exceptions, the disparity indices are large, adverse and statistically significant for all groups examined.[171]

In Construction and Construction-related industries, the largest disparity observed is for persons reporting multiple races (57.2), followed in descending order by Hispanics (59.2), Native Americans (59.9), Asians (64.4), non-minority females (76.3), and African-Americans (100.1). For M/WBEs as a group in the CCMA's Construction and Construction-related industries, the disparity index is 70.1.

In the Goods and Services sector, the largest disparity observed is for Hispanics (47.7), followed by African-Americans (57.8), non-minority women (74.0), Asians (76.5), persons reporting multiple races (77.3), and Native Americans (82.6). For M/WBEs as a group in the CCMA Goods and Services sectors, the disparity index is 68.8.

E.   Evidence from the Survey of Business Owners

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

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.[172]

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

---

[171] The disparity index for African Americans in Construction is not adverse. For Asians and Native Americans in the top panel and for Native Americans in the bottom panel, the disparity indices are adverse and significant, but are above 80.0 percent, the traditional threshold for determining whether an adverse disparity is also "large."

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

Natives. The 2002 SBO also includes comparative information for non-minority-owned, non-women-owned firms.[173]

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 compared to the ACS PUMS or the CPS the SBO is more limited in the scope of industrial and geographic detail it provides, it nonetheless 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 Cook County Market Area. In the remainder of this section we present 2002 SBO statistics for the United States as a whole and the Cook County Market Area and calculate disparity indices from them. We find that results in the SBO regarding disparities are consistent with our findings above using the ACS PUMS and the CPS.

Tables 5.22 and 5.23 contain data for all industries combined. Table 5.22 is for the U.S. as a whole, Table 5.23 is for the State of Illinois.[174] Panel A in these three tables summarizes the 2002 SBO results for each grouping. Panel A of Table 5.22, for example, shows that there were 22.48 million firms in the U.S. in 2002 (column 1) with overall sales and receipts of $8.784 trillion (column 2). Of these 22.48 million firms, 5.17 million had one or more employees (column 3) and these 5.17 million firms had overall sales and receipts of $8.039 trillion (column 4). Column (5) shows a total of 55.37 million employees on the payroll of these 5.17 million firms and a total annual payroll expense of $1.627 trillion (column 6).

The remaining rows in Panel A provide comparable statistics for women-owned and minority-owned firms. For example, Table 5.22 shows that there were 1.2 million African-American-owned firms counted in 2002, and that these 1.2 million firms registered $88.6 billion in sales and receipts. It also shows that 94,518 of these African-American-owned firms had one or more employees, and that they employed a total of 753,978 workers in 2002 with an annual payroll total of $17.55 billion.

Panel A of Table 5.23 provides comparable information for Illinois. In 2002 the Census Bureau counted 284,954 female-owned firms in Illinois,[175] 68,699 African-American-owned firms, 39,539 Hispanic-owned firms, 45,133 Asian- or Pacific Islander-owned firms, and 3,379 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 African-American-owned

---

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

[174] It is not possible with the SBO data to replicate the CCMA. The IL numbers presented in this section therefore also include portions of Illinois that are not inside the CCMA.

[175] Additionally 104,266 equally male/female-owned firms were counted.

firms were 7.36 percent of all firms in Illinois in 2002, and that female-owned firms were 30.5 percent of all firms in Illinois. Additionally, 4.24 percent of firms were Hispanic-owned, 4.84 percent were Asian- or Pacific Islander-owned and 0.36 percent were Native American-owned.

Column (2) in Panel B provides the same percentage distribution for overall sales and receipts. Table 5.23, for example, shows that although African-American-owned firms were 7.36 percent of all firms in Illinois, they accounted for only 1.17 percent of all sales and receipts. Similar results are obtained when the sample is restricted to firms with one or more paid employees. Column (3) in Table 5.23 shows that African-American-owned employer firms accounted for 1.87 percent of all firms but only 0.98 percent of all sales and receipts. Large disparities in Illinois are observed not only for African-Americans, but also for female-owned firms, Hispanic-owned firms, Asian-owned firms, and Native American-owned firms.

The disparity indices are presented in Panel C of each Table. Disparity indices of 80 percent or less indicate disparate impact consistent with business discrimination against minority-owned and female-owned firms (0 percent being complete disparity and 100 percent being full parity). In Illinois, these disparity indices fall beneath the 80 percent threshold in practically every instance.

Tables 5.24 and 5.25 show comparable SBO data for Construction and Construction-related industries (NAICS 23 and 54) in the U.S. and in Illinois, while Tables 5.26 and 5.27 show data for Goods and Services (balance of NAICS codes). Disparity indices in Illinois are again large and statistically significant in almost every case.

Tables

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

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.328	-0.326	-0.326
	(173.5)	(168.93)	(169.07)
Hispanic	-0.229	-0.229	-0.229
	(124.51)	(122.28)	(124.56)
Asian	-0.268	-0.266	-0.266
	(111.33)	(108.43)	(108.57)
Native American	-0.309	-0.308	-0.308
	(47.84)	(47.44)	(47.47)
Other Race	-0.263	-0.262	-0.263
	(63.02)	(62.13)	(62.97)
Non-minority Female	-0.325	-0.325	-0.325
	(293.68)	(289.51)	(290.03)
Age	0.182	0.182	0.182
	(572.92)	(572.92)	(572.92)
Age^2	-0.002	-0.002	-0.002
	(499.13)	(499.13)	(499.13)
CCMA	0.171	0.199	0.194
	(28.91)	(27)	(28.46)
CCMA*African-American		-0.092	-0.088
		(8.17)	(7.98)
CCMA*Hispanic		-0.015	
		(1.54)	
CCMA* Asian/Pacific Islanders		-0.065	-0.061
		(4.7)	(4.45)
CCMA* Native American		-0.203	-0.199
		(2.34)	(2.3)
CCMA*Other Race		-0.046	
		(1.36)	
CCMA*non-minority Female		-0.027	-0.022
		(3.67)	(3.25)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	2548959	2548959	2548959
R^2	.4597	.4597	.4597

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

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number is the percentage difference in annual wages between a given group and non-minority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence; (6) "CCMA" is shorthand for "Cook County Market Area," which is the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area.

Table 5.2. Annual Wage Earnings Regressions, All Industries, 1980-1991

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.304	-0.302	-0.302
	(82.86)	(80.45)	(80.49)
Hispanic	-0.206	-0.206	-0.206
	(58.2)	(57.05)	(58.19)
Other Race	-0.128	-0.125	-0.125
	(15.85)	(15.06)	(15.06)
Non-minority Female	-0.283	-0.283	-0.283
	(127.04)	(125.16)	(127.03)
Age	0.099	0.099	0.099
	(150.36)	(150.37)	(150.37)
Age^2	-0.001	-0.001	-0.001
	(124.5)	(124.51)	(124.51)
CCMA	0.161	0.165	0.170
	(15.22)	(14.02)	(15.9)
CCMA*African-American		-0.041	-0.045
		(2.1)	(2.39)
CCMA*Hispanic		0.005	
		(.32)	
CCMA*Other Race		-0.090	-0.090
		(2.24)	(2.24)
CCMA*non-minority Female		0.009	
		(.74)	
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	689172	689172	689172
R^2	.6350	.6351	.6351

Source: NERA calculations from the Annual Demographic File of the 1980-1991 Current Population Survey microdata samples.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64; (2) Reported number is the percentage difference in annual wages between a given group and non-minority 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 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, 1992-2008

Independent Variables	Specification		
	(1)	(2)	(3)
African-American	-0.282 (94.54)	-0.280 (91.67)	-0.280 (91.85)
Hispanic	-0.199 (71.36)	-0.199 (69.87)	-0.199 (71.38)
Asian	-0.218 (49.27)	-0.217 (47.91)	-0.218 (49.29)
Native American	-0.234 (27.84)	-0.234 (27.71)	-0.234 (27.83)
Non-minority Female	-0.217 (104.93)	-0.217 (103.42)	-0.217 (104.93)
Age	0.095 (165.24)	0.095 (165.24)	0.095 (165.24)
Age^2	-0.001 (139.4)	-0.001 (139.4)	-0.001 (139.4)
CCMA	0.153 (16.96)	0.164 (14.72)	0.161 (17.43)
CCMA*African-American		-0.048 (3.14)	-0.045 (3.2)
CCMA*Hispanic		-0.005 (.37)	
CCMA*Asian		-0.037 (1.61)	
CCMA*Native American		0.048 (.53)	
CCMA*non-minority Female		-0.001 (.1)	
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	1054627	1054627	1054627
R^2	.5955	.5955	.5955

Source: NERA calculations from the Annual Demographic File of the 1992-2008 Current Population Survey microdata samples.

Notes: (1) Universe is all private sector wage and salary workers between age 16 and 64; (2) Reported number is the percentage difference in annual wages between a given group and non-minority 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 Asian/Pacific Islanders and American Indians/Alaska Natives; (5) Geography is defined based on place of residence; (6) "CCMA" is shorthand for "Cook County Market Area," which is the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area.

Table 5.4. Annual Wage Earnings Regressions, Construction and Related Industries, 2006–2008

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.352	-0.348	-0.348
	(44.51)	(43.36)	(43.35)
Hispanic	-0.199	-0.200	-0.199
	(37.59)	(37.29)	(37.58)
Asian	-0.221	-0.218	-0.218
	(19.55)	(19.06)	(19.05)
Native American	-0.310	-0.309	-0.310
	(17.21)	(17.14)	(17.19)
Other Race	-0.227	-0.225	-0.227
	(15.93)	(15.65)	(15.9)
Non-minority Female	-0.361	-0.359	-0.359
	(81.63)	(80.07)	(80.08)
Age	0.149	0.149	0.149
	(139.47)	(139.44)	(139.45)
Age^2	-0.001	-0.001	-0.001
	(119.5)	(119.48)	(119.48)
CCMA	0.323	0.348	0.354
	(15.84)	(15.59)	(16.56)
CCMA*African-American		-0.189	-0.193
		(3.45)	(3.55)
CCMA*Hispanic		0.034	
		(1.12)	
CCMA* Asian/Pacific Islanders		-0.155	-0.160
		(1.97)	(2.03)
CCMA* Native American		-0.120	
		(.36)	
CCMA*Other Race		-0.148	
		(1.19)	
CCMA*non-minority Female		-0.103	-0.107
		(3.2)	(3.39)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	221546	221546	221546
R^2	.2773	.2774	.2774

Source and Notes: See Table 5.1.

Table 5.5. Annual Wage Earnings Regressions, Construction and Related Industries, 1980-1991

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.354	-0.351	-0.354
	(21.98)	(21.35)	(21.98)
Hispanic	-0.159	-0.161	-0.159
	(12.39)	(12.36)	(12.39)
Other Race	-0.130	-0.134	-0.130
	(3.91)	(3.92)	(3.91)
Non-minority Female	-0.302	-0.300	-0.302
	(25.15)	(24.65)	(25.15)
Age	0.122	0.122	0.122
	(48.65)	(48.63)	(48.65)
Age^2	-0.001	-0.001	-0.001
	(40.1)	(40.08)	(40.1)
CCMA	0.260	0.273	0.260
	(5.92)	(5.97)	(5.92)
CCMA*African-American		-0.111	
		(1.11)	
CCMA*Hispanic		0.117	
		(1.6)	
CCMA*Other Race		0.106	
		(.77)	
CCMA*non-minority Female		-0.081	
		(.95)	
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	49976	49976	49976
R^2	.5529	.5529	.5529

Source: See Table 5.2.

Table 5.6. Annual Wage Earnings Regressions, Construction and Related Industries, 1992-2008

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.243	-0.242	-0.243
	(18.62)	(18.13)	(18.62)
Hispanic	-0.170	-0.171	-0.170
	(19.63)	(19.47)	(19.63)
Asian	-0.185	-0.184	-0.185
	(9.24)	(9.03)	(9.24)
Native American	-0.157	-0.162	-0.157
	(6.83)	(7.05)	(6.83)
Non-minority Female	-0.207	-0.206	-0.207
	(20.55)	(20)	(20.55)
Age	0.098	0.098	0.098
	(48.96)	(48.94)	(48.96)
Age^2	-0.001	-0.001	-0.001
	(40.81)	(40.79)	(40.81)
CCMA	0.190	0.189	0.190
	(6.19)	(5.65)	(6.19)
CCMA*African-American		-0.045	
		(.69)	
CCMA*Hispanic		0.047	
		(1.2)	
CCMA*Asian		-0.037	
		(.43)	
CCMA*Native American		0.573	
		(1.72)	
CCMA*non-minority Female		-0.062	
		(1.14)	
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	83316	83316	83316
R^2	.4951	.4952	.4951

Source: See Table 5.3.

Table 5.7. Annual Business Owner Earnings Regressions, All Industries, 2006–2008

Independent Variables	Specification		
	(1)	(2)	(3)
African-American	-0.403	-0.403	-0.403
	(32.36)	(31.75)	(32.36)
Hispanic	-0.233	-0.233	-0.233
	(20.99)	(20.71)	(20.99)
Asian	-0.096	-0.100	-0.096
	(5.96)	(6.15)	(5.96)
Native American	-0.359	-0.359	-0.359
	(10.19)	(10.16)	(10.19)
Other Race	-0.364	-0.369	-0.369
	(16.26)	(16.45)	(16.43)
Non-minority Female	-0.407	-0.407	-0.407
	(67.42)	(66.88)	(67.41)
Age	0.163	0.163	0.163
	(79.09)	(79.1)	(79.1)
Age^2	-0.002	-0.002	-0.002
	(69.58)	(69.59)	(69.59)
CCMA	0.047	0.028	0.043
	(1.4)	(.71)	(1.26)
CCMA*African-American		-0.007	
		(.09)	
CCMA*Hispanic		-0.057	
		(.73)	
CCMA* Asian/Pacific Islanders		0.186	
		(1.69)	
CCMA* Native American		-0.070	
		(.12)	
CCMA*Other Race		0.709	0.685
		(2.47)	(2.42)
CCMA*non-minority Female		0.037	
		(.78)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	284365	284365	284365
R^2	.1680	.1676	.1676

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

Notes: (1) Universe is all persons in the private sector with positive business earnings between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number is the percentage difference in annual business earnings between a given group and non-minority men; (3) Number in parentheses is the absolute value of the associated t-statistic. Using a two-tailed test, t-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence; (6) "CCMA" is shorthand for "Cook County Market Area," which is the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area.

Table 5.8. Annual Business Owner Earnings Regressions, All Industries, 1980-1991

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.339	-0.340	-0.339
	(15.49)	(14.9)	(15.49)
Hispanic	-0.200	-0.199	-0.200
	(13.1)	(12.83)	(13.1)
Other Race	-0.094	-0.090	-0.094
	(3.18)	(2.95)	(3.18)
Non-minority Female	-0.456	-0.455	-0.456
	(48.54)	(47.74)	(48.54)
Age	0.100	0.100	0.100
	(32.78)	(32.8)	(32.78)
Age^2	-0.001	-0.001	-0.001
	(29.41)	(29.43)	(29.41)
CCMA	0.245	0.289	0.245
	(5.61)	(6.33)	(5.61)
CCMA*African-American		-0.011	
		(.12)	
CCMA*Hispanic		-0.078	
		(.86)	
CCMA*Other Race		-0.080	
		(.63)	
CCMA*non-minority Female		-0.115	
		(1.87)	
Time (13 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	74895	74895	74895
R^2	.5174	.5175	.5174

Source: NERA calculations from the Annual Demographic File of the 1980-1991 Current Population Survey microdata samples.

Notes: (1) Universe is all private sector incorporated and unincorporated self-employed with positive business earnings between age 16 and 64; (2) Reported number is the percentage difference in annual business earnings between a given group and non-minority 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 Asian/Pacific Islanders and American Indians/Alaska Natives; (5) Geography is defined based on place of residence; (6) "CCMA" is shorthand for "Cook County Market Area," which is the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area.

Table 5.9. Annual Business Owner Earnings Regressions, All Industries, 1992-2008

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.282	-0.279	-0.282
	(16.44)	(15.77)	(16.44)
Hispanic	-0.249	-0.247	-0.249
	(19.31)	(18.91)	(19.31)
Asian	-0.215	-0.214	-0.215
	(12.93)	(12.52)	(12.93)
Native American	-0.281	-0.281	-0.281
	(8.11)	(8.08)	(8.11)
Non-minority Female	-0.377	-0.377	-0.377
	(43.02)	(42.4)	(43.02)
Age	0.097	0.097	0.097
	(30.48)	(30.49)	(30.48)
Age^2	-0.001	-0.001	-0.001
	(28.47)	(28.48)	(28.47)
CCMA	0.237	0.273	0.237
	(5.21)	(5.53)	(5.21)
CCMA*African-American		-0.101	
		(1.27)	
CCMA*Hispanic		-0.102	
		(1.25)	
CCMA*Asian		-0.064	
		(.77)	
CCMA*Native American		-0.035	
		(.05)	
CCMA*non-minority Female		-0.036	
		(.68)	
Time (11 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	115869	115869	115869
R^2	.3825	.3825	.3825

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

Notes: (1) Universe is all private sector incorporated and unincorporated self-employed with positive business earnings between age 16 and 64; (2) Reported number is the percentage difference in annual business earnings between a given group and non-minority 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 Asian/Pacific Islanders and American Indians/Alaska Natives; (5) Geography is defined based on place of residence; (6) "CCMA" is shorthand for "Cook County Market Area," which is the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area.

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

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.435	-0.436	-0.435
	(14.18)	(13.99)	(14.18)
Hispanic	-0.162	-0.160	-0.162
	(7.1)	(6.93)	(7.1)
Asian/Pacific Islanders	-0.174	-0.175	-0.174
	(3.55)	(3.55)	(3.55)
Native American	-0.312	-0.312	-0.312
	(4.48)	(4.49)	(4.48)
Other Race	-0.280	-0.281	-0.280
	(5.42)	(5.42)	(5.42)
Non-minority Female	-0.459	-0.463	-0.459
	(22.98)	(23.01)	(22.98)
Age	0.126	0.125	0.126
	(27.34)	(27.33)	(27.34)
Age^2	-0.001	-0.001	-0.001
	(24.61)	(24.61)	(24.61)
CCMA	-0.031	-0.047	-0.031
	(.45)	(.63)	(.45)
CCMA*African-American		0.045	
		(.19)	
CCMA*Hispanic		-0.132	
		(.87)	
CCMA* Asian/Pacific Islanders		0.167	
		(.25)	
CCMA* Native American		0.000	
		(.)	
CCMA*Other Race		0.236	
		(.26)	
CCMA*non-minority Female		0.404	
		(1.85)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	47414	47414	47414
R^2	.0543	.0544	.0543

Source and Notes: See Table 5.7.

Table 5.11. Business Owner Earnings Regressions, Construction and Related Industries, 1980-1991

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.399	-0.393	-0.399
	(8.82)	(8.5)	(8.82)
Hispanic	-0.162	-0.162	-0.162
	(4.67)	(4.63)	(4.67)
Other Race	0.002	0.002	0.002
	(.03)	(.03)	(.03)
Non-minority Female	-0.382	-0.385	-0.382
	(9.18)	(9.12)	(9.18)
Age	0.106	0.106	0.106
	(15.87)	(15.84)	(15.87)
Age^2	-0.001	-0.001	-0.001
	(14.27)	(14.25)	(14.27)
CCMA	0.369	0.377	0.369
	(3.35)	(3.36)	(3.35)
CCMA*African-American		-0.267	
		(.98)	
CCMA*Hispanic		0.021	
		(.09)	
CCMA*Other Race			
CCMA*non-minority Female		0.257	-0.399
		(1)	(8.82)
Time (13 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	13171	13171	13171
R^2	.3330	.3331	.3330

Source and Notes: See Table 5.8.

Table 5.12. Business Owner Earnings Regressions, Construction and Related Industries, 1992-2008

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.236	-0.238	-0.236
	(5.64)	(5.58)	(5.64)
Hispanic	-0.161	-0.160	-0.161
	(6.12)	(6.01)	(6.12)
Asian	-0.132	-0.114	-0.132
	(2.28)	(1.94)	(2.28)
Native American	-0.126	-0.125	-0.126
	(1.86)	(1.84)	(1.86)
Non-minority Female	-0.223	-0.213	-0.223
	(6.94)	(6.58)	(6.94)
Age	0.073	0.073	0.073
	(11.32)	(11.31)	(11.32)
Age^2	-0.001	-0.001	-0.001
	(10.25)	(10.25)	(10.25)
CCMA	0.297	0.371	0.297
	(2.81)	(3.33)	(2.81)
CCMA*African-American		0.048	
		(.19)	
CCMA*Hispanic		-0.027	
		(.19)	
CCMA*Asian		-0.480	
		(1.68)	
CCMA*Native American			
CCMA*non-minority Female		-0.393	
		(1.66)	
Time (11 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	22992	22992	22992
R^2	.2528	.2533	.2528

Source and Notes: See Table 5.9.

Table 5.13. Self-Employment Rates in 2006–2008 for Selected Race and Sex Groups: United States and the Cook County Market Area, All Industries

Race/Sex	U.S. (%)	Cook County Market Area (%)	Percent Difference from Non-minority male (CCMA)
African-American	5.38	5.45	-57.0%
Hispanic	8.65	5.07	-60.0%
Asian	10.58	8.82	-30.4%
Native American	8.65	13.17	3.9%
Multiple Races	8.96	7.39	-41.7%
MBE	7.95	5.90	-53.5%
Non-minority female	8.76	7.89	-37.8%
M/WBE	8.38	6.80	-46.4%
Non-minority male	14.22	12.68	

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

Table 5.14. Self-Employment Rates in 2006–2008 for Selected Race and Sex Groups: United States and the Cook County Market Area, Construction and Construction-Related Sectors and Goods and Services Sectors

Race/Sex	U.S. (%)	Cook County Market Area (%)	Percent Difference from Non-minority male (CCMA)
Construction and Construction-Related Sectors			
African-American	16.61	19.85	-11.7%
Hispanic	14.60	11.34	-49.5%
Asian	17.68	11.22	-50.1%
Native American	18.06	11.80	-47.5%
Multiple Races	18.93	5.49	-75.6%
MBE	15.40	12.68	-43.6%
Non-minority female	15.34	15.13	-32.7%
M/WBE	15.39	13.32	-40.7%
Non-minority male	26.17	22.47	
Goods and Services Sectors			
African-American	4.81	4.94	-55.0%
Hispanic	7.65	4.38	-60.1%
Asian	10.26	8.77	-20.1%
Native American	7.37	13.25	20.7%
Multiple Races	8.01	7.49	-31.8%
MBE	7.17	5.43	-50.5%
Non-minority female	8.56	7.68	-30.1%
M/WBE	7.93	6.47	-41.1%
Non-minority male	11.99	10.98	

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

Table 5.15. Business Formation Regressions, All Industries, 2006–2008

Independent Variables	Specification		
	(1)	(2)	(3)
African-American	-0.042	-0.042	-0.042
	(74.35)	(73.56)	(73.6)
Hispanic	-0.032	-0.032	-0.032
	(64.63)	(63.96)	(64.66)
Asian/Pacific Islanders	-0.018	-0.019	-0.019
	(27)	(27.07)	(27.08)
Native American	-0.027	-0.027	-0.027
	(15.05)	(15.1)	(15.06)
Other Race	-0.020	-0.020	-0.020
	(16.41)	(16.44)	(16.42)
Non-minority Female	-0.028	-0.028	-0.028
	(80.33)	(79.34)	(80.33)
Age	0.010	0.010	0.010
	(115.65)	(115.66)	(115.66)
Age^2	-0.000	-0.000	-0.000
	(80.53)	(80.54)	(80.54)
CCMA	-0.013	-0.014	-0.014
	(8.64)	(8.09)	(9.32)
CCMA*African-American		0.013	0.013
		(3.14)	(3.27)
CCMA*Hispanic		0.001	
		(.4)	
CCMA* Asian/Pacific Islanders		0.013	0.013
		(2.82)	(2.92)
CCMA* Native American		0.037	
		(1.19)	
CCMA*Other Race		0.014	
		(1.27)	
CCMA*non-minority Female		-0.001	
		(.62)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	2695435	2695435	2695435
Pseudo R^2	.2194	.2195	.2195

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

Notes: (1) Universe is all private sector labor force participants between age 16 and 64; observations with imputed values to the dependent variable and all independent variables are excluded; (2) Reported number represents the percentage point probability difference in business ownership rates between a given group and non-minority men, evaluated at the mean business ownership rate for the estimation sample; (3) Number in parentheses is the absolute value of the associated z-statistic. Using a two-tailed test, z-statistics greater than 1.67 (1.99) (2.64) are statistically significant at a 90 (95) (99) percent confidence level; (4) "Other Race" includes persons identifying themselves as belonging in more than one racial category; (5) Geography is defined based on place of residence; (6) "CCMA" is shorthand for "Cook County Market Area," which is the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area.

Table 5.16. Business Formation Regressions, All Industries, 1980-1991

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.037	-0.037	-0.037
	(50.41)	(49.63)	(49.68)
Hispanic	-0.022	-0.022	-0.022
	(31.22)	(30.83)	(31.25)
Other Race	-0.003	-0.004	-0.004
	(1.68)	(2.32)	(2.32)
Non-minority Female	-0.033	-0.033	-0.033
	(62.18)	(61.24)	(62.19)
Age	0.012	0.012	0.012
	(91.01)	(91.01)	(91.01)
Age^2	-0.000	-0.000	-0.000
	(71.55)	(71.54)	(71.54)
CCMA	-0.009	-0.009	-0.010
	(4.51)	(4.18)	(5.18)
CCMA*African-American		0.014	0.015
		(2.44)	(2.72)
CCMA*Hispanic		-0.002	
		(.33)	
CCMA*Other Race		0.035	0.035
		(3.03)	(3.04)
CCMA*non-minority Female		-0.003	
		(1.16)	
Time (6 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	770337	770377	770377
Pseudo R^2	.2530	.2530	.2530

Source: NERA calculations from the Merged Outgoing Rotation Groups of the 1980-1991 Current Population Survey microdata samples.

Notes: (1) Universe is all private sector labor force participants between age 16 and 64; (2) Reported number represents the percentage point probability difference in business ownership rates between a given group and non-minority 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 Asian/Pacific Islanders and American Indians/Alaska Natives; (5) Geography is defined based on place of residence; (6) "CCMA" is shorthand for "Cook County Market Area," which is the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area.

Table 5.17. Business Formation Regressions, All Industries, 1992-2008

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.036	-0.036	-0.036
	(48.14)	(47.4)	(47.49)
Hispanic	-0.028	-0.028	-0.028
	(41.05)	(40.46)	(41.07)
Asian	-0.010	-0.010	-0.011
	(9.14)	(9.52)	(9.57)
Native American	-0.021	-0.021	-0.021
	(10.95)	(10.8)	(10.97)
Non-minority Female	-0.025	-0.024	-0.025
	(46.28)	(45.45)	(46.27)
Age	0.012	0.012	0.012
	(85.74)	(85.75)	(85.75)
Age^2	-0.000	-0.000	-0.000
	(64.31)	(64.31)	(64.31)
CCMA	-0.008	-0.008	-0.010
	(3.87)	(3.39)	(4.71)
CCMA*African-American		0.012	0.014
		(2.42)	(2.97)
CCMA*Hispanic		-0.000	
		(.01)	
CCMA*Asian		0.021	0.023
		(3.27)	(3.7)
CCMA*Native American		-0.026	
		(1.41)	
CCMA*non-minority Female		-0.005	
		(1.73)	
Time (11 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	1177892	1177887	1177887
Pseudo R^2	.2089	.2090	.2089

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; (2) Reported number represents the percentage point probability difference in business ownership rates between a given group and non-minority 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 Asian/Pacific Islanders and American Indians/Alaska Natives; (5) Geography is defined based on place of residence; (6) "CCMA" is shorthand for "Cook County Market Area," which is the Illinois portion of the Chicago-Naperville-Joliet Metropolitan Statistical Area.

Table 5.18a. Business Formation Regressions, Construction and Related Industries, 2006–2008

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.092	-0.094	-0.094
	(21.59)	(21.76)	(21.75)
Hispanic	-0.078	-0.078	-0.078
	(27.85)	(27.66)	(27.85)
Asian/Pacific Islanders	-0.062	-0.062	-0.062
	(10.15)	(10.14)	(10.15)
Native American	-0.079	-0.079	-0.079
	(8.27)	(8.27)	(8.28)
Other Race	-0.041	-0.040	-0.041
	(5.46)	(5.3)	(5.47)
Non-minority Female	-0.096	-0.097	-0.097
	(37.27)	(37.21)	(37.21)
Age	0.025	0.025	0.025
	(46.81)	(46.81)	(46.81)
Age^2	-0.000	-0.000	-0.000
	(32.55)	(32.55)	(32.55)
CCMA	-0.052	-0.060	-0.059
	(6.53)	(7.08)	(7.19)
CCMA*African-American		0.097	0.096
		(3.05)	(3.01)
CCMA*Hispanic		0.012	
		(.7)	
CCMA* Asian/Pacific Islanders		0.032	
		(.63)	
CCMA* Native American		0.014	
		(.08)	
CCMA*Other Race		-0.099	
		(1.39)	
CCMA*non-minority Female		0.052	0.050
		(2.61)	(2.56)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	259606	259606	259606
Pseudo R^2	.0815	.0816	.0815

Source and Notes: See Table 5.15.

Table 5.18b. Business Formation Regressions, Goods and Services Industries, 2006–2008

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.053	-0.053	-0.053
	(78.15)	(77.35)	(77.39)
Hispanic	-0.030	-0.030	-0.030
	(46.8)	(45.46)	(45.5)
Asian/Pacific Islanders	-0.027	-0.027	-0.027
	(33.58)	(33.06)	(33.54)
Native American	-0.028	-0.028	-0.028
	(12.02)	(12.06)	(12.01)
Other Race	-0.022	-0.023	-0.022
	(14.6)	(14.62)	(14.59)
Non-minority Female	-0.027	-0.027	-0.027
	(68.11)	(67.19)	(68.11)
Age	0.010	0.010	0.010
	(92.13)	(92.14)	(92.14)
Age^2	-0.000	-0.000	-0.000
	(61.64)	(61.65)	(61.65)
CCMA	-0.009	-0.008	-0.008
	(4.88)	(3.82)	(4.42)
CCMA*African-American		0.017	0.017
		(3.66)	(3.78)
CCMA*Hispanic		-0.018	-0.018
		(4.72)	(4.94)
CCMA* Asian/Pacific Islanders		0.002	
		(.48)	
CCMA* Native American		0.040	
		(1.09)	
CCMA*Other Race		0.016	
		(1.27)	
CCMA*non-minority Female		-0.001	
		(.32)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	2504250	2504250	2504250
Pseudo R^2	.0663	.0663	.0663

Source: See Table 5.15.

Table 5.19. Business Formation Regressions, Construction and Related Industries, 1980-1991

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.122	-0.123	-0.122
	(16.92)	(16.86)	(16.92)
Hispanic	-0.074	-0.074	-0.074
	(12.16)	(12.2)	(12.16)
Other Race	-0.079	-0.076	-0.076
	(5.1)	(4.87)	(4.86)
Non-minority Female	-0.121	-0.121	-0.121
	(21.33)	(21.02)	(21.34)
Age	0.037	0.037	0.037
	(36.25)	(36.25)	(36.25)
Age^2	-0.000	-0.000	-0.000
	(28.97)	(28.96)	(28.96)
CCMA	-0.010	-0.014	-0.009
	(.64)	(.82)	(.58)
CCMA*African-American		0.065	
		(1.17)	
CCMA*Hispanic		0.066	
		(1.28)	
CCMA*Other Race			
CCMA*non-minority Female		-0.026	
		(.56)	
Time (6 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	63877	63877	63877
Pseudo R^2	.1078	.1078	.1077

Source: See Table 5.16.

Table 5.20. Business Formation Regressions, Construction and Related Industries, 1992-2008

Independent Variables	Specification		
	(1)	**(2)**	**(3)**
African-American	-0.099	-0.101	-0.101
	(16.17)	(16.38)	(16.37)
Hispanic	-0.085	-0.085	-0.085
	(19.4)	(19.2)	(19.42)
Asian	-0.042	-0.046	-0.046
	(3.94)	(4.32)	(4.31)
Native American	-0.060	-0.059	-0.059
	(4.97)	(4.87)	(4.86)
Non-minority Female	-0.087	-0.088	-0.087
	(18.64)	(18.51)	(18.63)
Age	0.032	0.032	0.032
	(35.04)	(35.02)	(35.02)
Age^2	-0.000	-0.000	-0.000
	(26.87)	(26.85)	(26.85)
CCMA	-0.049	-0.059	-0.057
	(3.6)	(4.13)	(4.17)
CCMA*African-American		0.139	0.135
		(3.1)	(3.04)
CCMA*Hispanic		0.007	
		(.26)	
CCMA*Asian		0.222	0.217
		(2.74)	(2.7)
CCMA*Native American		0.000	
		(.)	
CCMA*non-minority Female		0.027	
		(.83)	
Time (11 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	107440	107440	107440
Pseudo R^2	.0957	.0959	.0959

Source: See Table 5.17.

Table 5.21. Actual and Potential Business Formation Rates in the Cook County Market Area

Race/Sex	Business Formation Rate (%)	Expected Business Formation Rate (%)	Disparity Index
All Industries	(1)	(2)	(3)
African-American	5.45	8.35	65.3
Hispanic	5.07	8.27	61.3
Asian	8.82	9.42	93.6
Native American	13.17	15.87	83.0
Multiple races reported	7.39	9.39	78.7
MBE	5.90	8.62	68.4
Non-minority female	7.89	10.68	73.9
All M/WBE	6.80	10.22	66.5
Construction and Construction-Related Industries	(1)	(2)	(3)
African-American	19.85	19.83	100.1
Hispanic	11.34	19.14	59.2
Asian	11.22	17.42	64.4
Native American	11.80	19.70	59.9
Multiple races reported	5.49	9.59	57.2
MBE	12.68	20.66	61.4
Non-minority female	15.13	19.83	76.3
All M/WBE	13.32	19.00	70.1
Goods and Services Sectors	(1)	(2)	(3)
African-American	4.94	8.54	57.8
Hispanic	4.38	9.18	47.7
Asian	8.77	11.47	76.5
Native American	13.25	16.05	82.6
Multiple races reported	7.49	9.69	77.3
MBE	5.43	7.97	68.1
Non-minority female	7.68	10.38	74.0
All M/WBE	6.47	9.41	68.8

Source: 2006–2008 ACS Public Use Microdata Sample. See Tables 5.15, 5.18a, 5.18b.

Notes: Figures in column (1) are average self-employment rates weighted using ACS population-based person weights. Figures in column (2), top, middle, and bottom panels, are derived by combining the figure in column (1) with the corresponding result from the regression reported in Table 5.15, 5.18a, or 5.18b, respectively. Column (3) is the figure in column (1) divided by the figure in column (2), with the result multiplied by 100.

Table 5.22. Disparity Indices from the 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	22,480,256	8,783,541,146	5,172,064	8,039,252,709	55,368,216	1,626,785,430
Female	6,489,259	939,538,208	916,657	802,851,495	7,141,369	173,528,707
Equally male-/female-owned	2,693,360	731,678,703	717,961	627,202,424	5,664,948	129,700,997
African-American	1,197,567	88,641,608	94,518	65,799,425	753,978	17,550,064
Hispanic	1,573,464	221,927,425	199,542	179,507,959	1,536,795	36,711,718
Asian	1,103,587	326,663,445	319,468	291,162,771	2,213,948	56,044,960
Native Hawaiian/Pac. Islander	28,948	4,279,591	3,693	3,502,157	29,319	826,217
Am. Indian & Alaska Native	201,387	26,872,947	24,498	21,986,696	191,270	5,135,273
Panel B. Column Percentages						
UNITED STATES	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	28.87%	10.70%	17.72%	9.99%	12.90%	10.67%
Equally male-/female-owned	11.98%	8.33%	13.88%	7.80%	10.23%	7.97%
African-American	5.33%	1.01%	1.83%	0.82%	1.36%	1.08%
Hispanic	7.00%	2.53%	3.86%	2.23%	2.78%	2.26%
Asian	4.91%	3.72%	6.18%	3.62%	4.00%	3.45%
Native Hawaiian/Pac. Islander	0.13%	0.05%	0.07%	0.04%	0.05%	0.05%
Am. Indian & Alaska Native	0.90%	0.31%	0.47%	0.27%	0.35%	0.32%
Panel C. Disparity Indices		**(2) vs. (1)**		**(4) vs. (3)**	**(5) vs. (3)**	**(6) vs. (3)**
Female		37.06%		56.35%	72.77%	60.19%
Equally male-/female-owned		69.53%		56.20%	73.71%	57.43%
African-American		18.94%		44.79%	74.52%	59.03%
Hispanic		36.10%		57.88%	71.94%	58.49%
Asian		75.76%		58.63%	64.74%	55.78%
Native Hawaiian/Pac. Islander		37.84%		61.01%	74.16%	71.13%
Am. Indian & Alaska Native		34.15%		57.74%	72.93%	66.64%

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

Table 5.23. Disparity Indices from the 2002 Survey of Business Owners: IL, 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						
ILLINOIS	933,129	426,608,953	225,968	398,531,673	2,534,993	81,053,320
Female	284,954	46,861,800	40,396	41,374,269	351,317	9,530,794
Equally male-/female-owned	104,266	29,365,003	28,891	25,866,530	230,870	5,443,589
African-American	68,699	4,980,181	4,218	3,906,273	38,457	1,106,700
Hispanic	39,539	7,389,214	6,574	6,411,802	60,576	1,553,919
Asian	44,477	14,544,716	13,278	13,366,682	98,305	2,722,085
Native Hawaiian/Pac. Islander	656	-	-	-	-	-
Am. Indian & Alaska Native	3,379	440,748	490	349,424	4,054	96,925
Panel B. Column Percentages						
ILLINOIS	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	30.54%	10.98%	17.88%	10.38%	13.86%	11.76%
Equally male-/female-owned	11.17%	6.88%	12.79%	6.49%	9.11%	6.72%
African-American	7.36%	1.17%	1.87%	0.98%	1.52%	1.37%
Hispanic	4.24%	1.73%	2.91%	1.61%	2.39%	1.92%
Asian	4.77%	3.41%	5.88%	3.35%	3.88%	3.36%
Native Hawaiian/Pac. Islander	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%
Am. Indian & Alaska Native	0.36%	0.10%	0.22%	0.09%	0.16%	0.12%
Panel C. Disparity Indices						
Female		35.97%		58.07%	77.52%	65.78%
Equally male-/female-owned		61.60%		50.76%	71.23%	52.53%
African-American		15.86%		52.51%	81.27%	73.15%
Hispanic		40.88%		55.30%	82.14%	65.90%
Asian		71.53%		57.08%	66.00%	57.15%
Native Hawaiian/Pac. Islander		-	-	-	-	-
Am. Indian & Alaska Native		28.53%		40.43%	73.75%	55.15%

Source: See Table 5.22.

Table 5.24. Disparity Indices from the 2002 Survey of Business Owners: United States, Construction and Construction-Related 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	5,996,428	1,685,502,784	1,406,037	1,476,285,725	10,446,834	410,330,833
Female	1,136,584	147,556,354	185,072	119,542,082	1,028,439	37,265,214
Equally male-/female-owned	566,062	132,088,134	154,135	108,702,609	871,950	28,975,443
African-American	190,840	19,026,591	19,743	14,600,451	125,988	4,596,509
Hispanic	350,845	46,462,089	44,506	34,190,411	288,520	9,446,399
Asian	193,007	36,948,648	37,390	31,489,180	242,907	11,627,079
Native Hawaiian/Pac. Islander	6,092	1,173,615	321	172,732	1,351	53,364
Am. Indian & Alaska Native	54,758	8,145,166	8,103	6,435,409	46,650	1,712,542
Panel B. Column Percentages						
UNITED STATES	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	18.95%	8.75%	13.16%	8.10%	9.84%	9.08%
Equally male-/female-owned	9.44%	7.84%	10.96%	7.36%	8.35%	7.06%
African-American	3.18%	1.13%	1.40%	0.99%	1.21%	1.12%
Hispanic	5.85%	2.76%	3.17%	2.32%	2.76%	2.30%
Asian	3.22%	2.19%	2.66%	2.13%	2.33%	2.83%
Native Hawaiian/Pac. Islander	0.10%	0.07%	0.02%	0.01%	0.01%	0.01%
Am. Indian & Alaska Native	0.91%	0.48%	0.58%	0.44%	0.45%	0.42%
Panel C. Disparity Indices						
Female		46.19%		61.52%	74.79%	69.00%
Equally male-/female-owned		83.02%		67.17%	76.14%	64.42%
African-American		35.47%		70.43%	85.89%	79.78%
Hispanic		47.11%		73.17%	87.25%	72.73%
Asian		68.11%		80.21%	87.44%	106.56%
Native Hawaiian/Pac. Islander		68.54%		51.25%	56.65%	56.96%
Am. Indian & Alaska Native		52.92%		75.64%	77.49%	72.42%

Source: See Table 5.22.

Table 5.25. Disparity Indices from the 2002 Survey of Business Owners: IL, Construction and Construction-Related 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						
ILLINOIS	249,533	79,468,164	63,566	71,539,558	451,684	20,951,103
Female	51,003	8,245,738	9,841	7,108,109	54,229	2,273,513
Equally male-/female-owned	23,186	5,073,318	6,267	4,261,191	33,949	1,322,854
African-American	9,036	960,763	891	775,043	6,888	245,604
Hispanic	8,427	1,241,169	1,198	1,023,189	7,031	280,038
Asian	7,605	1,435,413	1,667	1,275,009	10,463	483,572
Native Hawaiian/Pac. Islander	-	-	-	-	-	-
Am. Indian & Alaska Native	735	96,452	120	80,871	598	25,514
Panel B. Column Percentages						
ILLINOIS	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	20.44%	10.38%	15.48%	9.94%	12.01%	10.85%
Equally male-/female-owned	9.29%	6.38%	9.86%	5.96%	7.52%	6.31%
African-American	3.62%	1.21%	1.40%	1.08%	1.52%	1.17%
Hispanic	3.38%	1.56%	1.88%	1.43%	1.56%	1.34%
Asian	3.05%	1.81%	2.62%	1.78%	2.32%	2.31%
Native Hawaiian/Pac. Islander	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Am. Indian & Alaska Native	0.29%	0.12%	0.19%	0.11%	0.13%	0.12%
Panel C. Disparity Indices						
Female		50.77%		64.18%	77.55%	70.09%
Equally male-/female-owned		68.71%		60.42%	76.24%	64.04%
African-American		33.39%		77.29%	108.79%	83.63%
Hispanic		46.25%		75.89%	82.59%	70.92%
Asian		59.27%		67.96%	88.33%	88.01%
Native Hawaiian/Pac. Islander	-	-	-	-	-	-
Am. Indian & Alaska Native		41.21%		59.88%	70.13%	64.51%

Source: See Table 5.22.

Table 5.26. Disparity Indices from the 2002 Survey of Business Owners: United States, Goods and Services 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	16,483,828	7,098,038,362	3,766,027	6,562,966,984	44,921,382	1,216,454,597
Female	5,352,675	791,981,854	731,585	683,309,413	6,112,930	136,263,493
Equally male-/female-owned	2,127,298	599,590,569	563,826	518,499,815	4,792,998	100,725,554
African-American	1,006,727	69,615,017	74,775	51,198,974	627,990	12,953,555
Hispanic	1,222,619	175,465,336	155,036	145,317,548	1,248,275	27,265,319
Asian	910,580	289,714,797	282,078	259,673,591	1,971,041	44,417,881
Native Hawaiian/Pac. Islander	22,856	3,105,976	3,372	3,329,425	27,968	772,853
Am. Indian & Alaska Native	146,629	18,727,781	16,395	15,551,287	144,620	3,422,731
Panel B. Column Percentages						
UNITED STATES	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	32.47%	11.16%	19.43%	10.41%	13.61%	11.20%
Equally male-/female-owned	12.91%	8.45%	14.97%	7.90%	10.67%	8.28%
African-American	6.11%	0.98%	1.99%	0.78%	1.40%	1.06%
Hispanic	7.42%	2.47%	4.12%	2.21%	2.78%	2.24%
Asian	5.52%	4.08%	7.49%	3.96%	4.39%	3.65%
Native Hawaiian/Pac. Islander	0.14%	0.04%	0.09%	0.05%	0.06%	0.06%
Am. Indian & Alaska Native	0.89%	0.26%	0.44%	0.24%	0.32%	0.28%
Panel C. Disparity Indices						
Female		34.36%		53.60%	70.05%	57.66%
Equally male-/female-owned		65.46%		52.77%	71.27%	55.31%
African-American		16.06%		39.29%	70.41%	53.63%
Hispanic		33.33%		53.79%	67.50%	54.45%
Asian		73.89%		52.83%	58.58%	48.75%
Native Hawaiian/Pac. Islander		31.56%		56.66%	69.54%	70.96%
Am. Indian & Alaska Native		29.66%		54.43%	73.95%	64.63%

Source: See Table 5.22.

Table 5.27. Disparity Indices from the 2002 Survey of Business Owners: IL, Goods and Services 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						
ILLINOIS	683,596	347,140,789	162,402	326,992,115	2,083,309	60,102,217
Female	233,951	38,616,062	30,555	34,266,160	297,088	7,257,281
Equally male-/female-owned	81,080	24,291,685	22,624	21,605,339	196,921	4,120,735
African-American	59,663	4,019,418	3,327	3,131,230	31,569	861,096
Hispanic	31,112	6,148,045	5,376	5,388,613	53,545	1,273,881
Asian	36,872	13,109,303	11,611	12,091,673	87,842	2,238,513
Native Hawaiian/Pac. Islander	656	-	-	-	-	-
Am. Indian & Alaska Native	2,644	344,296	370	268,553	3,456	71,411
Panel B. Column Percentages						
ILLINOIS	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Female	34.22%	11.12%	18.81%	10.48%	14.26%	12.07%
Equally male-/female-owned	11.86%	7.00%	13.93%	6.61%	9.45%	6.86%
African-American	8.73%	1.16%	2.05%	0.96%	1.52%	1.43%
Hispanic	4.55%	1.77%	3.31%	1.65%	2.57%	2.12%
Asian	5.39%	3.78%	7.15%	3.70%	4.22%	3.72%
Native Hawaiian/Pac. Islander	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%
Am. Indian & Alaska Native	0.39%	0.10%	0.23%	0.08%	0.17%	0.12%
Panel C. Disparity Indices						
Female		32.50%		55.70%	75.79%	64.18%
Equally male-/female-owned		59.00%		47.43%	67.85%	49.22%
African-American		13.27%		46.74%	73.97%	69.94%
Hispanic		38.91%		49.78%	77.64%	64.03%
Asian		70.01%		51.72%	58.98%	52.09%
Native Hawaiian/Pac. Islander		-	-	-	-	-
Am. Indian & Alaska Native		25.64%		36.05%	72.81%	52.15%

Source: See Table 5.22.

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

VI.   Statistical Disparities in Capital Markets

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

In this Chapter, we examine whether there is evidence consistent with the presence of discrimination in the small business credit market against minority-owned or women-owned small businesses. Discrimination in the credit market against such businesses can have an important effect on the likelihood that they will succeed. Moreover, discrimination in the credit market might even prevent businesses from opening in the first place.

In our analysis, we use data from the Federal Reserve Board to examine the existence or otherwise of discrimination in the small business credit market for 1993, 1998 and 2003. These surveys are based on a large representative sample of firms with fewer than 500 employees and are administered by the Federal Reserve Board and the U.S. Small Business Administration. The 1993 and 1998 surveys deliberately oversampled minority-owned firms but the 2003 survey did not.[176]

These data provide qualitative and quantitative evidence consistent with the presence of discrimination against minorities in the credit market for small businesses. For example, we find that African-American-owned firms are much more likely to report being seriously concerned with credit market problems and report being less likely to apply for credit because they fear the loan would be denied. Moreover, after controlling for a large number of characteristics of the firms, we find that African-American-owned firms, Hispanic-owned firms, and to a lesser extent other minority-owned firms are substantially and statistically significantly more likely to be denied credit than are non-minority-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 applied for a loan their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences like firm size and credit history.

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

- A larger proportion of minority-owned firms than non-minority-owned firms report that credit market conditions are a serious concern.

---

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

- A larger share of minority-owned firms than non-minority-owned firms believes that the availability of credit is the most important issue likely to confront them in the upcoming year.

- There is no evidence that discrimination in the market for credit is significantly different in the East North Central census division or in the construction and construction-related professional services industries than it is in the nation or the economy as a whole.

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

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

A. Theoretical Framework and Review of the Literature

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

A similar connection between the likelihood of loan approval and the race, ethnicity or gender of the applicant might also be found if lenders employ statistical discrimination—meaning that lenders use personal characteristics such as race, ethnicity or gender to infer the likelihood of default on the loan. If experience has suggested that certain groups of individuals are on average more or less likely to default, then the lender may use this information to economize on the costs of gathering more directly relevant information. Hence, discrimination would not reflect the preferences of the owner but would rather reflect an attempt to minimize costs. Empirically, the racial, ethnic or gender characteristics of the applicant could proxy for unobserved characteristics of their creditworthiness.

There has been an active debate about whether banks discriminate against minority applicants for mortgages. In particular, banks were often accused of "redlining"—that is, not granting loans for properties located in certain areas. To analyze that issue, the Home Mortgage Disclosure Act was passed to require lenders to disclose information on the geographic location of their home mortgage loans. These data, however, were not sufficient to assess whether or not there was discrimination in the market for mortgage loans.

In 1992, researchers at the Federal Reserve Bank of Boston collected additional information from mortgage lenders (Munnell et al., 1996). In particular, they tried to collect any information that might be deemed economically relevant to whether a loan would be approved. In the raw data, non-minorities had 10 percent of their loans rejected whereas rejection rates were 28 percent for both African-Americans and Hispanics. Even after the creditworthiness of the borrowers (including the amount of the debt, debt-to-income ratio, credit history, loan characteristics, etc.) were controlled for, African-Americans were still found to be 7 percentage points less likely to be granted the loan. A variety of criticisms have been launched at this study (see, for example, Horne, 1994; Day and Liebowitz, 1998; Harrison, 1998). Responses to these criticisms are found in Browne and Tootell (1995).

In addition to the type of statistical analysis done in the Munnell et al. (1996) study, two other approaches have been used to measure discrimination in mortgage markets. First, Federal Reserve regulators can examine a lending institution's files to try to identify any cases where a loan rejection looks suspicious. Second, audit studies have been used with paired "identical" applicants. Such studies have also found evidence of discrimination (*c.f.* Cloud and Galster, 1993) although the audit approach is not without its critics (Heckman, 1998).

Another relevant literature is concerned with the severity of liquidity constraints affecting consumers in non-mortgage credit markets. A consumer is said to be liquidity-constrained when lenders refuse to make the household a loan or offer the household less than they wished to borrow (Ferri and Simon, 1997). Many studies have suggested that roughly twenty percent of U.S. families are liquidity-constrained (cf. Hall and Mishkin, 1982; and Jappelli, 1990). As might be expected, liquidity-constrained households are typically younger, with less wealth and accumulated savings (Hayashi, 1985; and Jappelli, 1990). The research shows non-minority households to be substantially more likely to be liquidity-constrained even when a variety of financial characteristics of households are controlled for (Jappelli, 1990; and Ferri and Simon, 1997).

We now turn to the more directly relevant evidence on liquidity constraints facing small businesses. Just like individuals and households, businesses can also face liquidity constraints.[177]

---

[177] Evans and Leighton (1989) and Evans and Jovanovic (1989) have argued formally that entrepreneurs face difficulties borrowing money. As in the discussion above, such individuals are labeled liquidity constrained by economists. Using data from the National Longitudinal Survey of Youth from 1966-1981 and the Current Population Surveys from 1968-1987, these authors found that, all else equal, people with greater family assets are more likely to switch to self-employment from employment. Blanchflower and Oswald (1998) studied the probability that an individual reports him or herself as self-employed. Consistent with the existence of capital constraints on potential entrepreneurs, their econometric estimates imply that the probability of being self-employed depends positively upon whether the individual ever received an inheritance or gift. Second, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Holtz-Eakin et al. (1994a, 1994b) examine flows in and out of self-employment and find that inheritances both

Liquidity constraints can be a problem in starting a business as well as in running it. Discrimination in the credit market against minority-owned small businesses can have a devastating effect on the success of such businesses, and even prevent them from opening in the first place. Evidence of the latter effect is provided in the economics literature on self-employment.[178]

In his 2003 report for *Builders Association of Greater Chicago v. the City of Chicago*,[179] Bates argued that "from its origins, the black-business community has been constrained by limited access to credit, limited opportunities for education and training, and non-minority 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 non-minority males who possess significant amounts of equity capital to invest in their businesses (Bates, 1991a). Apart from banks, an important source of debt capital for small business is likely to be family and friends, but the low wealth of African-American households reduces the availability of debt capital that family and friends could invest in small business operations (Bates, 1993; Bates, 1991b).

Additional evidence indicates that capital constraints for African-American-owned businesses are particularly large. For instance, Bates (1989) finds that racial differences in levels of financial capital do have a significant effect upon racial patterns in business failure rates. Fairlie and Meyer (1996) find that racial groups with higher levels of unearned income have higher levels of self-employment. In an important paper Fairlie (1999) uses data from the 1968-1989 Panel Study of Income Dynamics to examine why African-American men are one-third as likely to be self-employed as non-minority men. The author finds that the large discrepancy is due to a African-American transition rate into self-employment that is approximately one half the non-minority rate and a African-American transition rate out of self-employment that is twice the non-minority rate. He finds that capital constraints—measured by interest income and lump-sum cash payments—significantly reduce the flow into self-employment from wage/salary work, with this effect being nearly seven times larger for African-American self-employed than for non-minority 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

---

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.

[178] *See* Chapter V, above.

[179] 298 F.Supp.2d 725 (N.D. Ill. 2003).

that differences in the distributions of characteristics between African-Americans and non-minorities explain only a part of the racial gap in the transition rate into self-employment. In addition, racial differences in specific variables, such as levels of assets and the likelihood of having a self-employed father provide important contributions to the gap. He concludes, however, that "the remaining part of the gap is large and is due to racial differences in the coefficients. Unfortunately, we know much less about the causes of these differences. They may be partly caused by lending or consumer discrimination against blacks" (1998, p.14).

There is also research into racial differences in access to credit among small businesses. Cavalluzzo and Cavalluzzo (1998) use data from the 1988-1989 National Survey of Small Business Finances (NSSBF), conducted by the Board of Governors of the Federal Reserve System, to analyze differences in application rates, denial rates, and other outcomes by race, ethnicity and gender in a manner similar to the econometric models reported in this study. This paper documents that a large discrepancy exists in credit access between non-minorities and minority-owned firms that cannot be explained by a handful of firm characteristics. Unfortunately, the earlier NSSBF data did not over-sample minority-owned firms and included limited information on a firm's credit history and that of its owner, reducing the ability to provide a powerful test of the causal impact of race, ethnicity or gender on loan decisions. In an unpublished paper, Cole (1998) uses the 1993 NSSBF and estimates models of loan denials similar in nature to those discussed in this Study.

The present analysis takes advantage of the 1993 NSSBF data, the 1998 Survey of Small Business Finances (SSBF) data, and the 2003 SSBF data. All three datasets have better information on creditworthiness than did the earlier NSSBF data, and the 1993 and 1998 surveys have larger sample of minority-owned firms than did the earlier NSSBF data. These datasets are also used to conduct an extensive set of specification checks designed to weigh the possibility that our results are subject to alternative interpretations.

B. Empirical Framework and Description of the Data

1. Introduction

Disputes about discrimination typically originate in differences in the average outcomes for two groups. To determine whether a difference in the loan denial rate for African-American-owned firms compared to non-minority-owned firms is consistent with discrimination, it is necessary to compare African-American- and non-minority-owned firms that have similar risks of default, that is, the fraction of the African-American firms' loans that would be approved if they had the same creditworthiness as the non-minority-owned firms. A standard approach to this problem is to statistically control for firms' characteristics relevant to the loan decision. If African-American-owned firms with the same likelihood of default as non-minority-owned firms are less likely to be approved, then it is appropriate to attribute such a difference to discrimination.

Following Munnell et al. (1996) we estimated the following loan denial equation:

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

where D_i represents an indicator variable for loan denial for firm i (that is, 1 if the loan is denied and 0 if accepted), CW represents measures of creditworthiness, X represents other firm characteristics, R represents the race, ethnicity or gender of the firm's ownership, and Φ is the cumulative normal probability distribution.[180] This econometric model can be thought of as a reduced form version of a structural model that incorporates firms' demand for and financial institutions' supply of loan funds as a function of the interest rate and other factors.[181] Within the framework of this model, a positive estimate of β_3 is consistent with the presence of discrimination.[182]

2.   1993 NSSBF Data

The 1993 NSSBF data contain substantial information regarding credit availability on a nationally representative target sample of for-profit, non-farm, non-financial business enterprises with fewer than 500 employees. The survey was conducted during 1994 and 1995 for the Board of Governors of the Federal Reserve System and the U.S. Small Business Administration; the data relate to the years 1992 and 1993. The data file used here contains 4,637 firms.[183] In this NSSBF file, minority-owned firms were over-sampled, but sampling weights are provided to generate nationally representative estimates. Of the firms surveyed, 9.5 percent were owned by African-Americans, 6.4 percent were owned by Hispanics, and 7.4 percent were owned by individuals of other races (*i.e.* Asians, Pacific Islanders, American Indians, and Alaska Natives).[184]

Table 6.1 presents population-weighted sample means from these data for all firms in the sample that applied for credit. The estimates indicate that African-American-owned firms are almost 2.5 times more likely to have a loan application rejected as are non-Hispanic White-owned firms (hereafter "non-minority") (65.9 percent versus 26.9 percent).[185] Other minority groups are

---

[180] Additional discussion of Probit regression appears in Chapter V, Section C.1.

[181] Maddala and Trost (1994) describe two variants of such a model, one in which the interest rate is exogenous and another in which the interest rate is endogenously determined, but is capped so that some firms' loan applications are approved and others are rejected. If the interest rate is exogenous, they show that a reduced form model which controls for the loan amount, such as we report below, uniquely identifies supply-side differences in the treatment of African-American-owned firms. If the interest rate is endogenous, a reduced form approach requires an assumption that the determinants of demand for non-minority and African-American-owned firms are identical, other things being equal. The main alternative empirical strategy is to estimate a structural supply and demand model, in which proper identification generally is not feasible. Any characteristic of the borrower that affects his/her expected rate of return on the investment will affect his/her ability to repay and should be taken into consideration by the lender as well. For instance, in their structural model of mortgage decisions, Maddala and Trost (1994) impose questionable exclusion restrictions, like omitting marital status from the loan supply equation.

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

[183] The median size of firms in the sample was 5.5 and mean size was 31.6 full-time equivalent employees; 440 firms out of 4,637 had 100 or more full-time equivalent employees.

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

[185] Cavalluzzo and Cavalluzzo (1998) examined these outcomes using the 1987 NSSBF and similarly found that denial rates (weighted) are considerably higher for minorities. non-minority-owned firms had a denial rate for loans of 22 percent compared with 56 percent for African-Americans, 36 percent for Hispanics, and 24 percent for

denied at rates higher than non-minorities as well, but the magnitude of the African-American/non-minority differential is especially striking.

Minority-owned firms, however, do have characteristics that are different from those of non-minority-owned firms, and such differences may contribute to the gap in loan denial rates. For instance, minority-owned firms were younger, smaller (whether measured in terms of sales or employment), more likely to be located in urban areas, and more likely to have an owner with fewer years of experience than their non-minority counterparts. Minority firms were also less creditworthy, on average, than their non-minority counterparts, as measured by whether (a) the owner had legal judgments against him or her over the previous three years, (b) the firm had been delinquent for more than 60 days on business obligations over the preceding three years, or (c) the owner had been delinquent for more than 60 days on personal obligations over the prior three years. Additionally, compared to non-minority-owned firms, African-American-owned firms were also more likely, on average, to have owners who had declared bankruptcy over the preceding seven years.

Minority-owned firms also sought smaller amounts of credit than non-minority-owned firms. This was particularly true for African-American-owned firms, who requested loans that were, on average, about 60 percent smaller than those requested by non-minority-owned firms; and Hispanic-owned firms, who requested loans about 42 percent smaller than those requested by non-minority-owned firms.

The NSSBF database does not identify the specific city or county or state where the firm is located; instead, data are reported for four census regions, nine census divisions, and urban or rural location. Table 6.2 presents evidence for the East North Central Census division (hereafter ENC), which includes all of the CCMA, the balance of the State of Illinois, as well as the states of Indiana, Michigan, Ohio, and Wisconsin. The 1993 ENC sample includes the owners of 748 firms, of whom 359 firms (48.0%) said that they had applied for a loan over the preceding three-year period.

The overall denial rate in the ENC is lower than the national rate reported in Table 6.1. The difference in the denial rates between African-American-owned and non-minority-owned firms, however, is virtually the same in the ENC as nationally (39.0 percentage points nationally and 40.1 percentage points in the ENC). Indeed, in the large majority of cases, the weighted sample means are not statistically significantly different in the ENC than in the nation as a whole—either overall or by race, ethnicity or gender.

C. Qualitative Evidence

Before moving on to the results of our multivariate analysis, we first report on what business owners themselves say are their main problems. While this evidence is not conclusive in determining whether discrimination exists, it highlights firms' perceptions regarding

---

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.

discrimination in obtaining credit. That African-American-owned firms and other minorities report greater difficulty in obtaining credit than do non-minority-owned firms, but report other types of problems no more frequently, suggests either that discrimination takes place or that perceptions of discrimination exist that are unwarranted. It therefore complements the econometric analysis provided subsequently, which can distinguish between these two hypotheses.

Table 6.3 summarizes, for the U.S. as a whole, responses to specific questions about problems that firms confronted over the 12-month period before the date of response. In the top panel, respondents were asked to what extent credit market conditions had been a problem. African-Americans and Hispanics were much more likely to say that it had been a "serious" problem (31.3 percent and 22.9 percent, respectively) than non-minorities (12.7 percent). The bottom panel of the table reports the results for eight other designated problem areas—(1) training costs; (2) worker's compensation costs; (3) health insurance costs; (4) IRS regulation or penalties; (5) environmental regulations; (6) the Americans with Disabilities Act; (7) the Occupational Safety and Health Act; and (8) the Family and Medical Leave Act. Differences by race, ethnicity or gender are much less pronounced in these eight areas than they are in relation to credit market conditions.[186] The finding that African-American-owned and Hispanic-owned firms are largely indistinguishable from non-minority-owned firms in reporting a variety of problems, except for the case of credit, indicates that minority-owned firms perceive credit availability to be a particular problem for them.

Results are broadly similar in Table 6.4 for the ENC division—with African-American and Hispanic firms being more likely than non-minority-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 ENC on the most important issue businesses expected to face over the next 12 months. Nationally, credit availability and cash flow again were more important issues for African-American-owned firms than for non-minority-owned firms. Non-minority-owned firms were especially worried about health care costs. Hispanic and Other minority-owned firms were especially worried about general business conditions.

In the ENC, credit availability and cash flow are far more important issues for African-American-owned firms than for non-minority-owned firms. Four times as many African-American-owned firms reported credit availability as the most important issue compared to non-minority-owned firms, and almost twice as many African-Americans reported cash flow as the most important issue compared to non-minorities.

Acute credit availability problems for minorities have been reported in surveys other than the NSSBF. In the 1992 Characteristics of Business Owners (CBO) Survey, conducted by the Census Bureau, for example, when owners were asked to identify the impact of various issues on their firm's profitability, 27.0 percent of African-American-owned firms reporting an answer

---

[186] We also estimated a series of ordered Logit equations (not reported) to control for differences across firms in their creditworthiness, location, industry, size, and the like. It is apparent from these regressions that African-American-owned firms were more likely to report that credit market conditions were especially serious.

indicated that lack of financial capital had a strong adverse impact—compared to only 17.3 percent among non-minority male-owned firms. Hispanic-owned firms and other minority-owned firms also reported higher percentages than non-minority male-owned firms—21.3 percent and 19.7 percent, respectively. Further, owners who had recently discontinued their business because it was unsuccessful were asked in the CBO survey to identify the reasons why. African-American-owned firms, and to a lesser degree Hispanic-owned firms, other minority-owned firms, and women-owned firms, were much more likely than non-minority male-owned firms to report that the reason was due to lack of access to business or personal loans or credit. For unsuccessful firms that were discontinued, 7.3 percent of firms owned by non-minority males reported it was due to lack of access to business loans or credit compared to 15.5 percent for firms owned by African-Americans, 8.8 percent for Hispanics, 6.1 percent for other minorities, and 9.3 percent for women. Another 2.7 percent of non-minority males said it was due to lack of personal loans or credit compared to 8.4 percent for firms owned by African-Americans, 5.8 percent for Hispanics, 6.4 percent of Other minorities, and 3.3 percent for women.[187]

A more recent study published by the U.S. Chamber of Commerce (2005) is consistent with these findings from the 1993 NSSBF and the 1992 CBO.[188] The Chamber of Commerce survey was conducted in March and April 2005 and detailed the financing problems experienced by small business owners, 95 percent of whom had less than 100 employees. Over 1,000 business owners were interviewed. As detailed in Table 6.7, minority-owned businesses report that availability of credit is their top problem. The biggest difference in responses between minorities and non-minority men and women was availability of credit: 19 percent of non-minority males report credit as their top problem compared with 54 percent for minority males. There was a 15 percentage point difference between minority women and non-minority women. In no other category is there more than a 10 percentage point difference for men or women.

In summary, African-American-owned and Hispanic-owned firms in particular and to a lesser extent other minority-owned firms and women-owned firms report that they had problems with the availability of credit in the past and expected that such difficulties would continue into the future. Whether or not these perceptions reflect actual discrimination can be distinguished in the econometric analyses to follow.

D. Differences in Loan Denial Rates by Race, Ethnicity or Gender

Evidence presented to this point indicates that minority-owned firms are more likely to be denied loans and report that their lack of access to credit significantly impairs their business. Can these differences be explained by such things as differences in size, creditworthiness, location, or other factors as some have suggested in the literature on discrimination in mortgage lending (Horne, 1994; Bauer and Cromwell, 1994; and Yezer, Phillips, and Trost, 1994)? To address this

---

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

[188] Although the CBO is part of the Economic Census, it was not published in 1997. In 2002, the name was changed to the Survey of Business Owners (SBO). Unfortunately, questions relating to the importance of access to financial loans and credit to business success were not included in the 2002 survey.

question we turn to an econometric examination of whether the loan requests made by minority-owned firms are more likely to be denied, holding constant important differences among firms.

In Table 6.8 and Table 6.9, we report the results from a series of loan denial Probit regressions of the form specified in Equation (1) using data from the 1993 NSSBF for the U.S. and the ENC region.[189] As indicated earlier, the 1993-2003 datasets have the particular advantage that they include information that can be used to proxy an applicant's creditworthiness. We report estimates from these models that can be interpreted as changes or differences in loan denial probabilities depending on the type of variables considered. For indicator variables, such as race, ethnicity and gender indicators, estimates show differences in loan denial probabilities between the indicated group and the base group.[190] In Column (1) of Table 6.8 (in which the regression model contains only race and gender indicators), the estimated coefficient of 0.443 on the African-American indicator can be interpreted as indicating that the denial rate for African-American-owned businesses is 44.3 percentage points higher than that for non-minority male-owned firms.[191]

The remainder of Table 6.8 includes additional explanatory variables to hold constant differences in the characteristics of firms that may vary by race, ethnicity or gender.[192] In Column (2) a number of controls are included that distinguish the creditworthiness of the firm and the owner. Many are statistically significant on a two-tailed test at conventional levels of significance with the expected signs. For instance, having been bankrupt or had legal judgments against the firm or owner raises the probability of denial; stronger sales lower this probability. **Even after controlling for these differences in creditworthiness, however, African-American-owned firms remain 29 percentage points more likely than non-minority-owned firms to have their loan request denied.**

---

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

[190] 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.

[191] This estimate largely replicates the raw difference in denial rates between African-American- and non-minority-owned businesses reported in Table 6.1. The raw differential observed there ($0.659 - 0.269 = 0.39$) differs slightly from the 0.443 differential reported here because this specification also controls for whether the business is owned by a non-minority female and because the regressions are unweighted whereas the descriptive statistics are weighted using the sample weights. When a full set of explanatory control variables are included the unweighted estimates are insignificantly different from the weighted estimates, hence in Table 6.8 and subsequent tables we report only unweighted estimates.

[192] In preliminary analyses, these models were also estimated separately, focusing specifically on the differences in coefficient estimates between non-minorities and African-Americans. The F-test conducted to determine whether parameter estimates were the same for African-Americans and non-minorities rejected this null hypothesis. Next, the estimates obtained by estimating the model separately by race were used to conduct an Oaxaca (1973) decomposition. The results from this analysis were similar to those obtained by restricting the coefficients to be the same between African-Americans and non-minorities and using the coefficient on the African-American indicator variable to measure the gap between groups. In this Chapter, all the results are reported in this simpler format for ease of exposition and interpretation.

The models reported in Columns (3) through (5) of Table 6.8 control for an array of additional characteristics of firms. Column (3) adds 39 additional characteristics of the firm and the loan application, including such factors as level of employment, change in employment, the size of the loan request, and the use of the loan. Column (4) includes variables to control for differences across regions of the country and major industry group. Column (5) adds variables indicating the month and year in which the loan was requested and the type of financial institution to which the firm applied.[193] In total these three columns add 176 variables to the more parsimonious specification reported in Column (2).[194] Nevertheless, the estimated disadvantage experienced by African-American-owned firms in obtaining credit remains large and statistically significant. The estimate from each of the three additional columns indicates that African-American-owned firms are 24 percentage points more likely than non-minority male-owned firms to have their loan application denied even after controlling for the multitude of factors we have taken into consideration.

The results also indicate that Asians/Pacific Islanders had significantly higher denial rates than non-minority males—12 percentage points. There is little evidence in the 1993 national data, however, that denial rates for firms owned by Native Americans or Hispanics were significantly different from the denial rates of firms owned by non-minorities; or that denial rates for firms owned by non-minority women were significantly different from those for firms owned by non-minority men.

In Table 6.9, we see results for the ENC region similar to those reported in Table 6.8 for the nation as a whole. The table shows that the results of our loan denial model in the ENC, which includes the County's market area, are not substantially different from the nationwide results reported in Table 6.8. The indicator variable for the ENC region is negative but not statistically significantly different from zero in all specifications but one. Moreover, all the interaction terms between race/ethnicity/gender and the ENC region are insignificantly different from zero.[195]

Although the results provided so far strongly indicate that financial institutions treat African-American-owned and non-minority male-owned small businesses differently in lending, other considerations may limit our ability to interpret this finding as discrimination. Of perhaps greatest concern is the possibility that we may not have adequately controlled for differences in the creditworthiness of firms. If African-American-owned firms are less creditworthy and we have failed to sufficiently capture those differences then we would be inadvertently attributing the racial difference in loan denial rates to discrimination. On the other hand, if financial

---

[193] Approximately four out of five (80.5%) of the firms who required a loan applied to a commercial bank. Overall seventeen different types of financial institution were tabulated, although only the following accounted for more than 1% of the (weighted) total— Finance Companies (4.9%); Savings Banks (2.5%); Savings & Loans (2.3%); Leasing Companies (2.1%); and Credit Unions (2.0%).

[194] One piece of information to which we did not have access in the 1993 NSSBF or the 1998 SSBF because of confidentiality concerns was each firm's credit rating. A working paper by Cavalluzzo, Cavalluzzo, and Wolken (1999) was able to incorporate Dun & Bradstreet credit ratings for each firm because the authors' connection to the Federal Reserve Board enabled them to access the confidential firm identifiers. They added these credit rating variables in a model comparable to that reported here and found the results insensitive to the inclusion. The 2003 SSBF includes Dun & Bradstreet credit ratings for each firm. Below, we discuss the impact of incorporating them into a model similar to that presented in Table 6.8 (see Tables 6.27 and 6.28).

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

institutions discriminate against African-American-owned firms, then the greater likelihood of denial for African-Americans in earlier years is likely to hurt the performance of these firms and appear to make them look less creditworthy. Therefore, controlling for creditworthiness will likely understate the presence of discrimination.

As a check on the foregoing results, therefore, our first approach was to identify the types of information that financial institutions collect in order to evaluate a loan application and compare that with the information available to us in the NSSBF. First, a selection of small business loan applications was collected from various banks. An Internet search of web sites that provide general business advice to small firms was also conducted. Such sites typically include descriptions of the loan application process and list the kinds of information typically requested of applicants.[196]

Bank loan applications typically request detailed information about both the firm and its owner(s). Regarding the firm, banks typically request information on: (a) type of business, (b) years in business, (c) number of full-time employees, (d) annual sales, (e) organization type (corporation or proprietorship), (f) owner share(s), (g) assets and liabilities, (h) whether the business is a party to any lawsuit, and (i) whether any back taxes are owed. Regarding the owner's personal finances, banks typically ask for: (a) assets and liabilities, (b) sources and levels of income, and (c) whether the owner has any contingent liabilities. Some applications ask explicitly if the firm qualifies as a minority-owned enterprise for the purposes of certain government loan guarantee programs. The race of the applicant, however, would be readily identifiable even in the absence of such a question since most of these loans would be originated through face-to-face contact with a representative of the financial institution.

These criteria seem to match reasonably closely the information available in the 1993 NSSBF. The particular strength of the NSSBF is the detail available on the firm, which covers much of the information typically requested on loan application forms. The main shortcoming that we have identified in these data is that less detail is available on the finances of the owner of the firm.[197] Although the creditworthiness measures enable us to identify those owners who have had serious financial problems (like being delinquent on personal obligations), we have no direct information regarding the owner's assets, liabilities, and income. These factors would be necessary to identify whether the business owner has sufficient personal resources to draw upon should the business encounter difficulties and to determine the personal collateral available should the firm default on its obligation. We do have measures of the owner's human capital in the form of education and experience, which likely capture at least some of the differential in available personal wealth across firm owners. Nevertheless, our potentially incomplete characterization of the business owner's personal financial condition may introduce a bias into our analysis if African-American business owners have fewer resources than non-minority business owners.

---

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

[197] This deficiency is remedied in the 1998 SSBF and the 2003 SSBF, discussed below, both of which contain information on the owner's home equity, and personal net worth excluding home equity and business equity.

To assess the potential impact of this problem on our results, we separately examined groups of firms who differ in the degree to which personal finances should influence the loan decision and compare the estimated disadvantage experienced by African-American-owned firms in different groups. First, we examine proprietorships and partnerships separately from corporations since owners of incorporated businesses are at least somewhat shielded from incurring the costs of a failed business. Second, we divide firms according to size.[198] Both larger small businesses and those that have been in existence for some time are more likely to rely on the business's funds, rather than the owner's, to repay its obligations. Third, we consider firms that have applied for loans to obtain working capital separately from those firms that seek funds for other purposes (mainly to purchase vehicles, machinery and equipment, and buildings or land). Loans made for any of these other purposes are at least partially collateralized because the financial institution could sell them, albeit at a potentially somewhat reduced rate, should the small business default.[199]

In order to determine whether the findings for the ENC region were different from those for the nation, in the second column of Table 6.10 we also report the coefficient and t-statistics on an interaction term between the ENC region and African-American ownership. In no case was the estimated coefficient on this interaction statistically significant, implying that the national results also apply in general to the ENC.

Results from these analyses provide no indication that omitting the owner's personal wealth substantially biases the results presented above in Tables 6.8 or 6.9. Estimates presented in row numbers 1 through 8 of Table 6.10 indicate that African-American-owned small businesses are significantly more likely to have their loan applications rejected regardless of the category of firm considered. In particular, when samples are restricted to corporations, larger firms, and firms seeking credit for uses other than working capital, African-American-owned firms are 21, 20, and 15 percentage points more likely, respectively, to have their loan application rejected even though personal resources should be less important in these categories. Moreover, in each group where there are two types of firms (large and small, etc.), the estimates for the two types of firms are not significantly different from each other.

Another issue is whether the racial differences in loan denial rates among firms with similar characteristics can be attributed to differences in the geographic location of African-American- and non-minority-owned firms. If, for example, African-American-owned firms are more likely to be located in the central city, and a central city location is inversely correlated with profitability and the ability to repay debt, then financial institutions may be acting optimally in

---

[198] As reported earlier, the mean and median size of firms is 5.5 and 31.6 full-time equivalent workers, respectively. 14 percent of firms have one or fewer employees and 27 percent have two or fewer employees. In the ENC, the figures are 5.5, 31.7, 16 percent, and 28 percent, respectively.

[199] 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.

rejecting the loan applications of African-American-owned firms at a higher rate. As indicated earlier, this type of behavior is labeled "statistical discrimination." In the subsequent text and tables, we present a limited analysis to address whether or not this type of behavior takes place.[200]

To identify whether lenders' behavior is consistent with this hypothesis we distinguish those firms that self-classified their sales market as being local rather than regional, national, or international. A central city location should have a greater impact on future profit expectations for those firms that operate on a local level. If minority-owned firms are more likely to locate in the central city, racial differences in loan denial rates should be greater in the firms that sell in the local marketplace. The results of this test, reported in row numbers 9 and 10 of Table 6.10, reject the hypothesis that differences in loan denial rates are attributable to different propensities to locate in the center of a city. Estimates for the nation as a whole indicate that African-American-owned firms that sell to the local market are 21 percentage points more likely to have their loan applications denied compared to a 19 percent excess denial rate for firms selling primarily to regional, national, or corresponding markets. The difference between these two rates is not significant. In the ENC, the figures are statistically indistinguishable from those in the nation as a whole.

We also estimate models that address a potential weakness in the specific functional form with which we control for differences in credit history across firms. As shown in Tables 6.1 and 6.2, African-American-owned firms are considerably more likely to have had troubles in the past in the form of judgments against them, late payments by the firm or its owner, or past bankruptcies. The model specifications reported in Tables 6.8 and 6.9 implicitly assume that these past problems are additive in their effect on loan denials and one might suspect the marginal impact would rise as past problems rise. Therefore, in the final three rows of Table 6.10, we separated firms by the number of past problems experienced. In Rows 11 through 13, we restricted the sample to those firms that have never had any past credit problems, those firms that reported one problem only, and those firms that reported more than one of these problems, respectively. The results indicate that even African-American-owned firms with clean credit histories are at a significant disadvantage in getting their loans approved, holding constant their other characteristics. In fact, the estimated differential in loan approval rates between African-American- and non-minority-owned firms is statistically indistinguishable within each of these groups. Asian-owned firms with clean credit histories, as well, are also at a significant disadvantage relative to non-minority-male owned firms.

Finally, we considered whether African-American-owned firms are treated differently from non-minority-owned firms when requesting credit from other sources. The source of credit we examined is credit cards. Such an analysis provides a unique advantage because credit card applications are more likely to be filled out and mailed in, so it is less likely that the race of the applicant is known to the financial institution, at least in the case of African-American-owned firms and Native American-owned firms, where surname is unlikely to provide any signal about

---

[200] 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.

minority status. On the other hand, for Asian and Hispanic applicants, it is possible that surname does provide such a signal, although an imperfect one. The 1993 NSSBF asked respondents whether they used either a business or personal credit card for business purposes. Although our analysis of use of credit cards does not condition on application, a finding that African-American- and non-minority-owned small businesses are equally likely to use credit cards may still provide evidence supporting discrimination in small-business lending. In fact, if financial institutions discriminate against African-Americans in providing small business loans, we may even expect to see African-Americans use credit cards more often than non-minorities since they have fewer alternatives. Even though many institutions may offer both types of credit, they may only be aware of the race of the applicant in a small business loan.[201]

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.[202] There is no evidence, either for the U.S. as a whole or for the ENC, that African-American-owned firms are less likely to access either business or personal credit cards for business expenses. On the other hand, there is evidence in the ENC and in the nation as a whole that Asian-owned firms are less likely to access business credit cards. Credit card use for financing business expenses may be an area where further research is warranted. Unfortunately, available data on this subject is quite limited.

E. Differences in Interest Rates Charged on Approved Loans

Although most of our analysis has addressed whether minority- and non-minority-owned firms are treated equally in terms of their probability of loan denial, another way that differential treatment may emerge is through the interest rate charged for approved loans. Discrimination may be apparent if banks approve loans to equally creditworthy minority- and non-minority-owned firms, but charge the minority-owned firms a higher interest rate. Therefore, we estimated model specifications analogous to those reported previously for loan denials, but now the dependent variable represents the interest rate charged for firms whose loans were approved and the set of explanatory variables includes characteristics of the loan. More formally, the model we estimated takes the form:

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

---

[201] 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 method for establishing its credit ratings, we do know from long experience that the comprehensive indicators of ownership by race are lacking in the Dun & Bradstreet's data. Indeed, this is the reason why NERA's availability estimation method requires creating a master directory of disadvantaged, minority, and women-owned businesses for merging with Dun & Bradstreet's data.

[202] On average, 29 percent of all firms use business credit cards and 41 percent use personal credit cards for business use; these levels vary only modestly by race and ethnicity. In the ENC the figures are 29 percent and 39 percent, respectively.

where I represents the interest rate charged on the loan, LC represents characteristics of the loan (see the notes to Table 6.8 for a full list of the variables included in this set), ε_i is a term capturing random factors, and all other notations are the same as in equation (1).

An important consideration is whether the interest rate may be treated as exogenous, as our reduced form model assumes. In the context of small business loans, in which it is possible that the loan terms may be negotiated in the determination process, this assumption may not be valid. As such, a model that simultaneously estimates the interest rate and the loan decision might be appropriate, except that the interest rate that would be charged to firms whose loans were denied is not available in our data. Alternatively, one could estimate an interest rate model alone for those firms whose loan was approved, adjusting for the potential bias brought about by sample selection. To properly identify such a model, however, a variable is required that is linked to the loan denial decision, but unrelated to the level of interest charged on approved loans; no such variable exists in the data.

Nevertheless, one would expect these considerations to impose a downward bias on the estimated differential in interest rates charged on loans to African-American-owned firms. Those firms whose loans were rejected would have been charged higher interest rates than those approved. Since African-American-owned businesses were considerably more likely to be rejected holding constant differences in creditworthiness, one would expect any differential in 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. Estimates indicated that African-American-owned firms pay rates of interest that are roughly 1 full percentage point higher than similarly situated non-minority-owned firms. Row 2 shows that even African-American-owned firms with good credit histories are charged higher interest rates relative to non-minority-owned firms.[203]

The remainder of the table presents similar specification checks to those reported in Table 6.10. Recall that most of these models identify firms for which the firm's own history is likely to be a more important contributor to its creditworthiness. The specifications by sales market are designed to distinguish the impact of central city location. Unfortunately, sample sizes are smaller in these specifications and reduce the power of the analysis. Nevertheless, we still find that regardless of organization type and firm age, African-American-owned firms face statistically significantly higher interest rates. Overall, the evidence presented indicates that African-Americans, and to a lesser extent Hispanics and Asians, do face disadvantages in the market for small business credit that does not appear to be attributable to differences in geography or creditworthiness.

Table 6.14 shows results for the ENC. Findings are comparable to those for the nation as a whole.

---

[203] Estimates from firms that have had past credit problems are not presented since the higher likelihood of their being denied credit restricts the size of the sample and limits the ability to provide a powerful test of the interest rates charged if they are approved.

F. Loan Approval Rates and Access to Credit

The results presented so far may be biased toward finding too small a disparity between non-minority- and African-American-owned firms because those minority-owned firms that actually apply for credit may represent a selected sample of the most creditworthy. More marginal minority-owned firms whose loans may have been accepted had they been owned by non-minorities may not even be among the pool of loan applicants. First, these firms may have gone out of business or may not have had the opportunity to commence operations because of their inability to obtain capital. Second, some existing firms may have chosen not to apply for credit because they were afraid their application would be rejected due to prejudice.

Although we have no direct evidence regarding the first proposition, data from the 1993 NSSBF provide some evidence for the second: African-American- and Hispanic-owned firms are much more likely to report that they did not apply for a loan, even though they needed credit, because they thought they would be rejected. Table 6.15 reports estimates from Probit models in which the dependent variable is an indicator variable representing failure to apply for a loan fearing denial for all firms. The first row presents racial differences without controlling for any other characteristics of firms, and the results indicate that African-American- and Hispanic-owned firms are 40 and 23 percentage points more likely than non-minority-owned firms to withhold an application fearing denial.

Of course, some of this difference may be attributable to differences in creditworthiness across firms since firms that are bad credit risks should be afraid that their loan would be denied. To adjust for this, the second row of Table 6.15 reports comparable models that control for differences in creditworthiness and other characteristics of firms. The results from this specification show that the greater fear of rejection among African-American- and Hispanic-owned firms can partially be explained by these differences. Nevertheless, a gap of 26 and 16 percentage points still exists for African-American- and Hispanic-owned firms relative to non-minority-owned firms with similar characteristics. In fact, when asked directly why they were afraid to apply for loans, minority-owned firms were far more likely to report prejudice as the reason (19 percent for African-American-owned firms, 8 percent for Hispanic-owned firms, and 3 percent for non-minority-owned firms).[204] Results obtained in section (b) of Table 6.15 for the ENC region are very similar to those found for the nation as a whole. Further, as section (c) of Table 6.15 shows, African-American-owned firms in construction also appear to be fearful of applying because of the possibility of their application being turned down.[205]

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

---

[204] 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.

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

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 non-minority- 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 non-minority- and minority-owned firms, respectively. Among the non-minority-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.[206]

As an alternative that answers a different, but related, question we consider the ability of firms to get credit among those who desired it, regardless of whether or not they applied. This amounts to analyzing access to credit rather than loan approval and includes in the denominator those firms that needed credit but did not apply because they feared rejection. If differences by race in this rate among all firms who needed credit are greater than differences by race in the rate of denial among loan applicants, then this would indicate that African-American- and other minority-owned firms have even less access to credit than an analysis of loan applicants would indicate.

To test this proposition, we estimate a regression model comparable to the one reported in Table 6.10 for the sample of firms that applied for a loan, except that this analysis considers all firms seeking credit and treats those who did not apply for fear of rejection as denials. The sample excludes firms that did not need additional credit in the preceding three years. The results, reported in Table 6.16, are consistent with the previous analysis; we find that selection is not

---

[206] The only variable that potentially could meet these conditions in the NSSBF data is the distance between a firm and the nearest financial institution. If greater distance reduced a firm's information regarding the availability of funds, it might be related to the decision to apply for a loan. On the other hand, the creditworthiness of the firm should be independent of its location and should be unlikely to enter into the approval process. Unfortunately, we did not find a direct relationship between distance to the nearest financial institution and the probability of applying for a loan. This may be due to the fact that few firms are located more than a very short distance from the nearest financial institution.

much of an issue for African-American-owned firms nationally, in the ENC region, or in construction sub-samples, or for Asian-owned firms nationally or in the ENC. Regardless of whether we consider denial rates among applicants or denial rates among firms that desired additional credit, African-American-owned firms are 20-30 percentage points less likely to obtain credit once control variables are included and even higher than that when they are not. For Hispanic-owned firms, however, some selection bias is evident. Among the pool of loan applicants, Hispanic-owned firms are not statistically significantly more likely to be denied than other firms with the same characteristics (see *e.g.* Table 6.8, Column 5). Among the pool of firms seeking additional credit, however, Hispanic-owned firms are 17 percentage points more likely to be denied access to credit, and this difference is statistically significant.

G.   Analysis of Credit Market Discrimination in the U.S. in 1998

We turn next to an examination of the extent to which discrimination in the credit market has changed since 1993 using data from the 1998 SSBF conducted by the Board of Governors of the Federal Reserve System.[207] This section updates the several estimates obtained above using the 1993 NSSBF. Two complications are that the overall sample size is smaller and a number of the questions have been changed. However, the result is still clear – African-American-owned firms face discrimination in the credit market. In addition, there is evidence of discrimination in the credit market against other minority-owned firms as well. We present four sections of evidence, all of which are consistent with our findings from the 1993 survey.

1.   Qualitative Evidence

Consistent with the 1993 survey, Table 6.17 shows that African-American-owned firms in the 1998 survey report that the biggest problem their firm currently faces is "financing and interest rates." In the 1993 survey, respondents were asked to report problems in the preceding 12 months (Tables 6.3 and 6.4) and over the next 12 months (Tables 6.5 and 6.6). Interestingly, even though credit availability was by far the most important category for African-Americans (21 percent in Table 6.5), interest rates were relatively unimportant (2 percent). The 1998 SSBF, however, did not report separate categories.

---

[207] 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.

2.   Differences in Loan Denial Rates by Race/Ethnicity

In 1998 as in 1993, in comparison with firms owned by non-minority males, minority and female-owned firms were less creditworthy, more likely to have their loan applications turned down, more likely not to apply for a loan for fear of being denied, and consistently smaller and younger. Moreover, their owners had lower amounts of both home and non-home equity. Minority-owned firms in general, and African-American-owned firms in particular, were much less likely to be classified as having a "low risk" credit rating by Dun & Bradstreet.[208]

In the 1993 survey, respondents were asked "During the last three years has the firm applied for credit or asked for the renewal of terms on an existing loan?" In 1998, a narrower question limited to new loans was asked – "Did the firm apply for new loans in the last three years?" In 1993, 43 percent answered the question in the affirmative compared with 27 percent in 1998. Despite the fact that in 1993 the question was broader, the pattern of denials by race and sex is similar across the years. As can be seen below, minority-owned firms were especially likely to have their loan applications denied.

---

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

Percentage of Loan Applications Denied		
	1993	1998
Non-minority males	26.2%	24.4%
African-Americans	65.9%	62.3%
Asians, Native Americans, etc.	39.9%	47.0%
Hispanics	35.9%	49.9%
Non-minority females	30.1%	23.5%
Overall	28.8%	28.6%

Similarly, the proportion of firms reporting that they did not apply for fear of being denied is similar by race, ethnicity and gender across the two years. More than half of African-American owners did not apply for a loan for fear of being denied compared with only one out of five non-minority males.

Percentage Not Applying for Fear of Denial		
	1993	1998
Non-minority males	22.5%	20.2%
African-Americans	60.7%	53.9%
Asians, Native Americans, etc.	27.5%	23.1%
Hispanics	41.5%	34.3%
Non-minority females	22.7%	24.2%
Overall	24.7%	23.3%

In the 1998 SSBF survey, respondents who were denied loans were asked if they believed there were reasons other than the official ones provided by their financial institution as to why their loan applications were turned down. Among numerous options provided were the following:

a) Prejudice on a racial/ethnic basis.

b) Prejudice against women.

c) Prejudice against the business location.

d) Prejudice against the business type.

e) Prejudice or discrimination (not-specified or other).

Among firm owners who had applied for credit within the last three years and were denied, 34.1 percent believed there were reasons for their denial beyond the official explanation provided by the financial institution. Among non-minorities, 7.7 percent suspected some sort of prejudice. By contrast, the figure among minorities was 25.8 percent. Among owners who needed credit but did not apply for fear of denial, a similar pattern was observed. Only 1.7 percent of non-minorities believed prejudice was the reason, whereas among minorities the figure was 6.8 percent.

In Tables 6.8 and 6.9 the determinants of loan denial rates were estimated using data from the 1993 NSSBF. It was found that African-American-owned firms were almost twice as likely to have their loans denied than non-minority 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 non-minority men.

A similar exercise is performed below in Tables 6.18 and 6.19 using data from the 1998 SSBF. Column (1) in Table 6.18 shows that African-American-owned firms in 1998 had a 42.2 percentage point higher probability of denial than non-minority male-owned firms before taking account of creditworthiness of the firm or any other characteristics. For 1993 the comparable figure was 44.3 percentage points. The addition of a large number of controls reduces the percentage point differential for African-Americans to 21.8 in Column (5) as the full set of controls is added. For 1993 the comparable figure was 24.1 percentage points.

The main difference between 1993 and 1998 is that now we find evidence that the probability of denial is significantly higher for Hispanic-owned firms as well. In Table 6.18 Column (5), Hispanic-owned firms have a 17.1 percentage point higher probability of being denied than non-minority male-owned firms. In Table 6.8, by contrast, denial probabilities for Hispanic-owned firms were *not* significantly different from those of non-minority male-owned firms. If anything, discrimination in the small business credit market appears to have expanded during the late 1990s.

Table 6.19 focusing on the ENC region yields similar results—showing significantly larger denial probabilities for African-American- and Hispanic-owned firms (21.4 and 18.1 percentage points, respectively) than for non-minority male-owned firms. The ENC indicator was not significant in Table 6.19, nor were the interaction terms between ENC and race, ethnicity or gender, indicating that the 1998 loan denial results for the ENC are not significantly different than for the nation as a whole.

Although tempered by the smaller sample size available, the quality of the experiment is somewhat better using the 1998 data than it was using the 1993 data due to the availability of an improved set of controls for the creditworthiness of the firm and its owner. In 1998, three new variables are included regarding the financial viability of the firm:

a) The value of the equity, if any, in the owner's home.

b) The owner's net worth excluding home equity and equity in the firm.

c) The firm's 1999 Dun & Bradstreet credit rating in five categories (low, moderate, average, significant and high) indicating the likelihood of loan default.[209]

Despite the fact that these new variables do help to predict loan denials,[210] the estimated race differences including these variables are unchanged from those reported above.[211] This suggests

---

[209] 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.

[210] The coefficients and t-statistics on the credit score variables when they were included alone in a U.S. loan denial model was as follows: moderate risk .228 (2.45), average risk= .295 (3.25); significant risk=.319 (3.28); high

that the large estimated differences in the denial probabilities that were estimated in 1993 were not biased significantly upwards by the fact that these variables were unavailable.

3.   Effect of 1998 Survey Design Changes on Differences in Loan Denial Rates

The question we used to examine the 1998 data was somewhat narrower than the question used in the 1993 survey because it was changed by the survey designers. The 1998 question asked about new loans over the preceding three years, whereas the 1993 question covered all loans including renewals. Responses in 1998 were as follows:

Applied for New Loans Last Three Years	Number	Percent
Did not apply	2,599	73.0%
Always approved	713	20.0%
Always denied	166	4.7%
Sometimes approved/sometimes denied	83	2.3%
Total	3,561	100.0%

The dependent variable used in Tables 6.18 and 6.19 was set to one if the loan application was always denied and was set to zero if the application was always approved or sometimes approved/sometimes denied. An alternative dependent variable – *denylast* – is set to one if the application is always denied, set to zero if always approved. Those responding "sometimes approved/sometimes denied" are excluded from the analysis. Column (1) of Table 6.20 replicates Column (1) of Table 6.18 using *denylast* as the dependent variable with the smaller sub-sample. African-Americans, Hispanics, Asians and non-minority females are all confirmed to face higher denial rates than non-minority males using this specification. For African-Americans and Hispanics, the difference is 46 and 36 percentage points, respectively. For Asians, the difference is 19 percentage points, and for non-minority females, 8 percentage points.

Results consistent with discrimination are confirmed for African-Americans and Hispanics in Column (2) of Table 6.20 when a host of demographic and financial characteristics and geographic and industry indicators are included. When interaction terms for the ENC region are added to the model as in Column (3), results for minorities and non-minority females remain statistically significant. Neither the ENC indicator nor any of the interactions between ENC and race, ethnicity or gender is significant.

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

Tables 6.21 through 6.23 provide confirmation from the 1998 survey of a number of other results from the 1993 survey reported above.

---

risk= .391 (3.53), n=924 pseudo r^2=.0253. Excluded category 'low risk'. Results were essentially unchanged when a control for ENC was included.

[211] This confirms the findings of Cavalluzzo, Cavalluzzo and Wolken (1999) who performed a similar exercise with the 1993 data.

First, Table 6.21, which is similar to Tables 6.13 and 6.14, finds that conditional on obtaining a loan, African-Americans are charged a higher price for their credit—on average 1.06 percentage points nationally. African-Americans in the ENC appear to fare even worse in this regard than they do elsewhere in the country.

Table 6.22, which is similar to Table 6.15, shows that African-American owners are much more likely not to apply for a loan fearing they will be denied. Based on all of the foregoing evidence this is perhaps a sensible decision—if and when they do apply they are almost twice as likely as non-minority male-owned firms to have their application rejected. This is evident in the construction and construction-related industries as well.

Finally, Table 6.23, which is comparable to Tables 6.11 and 6.12, suggests that when the financial institution does not know the race or ethnicity of the applicant – as is often the case in an application for a credit card – there are no differences nationally by race or ethnicity in the usage for business purposes of either business or personal credit cards. There was also no evidence of any race effects in the use of business credit cards in the ENC region (row 3) or in construction (results not reported here).

Our confidence in the strength of our findings from the 1993 NSSBF survey is elevated by these findings from the 1998 SSBF survey, which strongly confirm the original results. Unfortunately, African-Americans continue to be discriminated against in the market for small business credit. By 1998, this discrimination appears to be on the increase for African-Americans and to be expanding to impact other minority groups, such as Hispanics and Asians, as well. This is an important market failure, and one which governments such as Cook County cannot ignore if they are to avoid passive participation in a discriminatory marketplace.

H.   Analysis of Credit Market Discrimination in the U.S. in 2003

More recently a new wave of the Survey of Small Business Finances was made available by the Board of Governors of the Federal Reserve System.[212] This is the fourth survey of U.S. small businesses conducted by the Board of Governors since 1987. The survey gathered data from 4,072 firms selected to be representative of small businesses operating in the U.S. at the end of 2003. The survey covered a nationally representative sample of U.S. for profit, non-financial, non-subsidiary, nonagricultural, and nongovernmental businesses with fewer than 500 employees that were in operation at year end 2003 and at the time of interview. Most interviews took place between June 2004 and January 2005. The sample was drawn from the Dun & Bradstreet Market Identifier file. The numbers of employees varied from zero to 486 with a weighted median of 3.0 and weighted mean of 8.6.

Unfortunately, the 2003 SSBF did not over-sample minority-owned firms, as in the first three survey waves, According to survey staff, this was due to concerns that doing so would delay the survey timeline and reduce the overall response rate.[213]

---

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

[213] See footnote 176, above.

In 1998 almost 8 percent of survey respondents were African-American, compared to slightly more than 3 percent in 2003. Hispanics were almost 7 percent in 1998 but less than 4 percent in 2003. Other minorities were 6.5 percent in 1998 but only 5.4 percent in 2003.[214] Although the population weights were adjusted to accommodate these changes, even these weighted percentages are significantly smaller for minorities in 2003 than in 1998.[215]

Mach and Wolken (2006) reported using these data that 13.1% of firms were owned by non-White or Hispanic individuals; the share is statistically lower than in 1998 (14.6 percent). The shares for African-Americans and Asians each held roughly constant at 4%; the share of American Indians and Alaska natives held at roughly 1 percent. However the share of Hispanics fell a statistically significant amount from 5.6 percent to 4.2 percent which is somewhat surprising given the evidence that Hispanics are a growing share of the U.S. population – up from 12.5 percent in 2000 to 14.5 percent in 2005. The percentage of firms owned by females also declined from 72.0 percent to 64.8 percent.

Despite these drawbacks, our analysis of the 2003 SSBF yields results that are strongly consistent with those obtained from the 1993 and 1998 survey waves. The next section presents our findings from this analysis.[216]

1. Qualitative Evidence

Table 6.24 reports the results of asking business owners for the most important problem currently facing their firm. Consistent with the 1993 and 1998 surveys, firms owned by minority and women-owned firms were more likely to say that their most important problem was "financing and interest rates." Once again the African-American/non-minority difference was most pronounced—only slightly more than 5 percent of non-minority male business owners reported this as their major problem compared to almost 21 percent of African-American business owners.

2. Differences in Loan Denial Rates by Race/Ethnicity

Tables 6.25 and 6.26 present estimates of loan denial probabilities for the nation as a whole and for the ENC using a regression model comparable to that which was used with the 1993 and 1998 survey waves.[217]

---

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

[215] Mach and Wolken (2006, Table 2) report that weighted figures for African-Americans were 4.1 percent in 1998 and 3.7 percent in 2003. Hispanics were 5.6 and 4.2 percent, respectively. Asians and Pacific Islanders were 4.4 and 4.2 percent, respectively. Native Americans were 0.8 and 1.3 percent, respectively, and women were 24.3 and 22.4 percent, respectively.

[216] The data file provided by the Board of Governors includes five separate observations per firm. That is to say there are 4240*5=21,200 observations. These so-called multiple imputations are done via a randomized regression model, and are included because where there are missing observations several alternative estimates are provided. Where values are not missing the values for each of the five imputations are identical. We make use of the data from the first imputation: the results presented here are essentially identical whichever imputation is used. Overall only 1.8 percent of observations in the data file were missing.

Column (1) in Table 6.25 (comparable to Table 6.8 for 1993 and 6.18 for 1998) shows that African-American-owned firms in 2003 had a 45.9 percentage point higher probability of denial than non-minority male-owned firms before taking account of creditworthiness of the firm or any other characteristics. The addition of a large number of controls reduces the percentage point differential for African-Americans to 9.4 in Column (5) as the full set of controls is added. The coefficients in Column (5) for non-minority females and other minority groups are not significant however.

Table 6.26 (comparable to Table 6.9 for 1993 and 6.19 for 1998) focuses on the ENC division yields similar results—showing significantly larger denial probabilities for African-American-owned firms than for non-minority male-owned firms. The ENC indicator as well as the race and gender interaction terms with the ENC are also insignificant.

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

Table 6.27 models the interest rate charged for those minority-owned and non-minority female-owned firms that were able to successfully obtain a loan (comparable to Tables 6.13 and 6.14 for 1993 and Table 6.21 for 1998). As was found in earlier surveys, African-American business owners are hurt here as well since they have to pay, nationally on average, 1.04 percentage points more for their loans than non-minority male business owners with identical characteristics. Hispanic business owners, as well, pay 1.01 percentage points more, nationally on average, than their non-minority male counterparts have to pay.

The loan price differential is present for African-American and Hispanic business owners in the ENC as well. According to the results in Table 6.27, Hispanic business owners in the ENC may pay 1.65 percentage points more for their loans, on average, than comparable non-minority males. For African Americans, the differential is 1.25 percentage points but is not strongly significant.

Table 6.28 reports the results of estimating a model where the dependent variable is whether a business or personal credit card is used to pay business expenses (comparable to Tables 6.11 and 6.12 for 1993 and Table 6.23 for 1998). As noted above, the application procedure for business and personal credit cards is usually automated and not conducted face-to-face. If there were missing variables such as creditworthiness or some such characteristic unobserved to the econometrician, then the race and ethnicity indicator variables should enter significantly in these equations. There is some evidence nationally in 2003 that African-Americans are less likely to use personal credit cards for business expenses. However, this result is not observed for business credit cards.

Finally, consistent with earlier results, Table 6.29 (comparable to Tables 6.15 for 1993 and 6.22 for 1998), shows that African-American owners are much more likely not to apply for a loan fearing they will be denied. Even after controlling for a host of demographic, financial, geographic, and industry factors, African-American business owners are still almost 17

---

[217] In 2003, the credit application question was changed from 1998 to once again include requests for renewals as well as new loans, making it comparable to the 1993 version.

percentage points more likely to fail to apply for loans for fear of denial—even though they need the credit.

In the ENC division the phenomenon is evident as well—African-American business owners are 17 percentage points more likely to fail to apply for fear of denial. In construction and related industries, the trend is even more pronounced at 30.3 percentage points. There is evidence of this phenomenon for non-minority female business owners as well in the nation as a whole, and for Hispanic business owners in the nation as a whole and in the ENC.

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

NERA has conducted local credit market surveys at nine times and places across the country since 1999. These include the Chicago metropolitan area in 1999, the State of Maryland[218] in 2000, the Jacksonville, Florida metropolitan area in 2002, the Baltimore-Washington, DC metropolitan area in 2003, the St. Louis metropolitan area in 2004, the Denver metropolitan area in 2005, the State of Maryland (again) in 2005,[219] the State of Massachusetts in 2005, and the Memphis, TN-MS-AR metropolitan area in 2007. The Chicago, Jacksonville, Baltimore, St. Louis, and Denver surveys focused on construction and construction-related industries, while the two Maryland surveys, the Massachusetts surveys and the Memphis surveys included other goods and services as well.

Our Chicago, Maryland I, and Jacksonville survey questionnaires followed the format of the 1993 NSSBF while our Baltimore, St. Louis, Denver, Maryland II, Massachusetts, and Memphis surveys followed the format of the 1998 SSBF questionnaire.

As a final check on our findings in this chapter, we combined the results of these nine NERA surveys together in a consistent format and re-estimated the basic loan denial model on this larger file. These results appear below in Table 6.30, and are remarkably similar to results seen in Tables 6.8-6.9, 6.18-6.19, and 6.25-6.26. Denial probabilities for African-American-owned firms compared to non-minority male-owned firms are 29 percentage points higher—even when creditworthiness controls, other firm and owner characteristics, and interaction terms are included.

Moreover, the NERA surveys found statistically significant loan denial disparities for Hispanic-owned firms and non-minority female-owned firms as well. Denial rates were 18-24 percentage points higher for Hispanic-owned firms and 5-9 percentage points higher for non-minority female-owned firms than for their non-minority male-owned counterparts. Significant loan denial disparities were also observed for Native American-owned firms in some cases (18 percentage points higher).

---

[218] Including the District of Columbia, the State of Delaware, and the portion of Virginia within the Baltimore-Washington Metropolitan Area.

[219] Including (again) the District of Columbia, the State of Delaware, and the portion of Virginia within the Baltimore-Washington Metropolitan Area.

Finally, as shown in Table 6.31, we modeled the rate of interest charged, conditional upon receiving loan approval, using our nine-jurisdiction dataset. Results are very similar to that observed in Tables 6.13-6.14, 6.21 and 6.27. African-Americans pay almost 1.7 percentage points more, on average, for their business credit than do non-minority males, declining to 1.5 percentage points when creditworthiness and other firm and owner controls are accounted for.

On the basis of the foregoing, we conclude that the evidence of credit discrimination from NERA's nine local credit market surveys conducted throughout the nation between 1999-2007 is entirely consistent with the results obtained using data from the 1993 NSSBF, the 1998 SSBF, and the 2003 SSBF.

J. Conclusions

The results presented in this chapter indicate that African-American-owned firms face serious obstacles in obtaining credit that are unrelated to their creditworthiness, industry, or geographic location. In a number of cases this is true as well for Hispanic-owned firms, Asian-owned firms, Native American-owned firms, and non-minority female-owned firms.

As in any regression-based study, our analysis hinges upon the proposition that all the factors that are related to loan denial rates have been included in our statistical model. If, for example, African-American business owners possess some unobservable characteristic that makes them less creditworthy, then our statistical finding would overstate the difference in loan denial rates. To check on this possibility, the models we have estimated include an extensive array of factors that could conceivably affect loan decisions. Moreover, we have estimated several alternative specifications that could potentially identify the impact of such a bias. We have also conducted our own surveys on numerous occasions and in numerous places across the U.S. Throughout, we have consistently found that African-Americans and often other minorities as well are disadvantaged in the small business credit market and that our specification tests support the interpretation of discrimination.

Another potential criticism is that this study has examined loan denial rates rather than loan default rates; some have claimed that the latter provides a more appropriate strategy for identifying discrimination. For example, if banks only approve loans for relatively good African-American firms then African-American firms should exhibit relatively low default rates. Such an approach has several significant shortcomings that are detailed in Browne and Tootell (1995) and Ladd (1998). For instance, one problem is that it relies on the distribution of default probabilities being similar for African-American and non-minority applicants meeting the acceptance standard used for non-minority 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 non-minority- and African-American-owned firms given the fact that the African-American-owned firms which obtain credit are typically charged higher interest rates, as we have demonstrated. Finally, such an analysis would require longitudinal data, tracking firms for several years following loan origination. Such data does not exist. While we have highlighted the potential limitations of such an analysis, we believe that it would be

fruitful for this sort of longitudinal data collection to take place and for future research to investigate this question more fully.

In addition, many of the criticisms levied against the home mortgage loan discrimination study of Munnell et al. (1996) could perhaps be used here as well. Yet these criticisms appear to have been effectively countered by, for example, Browne and Tootell (1995) and Tootell 1996). What is important to keep in mind in reference to this work compared with Munnell et al. (1996) is the magnitude of the estimated racial disparity. The absolute size of the raw racial differences found in the mortgage study is considerably smaller than those observed in this study regarding business credit.[220]

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.

Clearly, a portion of the difference in denial rates between non-minority males and other groups in both types of studies appears to be due to differences in the characteristics of the applicants. Even after controlling for these differences, however, the gap in denial rates in the small business credit market is considerably larger than that found in the mortgage market.[221]

Our analysis finds significant evidence that African-American-owned businesses face impediments to obtaining credit that go beyond observable differences in their creditworthiness. These firms are more likely to report that credit availability was a problem in the past and expect it to be a problem in the future. In fact, these concerns prevented more African-American-owned firms from applying for loans because they feared being turned down due to prejudice or discrimination. We also found that loan denial rates are significantly higher for African-American-owned firms than for non-minority male-owned firms even after taking into account differences in an extensive array of measures of creditworthiness and other characteristics. This result appears to be largely insensitive to geographic location or to changes in econometric specification. Comparable findings are observed for other minority business owners and for non-

---

[220] In the Boston Fed study 10 percent of non-minority mortgage applications were rejected compared with 28 percent for African-Americans. Loan denial rates (weighted) for business credit in this study ranged from 8.3 to 26.2 percent for non-minority males and between 50.0 and 65.9 percent for African-American-owned firms (depending on which NSSBF or SSBF survey is used).

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

minority women as well, although not with as much consistency as the findings for African-Americans.

Overall, the evidence is strong that African-American-owned firms and often other M/WBE firms as well face large and statistically significant disadvantages in the market for small business credit. The larger size and significance of the effects found in our analyses (compared to mortgage market analyses) significantly reduces the possibility that the observed differences can be explained away by some quirk of the econometric estimation procedure and, instead, strongly suggests that the observed differences are due to discrimination.

K.   Tables

Table 6.1. Selected Population-Weighted Sample Means of Loan Applicants – USA, 1993

	All	Non-minority	African-American	Hispanic	Other Races
% of Firms Denied in the Last Three Years	28.8	26.9	65.9	35.9	39.9
Credit History of Firm/Owners					
% Owners with Judgments Against Them	4.8	4.1	16.9	5.2	15.2
% Firms Delinquent in Business Obligations	24.2	23.1	49.0	25.1	31.6
% Owners Delinquent on Personal Obligations	14.0	12.6	43.4	14.8	24.5
% Owners Declared Bankruptcy in Past 7yrs	2.4	2.4	5.3	2.0	0.8
Other Firm Characteristics					
% Female-Owned	17.9	18.1	18.2	9.7	23.1
Sales (in 1,000s of 1992 $)	1795.0	1870.6	588.6	1361.3	1309.1
Profits (in 1,000s of 1992 $)	86.7	84.5	59.9	189.5	54.0
Assets (in 1,000s of 1992 $)	889.4	922.5	230.3	745.6	747.3
Liabilities (in 1,000s of 1992 $)	547.4	572.8	146.2	308.6	486.0
Owner's Years of Experience	18.3	18.7	15.3	15.9	14.9
Owner's Share of Business	77.1	76.5	86.4	83.9	77.1
% <= 8th Grade Education	0.8	0.7	0.0	3.4	1.0
% 9th-11th Grade Education	2.2	2.2	3.7	1.8	1.2
% High School Graduate	19.6	19.7	12.8	27.7	14.9
% Some College	28.0	28.3	36.0	20.6	19.8
% College Graduate	29.2	29.2	28.0	24.1	36.5
% Postgraduate Education	20.2	19.9	19.5	22.3	26.6
% Line of credit	48.7	49.1	35.8	52.8	43.7
Total Full-time Employment in 1990	11.4	11.8	6.8	9.3	8.8
Total Full-time Employment in 1992	13.6	13.9	8.3	10.8	12.3
Firm age, in years	13.4	13.6	11.5	13.3	9.3
% New Firm Since 1990	9.4	9.4	13.0	6.4	9.5
% Firms Located in MSA	76.5	75.1	91.2	90.7	85.7
% Sole Proprietorship	32.8	32.3	48.6	38.2	24.2
% Partnership	7.8	7.8	7.7	6.7	7.9
% S Corporation	26.1	27.1	11.7	13.7	27.1
% C Corporation	33.4	32.8	32.1	41.4	40.8
% Existing Relationship with Lender	24.6	24.7	12.8	29.6	25.7
% Firms with Local Sales Market	54.1	54.7	42.9	55.0	47.4
Characteristics of Loan Application					
Amount Requested (in 1,000s of 1992$)	300.4	310.8	126.5	179.1	310.5
% Loans to be Used for Working Capital	8.4	8.8	4.9	4.6	5.5
% Loans to be Used for Equipment/Machinery	2.3	2.4	1.7	0.2	0.6
% Loans to be Used for Land/Buildings	0.4	0.4	0.9	0.0	0.0
% Loan to be Backed by Real Estate	28.3	28.6	24.7	26.2	24.7
Sample Size (unweighted)	2,007	1,648	170	96	93

Source: NERA calculations from 1993 NSSBF.

Notes: Sample weights are used to provide statistics that are nationally representative of all small businesses. Sample restricted to firms that applied for a loan over the preceding three years.

Table 6.2. Selected Sample Means of Loan Applicants – ENC, 1993

	All	Non-minority	African-American	Hispanic	Other Races
% of Firms Denied in the Last Three Years	19.8	18.6	58.7	0	23
Credit History of Firm/Owners					
% Owners with Judgments Against Them	4.5	4.5	6.7	0	0
% Firms Delinquent in Business Obligations	20.2	19.9	40	0	10.4
% Owners Delinquent on Personal Obligations	12.3	11.7	42.3	0	0.4
% Owners Declared Bankruptcy in Past 7yrs	2.8	2.8	8	0	0
Other Firm Characteristics					
% Female-Owned	16.9	16.8	20.6	65.6	6.3
Sales (in 1,000s of 1992 $)	2422.6	2533.1	479.2	213.8	789.6
Profits (in 1,000s of 1992 $)	169.5	178.3	58.1	92.6	-41.9
Assets (in 1,000s of 1992 $)	1087.4	1137.9	179.7	58.7	371.9
Liabilities (in 1,000s of 1992 $)	673.8	703.8	123.4	18.9	273.2
Owner's Years of Experience	18.9	19	16	9.2	19.9
Owner's Share of Business	76.5	76.5	92.2	65.6	54
% <= 8th Grade Education	1.2	1.2	0	0	0
% 9th-11th Grade Education	1.9	1.7	0	31.2	5.1
% High School Graduate	27.3	27.8	14.6	0	30.4
% Some College	24.2	23.1	53.3	34.4	30.4
% College Graduate	27.6	28.5	10.4	34.4	10.4
% Postgraduate Education	17.8	17.7	21.8	0	23.7
% Line of credit	49.3	50.3	34.7	34.4	26.8
Total Full-time Employment in 1990	12.2	12.7	4.4	2.4	5.7
Total Full-time Employment in 1992	14.5	14.9	5.1	4.3	9.9
Firm age, in years	14.4	14.7	10.6	7.4	6.1
% New Firm Since 1990	10.1	9.3	15.6	0	36.3
% Firms Located in MSA	77.7	76.4	100	100	100
% Sole Proprietorship	32.2	32.4	45	31.2	5.6
% Partnership	10.4	9.9	9.2	0	36.5
% S Corporation	20.3	20.6	10	68.8	13.7
% C Corporation	37.1	37.2	35.8	0	44.2
% Existing Relationship with Lender	25.1	24.5	17.2	34.4	60.8
% Firms with Local Sales Market	55.9	56.7	47.5	100	23.7
Characteristics of Loan Application					
Amount Requested (in 1,000s of 1992$)	320	333.4	54.8	21.3	171.9
% Loans to be Used for Working Capital	7.1	7.3	4.8	0	0
% Loans to be Used for Equipment/Machinery	1.9	2	0	0	0
% Loans to be Used for Land/Buildings	0.1	0.1	0	0	0
% Loan to be Backed by Real Estate	32.8	33.2	15.2	34.4	42.1
Total Sample Size (unweighted)	359	317	28	3	11

Source and Notes: See Table 6.1.

Table 6.3. Problems Firms Experienced During Preceding 12 Months - USA, 1993

	All	Non-minority	African-American	Hispanic	Other Races
Credit Market Conditions					
Percent reporting not a problem	66.2	67.3	43.1	58.9	65.8
Percent reporting somewhat of a problem	20.1	19.9	25.6	18.2	21.3
Percent reporting serious problem	13.7	12.7	31.3	22.9	12.9
Other Potential Problems (% reporting problem is serious)					
Training costs	6.5	6.6	7.2	6.3	4.3
Worker's compensation costs	21.7	21.0	19.3	30.6	28.7
Health insurance costs	32.5	31.6	38.1	44.3	35.0
IRS regulation or penalties	12.3	11.8	17.1	17.9	13.2
Environmental regulations	8.5	8.5	5.6	7.4	11.0
Americans with Disabilities Act	2.7	2.6	3.6	2.7	3.9
Occupational Safety and Health Act	4.5	4.5	3.9	3.6	6.2
Family and Medical Leave Act	2.7	2.5	4.5	3.1	4.8
Number of observations (unweighted)	2,007	1,648	170	96	93

Source: See Table 6.1.

Table 6.4. Problems Firms Experienced During Preceding 12 Months – ENC, 1993

	All	Non-minority	African-American	Hispanic	Other Races
Credit Market Conditions					
Percent reporting not a problem	71.9	73.1	45.6	65.8	64
Percent reporting somewhat of a problem	18.7	18.1	27.7	22.8	27.9
Percent reporting serious problem	9.4	8.8	26.7	11.4	8.1
Other Potential Problems (% reporting problem is serious)					
Training costs	6.5	6.5	9.9	7.6	0
Worker's compensation costs	16.2	16.4	17.8	3.8	15.3
Health insurance costs	30.8	30.3	38.3	44.2	31.3
IRS regulation or penalties	7.9	7.9	7.8	10.6	6.3
Environmental regulations	6	6.2	5.5	3.1	0
Americans with Disabilities Act	2.7	2.6	2.7	3.8	4
Occupational Safety and Health Act	3.4	3.1	4.6	0	13.3
Family and Medical Leave Act	1.8	1.7	5.7	7.6	0
Number of observations (unweighted)	748	625	74	17	32

Source: See Table 6.1.

Table 6.5. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months - USA, 1993

	All	Non-minority	African-American	Hispanic	Other Races
Credit availability	5.9	5.5	20.5	5.3	4.3
Health care, health insurance	21.1	22.1	12.3	13.7	14.8
Taxes, tax policy	5.7	5.7	2.6	8.7	3.3
General U.S. business conditions	11.8	11.5	8.9	14.4	17.4
High interest rates	5.4	5.7	1.8	3.5	3.4
Costs of conducting business	3.3	3.3	3.8	3.8	3.6
Labor force problems	3.5	3.3	3.9	5.5	3.6
Profits, cash flow, expansion, sales	10.3	9.9	20.3	9.8	11.9
Number of observations (unweighted)	4,388	3,383	424	262	319

Source: See Table 6.1.

Table 6.6. Percentage of Firms Reporting Most Important Issues Affecting Them Over the Next 12 Months – ENC, 1993

	All	Non-minority	African-American	Hispanic	Other Races
Credit availability	5.4	4.7	18.8	5.1	13.4
Health care, health insurance	20.8	21.5	13.3	9.0	8.3
Taxes, tax policy	5.4	5.4	3.3	5.1	6.7
General U.S. business conditions	10.7	10.6	10.0	30.1	6.6
High interest rates	5.0	4.9	0.0	3.2	14.8
Costs of conducting business	3.8	4.0	2.8	0.0	0.0
Labor force problems	4.3	4.3	4.5	5.1	2.4
Profits, cash flow, expansion, sales	12.9	12.5	23.0	9.4	15.7
Number of observations (unweighted)	705	591	74	14	26

Source: See Table 6.1.

Table 6.7. Types of Problems Facing Your Business, by Race and Gender – USA, 2005 (%)

	Non-minority male	Non-minority Female	Minority Male	Minority Female	African-American	Hispanic	Asian
Availability of credit	19	23	54	38	46	52	34
Rising health care costs	60	49	50	41	31	42	66
Excessive tax burden	49	46	48	42	46	34	51
Lack of qualified workers	37	28	33	17	22	20	34
Rising energy costs	37	35	36	35	29	34	44
Rising costs of materials	44	47	36	47	53	42	32
Legal reform	21	15	15	12	11	10	17
Number firms	415	356	80	81	55	50	41

Source: U.S. Chamber of Commerce (2005), Appendix tables, page 55, available at http://www.uschamber.com/publications/reports/access_to_capital.htm.

Note: Total percentages may be greater than 100% due to respondents having the option to select multiple choices. Minorities also include 14 firms owned by Native Americans.

Table 6.8. Determinants of Loan Denial Rates – USA, 1993

	(1)	(2)	(3)	(4)	(5)
African-American	0.443	0.288	0.237	0.235	0.241
	(11.21)	(6.84)	(5.57)	(5.22)	(5.13)
Asian	0.225	0.171	0.140	0.121	0.119
	(4.21)	(3.18)	(2.56)	(2.15)	(2.07)
Native American	-0.016	-0.141	-0.097	-0.052	-0.083
	(0.11)	(1.06)	(0.71)	(0.35)	(0.56)
Hispanic	0.129	0.070	0.067	0.035	0.031
	(2.62)	(1.42)	(1.36)	(0.70)	(0.63)
Non-minority Female	0.088	0.048	0.047	0.036	0.033
	(2.65)	(1.45)	(1.45)	(1.06)	(0.94)
Judgments		0.143	0.129	0.124	0.121
		(2.84)	(2.56)	(2.40)	(2.29)
Firm delinquent		0.176	0.178	0.195	0.208
		(6.50)	(6.43)	(6.77)	(7.00)
Personally delinquent		0.161	0.128	0.124	0.119
		(4.45)	(3.56)	(3.38)	(3.17)
Bankrupt past 7 yrs		0.208	0.179	0.162	0.167
		(3.11)	(2.68)	(2.37)	(2.33)
$1992 profits ($*10^8$)		-0.000	-0.000	-0.000	-0.000
		(0.89)	(1.64)	(1.78)	(1.83)
$1992 sales ($*10^8$)		-0.000	-0.000	-0.000	-0.000
		(3.08)	(3.38)	(3.28)	(3.38)
$1992 assets ($*10^8$)		0.000	0.000	0.000	0.000
		(0.51)	(0.60)	(0.40)	(0.37)
$1992 liabilities ($*10^8$)		0.000	0.000	0.000	0.000
		(0.61)	(1.11)	(1.04)	(1.17)
Owner years experience		-0.003	-0.001	-0.002	-0.002
		(2.59)	(1.30)	(1.55)	(1.72)
Owners' share of business		0.001	0.000	0.000	0.000
		(1.91)	(0.71)	(0.26)	(0.30)
Owner's Education (5 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (13 variables)	No	No	Yes	Yes	Yes
Region (8 indicator variables)	No	No	No	Yes	Yes
Industry (60 indicator variables)	No	No	No	Yes	Yes
Month /Year of Application (51 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (16 indicator vars.)	No	No	No	No	Yes
N	2,007	2,007	2,006	1,985	1,973
Pseudo R^2	.0608	.1412	.2276	.2539	.2725
Chi^2	143.6	333.4	537.3	595.4	635.8
Log likelihood	-1108.8	-1013.8	-911.6	-874.8	-848.7

Source: See Table 6.1.

Notes: Reported estimates are 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, legal form of organization (sole proprietorship, partnership, S-corporation, or C-corporation), 1990-1992 employment change, existing long run relation with lender, geographic scope of market (local, regional, national or international), the value of the firm's inventory, the level of wages and salaries paid to workers, the firm's cash holdings, and the value of land held by the firm. "Characteristics of the loan" include the size of the loan applied for, a variable indicating whether the loan was backed by real estate, and twelve variables indicating the intended use of the loan.

Table 6.9. Determinants of Loan Denial Rates – ENC Region, 1993

	(1)	(2)	(3)	(4)	(5)
African-American	0.441	0.288	0.237	0.235	0.241
	(10.15)	(6.28)	(5.14)	(4.83)	(4.77)
Asian	0.205	0.149	0.122	0.101	0.091
	(3.65)	(2.65)	(2.14)	(1.72)	(1.53)
Native American	0.029	-0.123	-0.083	-0.025	-0.059
	(.18)	(.84)	(.57)	(.15)	(.37)
Hispanic	0.129	0.071	0.067	0.043	0.041
	(2.57)	(1.42)	(1.33)	(.86)	(.79)
Non-minority Female	0.097	0.058	0.050	0.037	0.032
	(2.64)	(1.59)	(1.37)	(.97)	(.83)
African-American*ENC	0.007	-0.002	-0.003	0.002	-0.001
	(.08)	(.03)	(.04)	(.02)	(.01)
Asian/Pacific*ENC	0.135	0.170	0.105	0.176	0.251
	(.78)	(.97)	(.62)	(.98)	(1.3)
Native American*ENC	–	–	–	–	–
Hispanic*ENC	–	–	–	–	–
Non-minority Female*ENC	-0.041	-0.048	-0.012	-0.002	0.004
	(.53)	(.61)	(.15)	(.02)	(.05)
ENC region	-0.053	-0.044	-0.046	-0.064	-0.096
	(1.71)	(1.4)	(1.47)	(1.29)	(2)
Creditworthiness controls (4 variables)	No	Yes	Yes	Yes	Yes
Owner's Education (5 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (13 variables)	No	No	Yes	Yes	Yes
Region (7 indicator variables)	No	No	No	Yes	Yes
Industry (60 indicator variables)	No	No	No	Yes	Yes
Month /Year of Application (51 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (16 indicator vars.)	No	No	No	No	Yes
N	2,002	2,002	2,001	1,980	1,968
Pseudo R^2	0.0632	0.1431	0.2292	0.2543	0.2735
Chi^2	149.06	337.45	540.27	595.5	637.24
Log likelihood	-1104.4	-1010.2	-908.5	-873.1	-846.4

Source: See Table 6.1.

Note: Creditworthiness controls are those used in Table 6.8 above.

Table 6.10. Alternative Models of Loan Denials, 1993

Specification	African-American	African-American* ENC	Asian	Hispanic	Non-minority Female	Sample Size
All	0.237 (5.14)	-0.003 (.04)	0.122 (2.14)	0.067 (1.33)	0.050 (1.37)	2,001
Organization Type						
1) Proprietorships and Partnerships	0.262 (3.05)	0.027 (.15)	0.213 (1.86)	0.033 (.38)	0.034 (.47)	533
2) Corporations	0.210 (3.8)	-0.017 (.15)	0.099 (1.47)	0.070 (1.08)	0.047 (1.09)	1,455
Age of Firm						
3) 12 Years or Under	0.258 (3.91)	0.069 (.47)	0.210 (2.61)	0.029 (.36)	0.043 (.74)	1,069
4) Over 12 Years	0.229 (3.33)	-0.087 (.83)	-0.077 (1.03)	0.108 (1.55)	0.072 (1.36)	924
1993 Firm Size						
5) Fewer than 10 Employees	0.239 (3.71)	-0.001 (.01)	0.128 (1.49)	0.040 (.56)	0.003 (.06)	864
6) 10 or More Employees	0.199 (2.82)	0.147 (.82)	0.099 (1.21)	0.110 (1.39)	0.108 (2.01)	1,132
Intended Use of Loan						
7) Working Capital	0.274 (4.61)	-0.042 (.41)	0.049 (.68)	-0.007 (.12)	0.058 (1.13)	1,086
8) Other Use	0.149 (2.04)	0.118 (.57)	0.250 (2.66)	0.165 (2.04)	0.047 (.91)	912
Scope of Sales Market						
9) Local	0.214 (2.81)	-0.130 (1.2)	0.169 (2.13)	0.011 (.16)	0.052 (.97)	872
10) Regional, National, or international	0.188 (4.44)	0.205 (1.6)	0.030 (.57)	0.093 (1.74)	0.036 (1.12)	1,127
Creditworthiness						
11) No Past Problems	0.244 (4.15)	-0.041 (.41)	0.185 (3.06)	0.034 (.72)	0.069 (1.93)	1,383
12) One Past Problem	0.254 (2.34)	0.075 (.34)	-0.102 (.61)	0.190 (1.34)	0.007 (.07)	376
13) More Than One Problem	0.309 (2.91)	-0.033 (.11)	0.251 (1.65)	0.051 (.29)	-0.010 (.06)	231

Source: See Table 6.1.

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. Control for ENC also included.

Table 6.11. Models of Credit Card Use – USA, 1993

Specification	African-American	Asian	Native American	Hispanic	Non-minority Female	Sample Size
1) Business Credit Card	0.035 (1.35)	-0.096 (3.23)	0.085 (1.00)	0.024 (0.79)	0.018 (0.83)	4,633
2) Personal Credit Card	0.019 (0.74)	-0.019 (0.63)	0.019 (0.23)	-0.042 (1.40)	0.028 (1.28)	4,633

Source: See Table 6.1.

Notes: Reported estimates are 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.

Table 6.12. Models of Credit Card Use – ENC, 1993

Specification	African-American	Asian	Native American	Hispanic	Non-minority Female	Sample Size
1) Business Credit Card	0.042 (1.49)	-0.102 (3.31)	0.096 (1.08)	0.018 (.58)	0.026 (1.09)	4,633
2) Personal Credit Card	0.024 (.84)	-0.023 (.74)	0.036 (.41)	-0.058 (1.87)	0.019 (.78)	4,633

Source: See Table 6.1.

Notes: See Table 6.11. Control for ENC included.

Table 6.13. Models of Interest Rate Charged – USA, 1993

Specification	African-American	Asian	Native American	Hispanic	Non-minority Female	Sample Size
1) All loans (controls as in Column 5, Table 6.8)	1.034 (3.72)	0.413 (1.37)	-0.427 (0.63)	0.517 (1.97)	0.025 (0.14)	1,454
Creditworthiness						
2) No credit problems	1.187 (3.27)	0.485 (1.33)	0.910 (1.07)	0.435 (1.48)	0.129 (0.66)	1,137
Organization Type						
3) Proprietorships and Partnerships	1.735 (2.57)	0.826 (1.03)	2.589 (0.9)	1.008 (1.74)	-0.239 (0.53)	364
4) Corporations	0.660 (2.04)	0.359 (1.07)	-0.585 (0.86)	0.491 (1.53)	0.127 (0.66)	1,090
1993 Firm Size						
5) Fewer than 10 Employees	1.200 (2.58)	-0.247 (0.41)	-0.010 (0.01)	0.783 (1.75)	-0.311 (1.02)	574
6) 10 or More Employees	0.450 (1.15)	0.446 (1.21)	-0.197 (0.25)	0.515 (1.37)	0.164 (0.77)	880
Scope of Sales Market						
7) Local	0.751 (1.55)	-0.073 (0.13)	1.773 (1.12)	0.805 (2.05)	0.324 (1.08)	633
8) Regional, National, or International	1.544 (4.26)	1.185 (2.93)	-1.368 (1.85)	0.392 (0.96)	-0.163 (0.73)	821

Source: See Table 6.1.

Notes: Reported estimates are Ordinary Least Squares (OLS) coefficients, t-statistics in parentheses. Each line of this table represents a separate regression with all of the control variables as Column (5) of Table 6.8 (except where specified) as well as: an indicator variable for whether the loan request was for a fixed interest rate loan, the length of the loan, the size of the loan, whether the loan was guaranteed, whether the loan was secured by collateral, and 7 variables identifying the type of collateral used if the loan was secured. The sample consists of firms who had applied for a loan and had their application approved. 'No credit problems' means that neither the firm nor the owner had been delinquent on payments over 60 days, no judgments against the owner for the preceding 3 years and the owner had not been bankrupt in the preceding 7 years.

Table 6.14. Models of Interest Rate Charged – ENC, 1993

Specification	African-American	African-American * ENC	Asian	Native American	Hispanic	Non-minority Female	Sample Size
1) All loans (controls as in Column 5, Table 6.8)	0.763 (2.51)	1.576 (2.29)	0.446 (1.4)	-0.801 (1.02)	0.609 (2.26)	0.023 (.12)	1,454
Creditworthiness							
2) No credit problems	1.121 (2.8)	0.576 (.65)	0.550 (1.43)	0.539 (.56)	0.564 (1.87)	0.143 (.64)	1,137
Organization Type							
3) Proprietorships and Partnerships	1.786 (2.35)	0.735 (.49)	0.748 (.9)	2.008 (.7)	1.103 (1.92)	-0.276 (.57)	364
4) Corporations	0.423 (1.23)	1.684 (1.93)	0.413 (1.15)	-0.828 (1.13)	0.635 (1.93)	0.166 (.75)	1,090
1993 Firm Size							
5) Fewer than 10 Employees	0.728 (1.38)	1.925 (1.85)	-0.316 (.51)	-0.899 (.61)	0.801 (1.75)	-0.394 (1.2)	574
6) 10 or More Employees	0.467 (1.18)	0.168 (.11)	0.519 (1.37)	-0.437 (.48)	0.613 (1.63)	0.238 (.92)	880
Scope of Sales Market							
7) Local	0.486 (.88)	1.607 (1.57)	-0.133 (.23)	1.404 (.89)	0.971 (2.4)	0.329 (1.01)	633
8) Regional, National, or International	1.345 (3.51)	1.395 (1.27)	1.298 (3.05)	-1.844 (2.04)	0.493 (1.21)	-0.217 (.82)	821

Source: See Table 6.1.

Notes: See Table 6.13

Table 6.15. Racial Differences in Failing to Apply for Loans Fearing Denial, 1993

Specification	African-American	Asian	Native American	Hispanic	Non-minority Female
a) USA No Other Control Variables (n=4,637)	0.405 (16.65)	0.099 (3.61)	0.134 (1.72)	0.235 (8.28)	0.031 (1.54)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=4,633)	0.257 (10.02)	0.054 (1.98)	0.019 (.27)	0.164 (5.69)	-0.008 (.38)
b) ENC					
No Other Control Variables, except for ENC dummy and race*ENC interactions (n=4,637)	0.423 (16.25)	0.104 (3.54)	0.138 (1.76)	0.217 (7.21)	0.023 (1.07)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=4,633)	0.276 (9.99)	0.058 (1.99)	0.022 (.3)	0.153 (5.04)	-0.014 (.67)
c) Construction					
No Other Control Variables (n=781)	0.350 (6.74)	0.109 (1.27)	-0.087 (.54)	0.150 (2.22)	-0.007 (.12)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=781)	0.181 (3.67)	0.064 (.78)	-0.132 (1)	0.039 (.65)	-0.063 (1.32)

Source: See Table 6.1.

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

Table 6.16. Models of Failure to Obtain Credit Among Firms that Desired Additional Credit, 1993

Specification	African-American	Asian	Native American	Hispanic	Non-minority Female
a) USA No Other Control Variables (n=2,647)	0.455 (14.85)	0.299 (6.83)	0.188 (1.57)	0.297 (7.77)	0.126 (4.01)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=2,644)	0.276 (6.93)	0.180 (3.42)	-0.009 (.06)	0.165 (3.51)	0.049 (1.38)
b) ENC					
No Other Control Variables (n=2,647)	0.449 (13.29)	0.278 (5.96)	0.209 (1.58)	0.275 (6.88)	0.122 (3.5)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=2,644)	0.269 (6.17)	0.157 (2.84)	0.011 (.07)	0.141 (2.88)	0.037 (.95)
c) Construction					
No Other Control Variables (n=463)	0.413 (6.12)	0.196 (1.46)	0.128 (.36)	0.255 (2.71)	0.043 (.51)
Full Set of Control Variables (same as Table 6.8, Column 3 except for loan characteristics) (n=463)	0.051 (2.86)	0.015 (.53)	-0.015 (.41)	0.019 (1)	-0.010 (1.04)

Source: See Table 6.1.

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 did not apply for fear of refusal. Failure to obtain credit includes those firms that were denied and those that did not apply for fear of refusal. Dependent variable is unity if the firm failed to obtain credit and zero if the firm applied for credit and had their loan application approved.

Table 6.17. Most Important Problem Facing Your Business Today – USA, 1998

	Non-minority male	African-American	Other	Hispanic	Non-minority Female	Total
Financing and interest rates	5.8%	18.2%	10.6%	8.1%	6.2%	6.8%
Taxes	7.7%	1.9%	5.3%	3.1%	6.6%	6.9%
Inflation	0.4%	0.6%	0.0%	1.0%	0.4%	0.4%
Poor sales	7.0%	5.9%	11.6%	7.0%	8.3%	7.5%
Cost/availability of labor	3.9%	3.3%	2.4%	3.5%	4.5%	3.9%
Government regulations/red tape	7.1%	3.0%	4.8%	8.1%	6.5%	6.8%
Competition (from larger firms)	11.1%	10.7%	10.6%	18.4%	10.2%	11.3%
Quality of labor	14.4%	11.0%	9.4%	8.7%	9.1%	12.6%
Cost and availability of insurance	2.6%	1.0%	0.8%	0.0%	2.3%	2.2%
Other	11.4%	10.0%	8.3%	16.0%	12.7%	11.7%
Cash flow	4.6%	10.9%	6.3%	3.5%	3.3%	4.6%
Capital other than working capital	1.1%	1.7%	4.1%	0.8%	1.3%	1.3%
Acquiring and retaining new customers	3.1%	3.9%	5.0%	1.8%	3.3%	3.2%
Growth of firm/industry	0.9%	1.0%	1.2%	0.1%	0.4%	0.8%
Overcapacity of firm/industry	0.1%	0.0%	0.0%	0.3%	0.0%	0.1%
Marketing/advertising	2.1%	3.9%	2.5%	2.8%	3.6%	2.5%
Technology	1.4%	1.2%	1.6%	2.6%	1.3%	1.5%
Costs, other than labor	2.7%	1.8%	2.5%	3.6%	3.8%	2.9%
Seasonal/cyclical issues	1.3%	1.2%	0.7%	0.4%	0.7%	1.1%
Bill collection	2.8%	2.2%	2.4%	2.6%	2.8%	2.8%
Too much work/not enough time	3.6%	2.2%	4.3%	1.4%	5.7%	3.9%
No problems	4.6%	4.3%	5.6%	5.8%	6.4%	5.1%
Not ascertainable	0.4%	0.0%	0.0%	0.0%	0.7%	0.4%

Source: NERA calculations from the 1998 SSBF (n=3561).

Notes: Results are weighted.

Table 6.18. Determinants of Loan Denial Rates - USA, 1998

	(1)	(2)	(3)	(4)	(5)
African-American	0.422	0.254	0.217	0.192	0.218
	(7.94)	(5.36)	(5.05)	(4.52)	(4.74)
Asian	0.148	0.129	0.049	0.023	0.028
	(2.54)	(2.52)	(1.25)	(0.65)	(0.77)
Hispanic	0.353	0.269	0.211	0.183	0.171
	(6.44)	(5.37)	(4.69)	(4.21)	(4.00)
Non-minority Female	0.087	0.049	0.024	0.016	0.011
	(2.22)	(1.55)	(0.96)	(0.66)	(0.44)
Judgments		0.272	0.249	0.272	0.262
		(4.28)	(4.32)	(4.47)	(4.20)
Firm delinquent		0.081	0.115	0.103	0.111
		(2.88)	(4.20)	(3.88)	(4.01)
Personally delinquent		0.092	0.039	0.042	0.045
		(2.85)	(1.59)	(1.69)	(1.76)
Bankrupt past 7 yrs		0.504	0.406	0.392	0.395
		(4.48)	(3.83)	(3.67)	(3.64)
$1998 sales (*$10^8$)		-0.000	-0.000	0.000	0.000
		(2.47)	(0.26)	(0.02)	(0.03)
$1998 firm equity (*$10^8$)		0.000	0.000	0.000	0.000
		(1.40)	(0.46)	(0.20)	(0.06)
Owner home equity (*10^8)		0.000	0.000	0.000	0.000
		(0.52)	(1.47)	(0.96)	(0.90)
Owner net worth (*10^8)		-0.000	-0.000	-0.000	-0.000
		(1.25)	(1.28)	(1.19)	(1.24)
Owner years experience		-0.002	-0.001	-0.000	-0.000
		(1.42)	(0.49)	(0.34)	(0.21)
Owners' share of business		0.000	-0.000	0.000	-0.000
		(0.75)	(0.12)	(0.03)	(0.33)
Dun & Bradstreet credit ratings (4)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Region (8 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	924	924	924	924	905
Pseudo R^2	.1061	.2842	.3714	.3910	.4015
Chi^2	90.0	241.1	315.1	331.8	337.8
Log likelihood	-379.3	-303.7	-266.7	-258.3	-251.7

Source: See Table 6.17.

Notes: Reported estimates are derivatives from Probit models, t-Statistics are in parentheses. "Other firm characteristics" include variables indicating whether the firm had a line of credit, 1998 full time equivalent employment, firm age, metropolitan area, legal form of organization (sole proprietorship, partnership, LLP, S-corporation, C-corporation, or LLC), existing long run relation with lender, geographic scope of market (regional, national, foreign, or international), the value of the firm's inventory, the firm's cash holdings, and the value of land held by the firm. "Characteristics of the loan" includes the size of the loan applied for.

Table 6.19. Determinants of Loan Denial Rates – ENC, 1998

	(1)	(2)	(3)	(4)	(5)
African-American	0.406	0.243	0.205	0.189	0.214
	(7.35)	(4.98)	(4.67)	(4.26)	(4.48)
Asian	0.155	0.124	0.045	0.025	0.031
	(2.57)	(2.4)	(1.17)	(.7)	(.82)
Hispanic	0.344	0.257	0.206	0.193	0.181
	(6.2)	(5.09)	(4.51)	(4.27)	(4.07)
Non-minority Female	0.079	0.042	0.018	0.016	0.010
	(1.97)	(1.3)	(.7)	(.63)	(.39)
African-American*ENC	0.082	0.000	0.017	0.016	0.029
	(.53)	(0)	(.17)	(.17)	(.27)
Asian*ENC					
Hispanic*ENC					
Non-minority Female*ENC	0.017	0.000	0.023	0.020	0.030
	(.11)	(0)	(.19)	(.17)	(.23)
ENC region	-0.057	-0.053	-0.039	-0.047	-0.046
	(1.25)	(1.5)	(1.41)	(1.27)	(1.24)
Creditworthiness Controls (8 variables)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Region (7 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	919	919	919	919	900
Pseudo R^2	0.1099	0.2892	0.3757	0.3912	0.4021
Chi^2	93.04	244.81	318.1	331.23	337.46
Log likelihood	-376.8	-300.9	-264.3	-257.7	-250.9

Source: See Table 6.17.

Notes: t-statistics in parentheses. Other creditworthiness controls are the 4 other variables included in Column (2) of Table 6.18.

Table 6.20. More Loan Denial Probabilities, 1998

	(1)	(2)	(3)	(4)
	Denylast	*Denylast*	*Denylast*	*Denylast*
African-American	0.457 (8)	0.246 (4.76)	0.447 (7.47)	0.257 (4.63)
Asian	0.185 (2.81)	0.027 (.65)	0.200 (2.9)	0.031 (.72)
Hispanic	0.360 (6.28)	0.171 (3.67)	0.353 (6.06)	0.182 (3.75)
Non-minority Female	0.083 (2)	0.005 (.2)	0.076 (1.79)	0.006 (.2)
African-American*ENC			0.043 (.28)	-0.037 (.47)
Asian*ENC				
Hispanic*ENC				
Non-minority Female*ENC			0.008 (.05)	0.025 (.2)
ENC			-0.058 (1.17)	-0.041 (.88)
Creditworthiness Controls	No	Yes	No	Yes
Owner's Education	No	Yes	No	Yes
Other Firm Characteristics	No	Yes	No	Yes
Characteristics of the loan	No	Yes	No	Yes
Region	No	Yes	No	Yes
Industry	No	Yes	No	Yes
N	846	846	841	841
Pseudo R^2	0.1112	0.4265	0.1155	0.4265
Chi^2	90.94	348.71	94.17	347.85
Log likelihood	-363.3	-234.5	-360.7	-233.8

Source: See Table 6.17.

Table 6.21. Models of Interest Rate Charged, 1998

Specification	African-American	African-American * ENC	African-American * Construction	Asian	Hispanic	Non-minority Female
1a) All Loans (as in Column 5 of Table 6.18) n=765	1.064 (2.66)	_	_	0.559 (1.49)	-0.088 (.23)	-0.501 (1.93)
1b) All Loans (as in Column 5 of Table 6.18) n=765	1.234 (2.69)	-2.199 (1.53)	0.173 (.17)	0.576 (1.31)	0.136 (.3)	-0.302 (1.06)
1c) All Loans (as in Column 5 of Table 6.18), ENC only n=103	-1.708 (1.05)	_	_	-1.530 (1.09)	5.768 (2.44)	-0.963 (.8)

Source: See Table 6.17.

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

Table 6.22. Racial Differences in Failing to Apply for Loans Fearing Denial, 1998

Specification	African-American	Asian	Hispanic	Non-minority Female
a) U.S.				
No Other Control Variables (n=3,448)	0.353 (11.9)	0.046 (1.48)	0.173 (5.77)	0.051 (2.55)
Full Set of Control Variables (n=3,448)	0.208 (7.04)	-0.012 (.43)	0.052 (1.87)	0.011 (.59)
b) ENC region				
No Other Control Variables (n=467)	0.252 (3.05)	0.018 (.21)	0.342 (2.16)	-0.003 (.05)
Full Set of Control Variables (n=464)	0.015 (.59)	0.018 (.6)	0.059 (.93)	0.009 (.51)
c) Construction				
No Other Control Variables (n=613)	0.371 (5.06)	0.117 (1.43)	0.020 (.26)	0.122 (2.08)
Full Set of Control Variables (n=609)	0.273 (3.69)	0.099 (1.32)	-0.062 (1.13)	0.038 (.74)

Source: See Table 6.17.

Note: Reported estimates are Probit derivatives with t-statistics in parentheses. Full set of control variables as in Column (5) of Table 6.18, except for loan amount, year of application, and type of lender.

Table 6.23. Models of Credit Card Use, 1998

Specification	African-American	Asian	Hispanic	Non-minority Female	Sample Size
1) Business Credit Card	-0.001 (.02)	-0.038 (1)	-0.014 (.38)	-0.018 (.72)	3,561
2) Personal Credit Card	-0.018 (.54)	0.016 (.44)	-0.050 (1.42)	0.012 (.52)	3,561
3) Business Credit Card ENC	-0.140 (1.21)	-0.078 (.64)	0.205 (.98)	-0.005 (.06)	485
4) Personal Credit Card ENC	0.105 (.92)	0.077 (.65)	-0.088 (.45)	-0.037 (.5)	485
3) Business Credit Card Construction & related	0.056 (.62)	-0.074 (.7)	0.087 (.86)	-0.025 (.35)	624
4) Personal Credit Card Construction & related	0.003 (.04)	0.047 (.46)	-0.092 (1.01)	-0.073 (.99)	624

Source: See Table 6.17.

Notes: Each line of this table represents a separate regression with the same control variables as Column (5) of Table 6.18, except for loan amount, year of application and type of lender. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size includes all firms. Reported estimates are Probit derivatives with t-statistics in parentheses.

Table 6.24. Most Important Problem Facing Your Business Today – USA, 2003

	Non-minority male	African-American	Other	Hispanic	Non-minority Female	Total
Financing and interest rates	5.4%	20.7%	9.1%	5.7%	5.8%	6.3%
Taxes	6.3%	2.4%	4.9%	7.7%	4.3%	5.7%
Inflation	2.7%	1.0%	2.3%	0.5%	1.4%	2.3%
Poor sales	17.8%	38.5%	28.9%	30.0%	22.5%	20.6%
Cost/availability of labor	1.5%	0.0%	0.6%	1.5%	1.5%	1.4%
Government regulations/red tape	4.7%	1.0%	5.4%	9.6%	2.5%	4.5%
Competition (from larger firms)	4.0%	2.7%	2.7%	3.6%	3.6%	3.8%
Quality of labor	7.9%	6.9%	5.0%	3.8%	6.5%	7.2%
Cost and availability of insurance	10.3%	1.8%	3.1%	5.2%	6.4%	8.6%
Other	2.6%	1.9%	4.0%	2.8%	1.6%	2.5%
Cash flow	5.3%	3.4%	9.4%	4.1%	8.6%	6.0%
Capital other than working capital	6.2%	5.1%	4.6%	7.1%	6.8%	6.3%
Acquiring and retaining new customers	0.9%	2.7%	0.4%	1.1%	0.8%	1.0%
Growth of firm/industry	1.3%	0.0%	1.0%	0.1%	0.7%	1.0%
Overcapacity of firm/industry	1.6%	0.8%	1.8%	0.1%	1.1%	1.4%
Marketing/advertising	0.8%	0.8%	0.6%	1.6%	1.2%	0.9%
Technology	1.2%	2.2%	0.2%	0.0%	1.3%	1.1%
Costs, other than labor	4.2%	2.5%	4.3%	1.0%	6.1%	4.4%
Seasonal/cyclical issues	1.4%	0.7%	1.6%	2.3%	2.0%	1.6%
Bill collection	2.2%	1.8%	2.4%	1.8%	3.3%	2.4%
Too much work/not enough time	4.9%	1.9%	4.0%	2.3%	6.2%	4.8%
No problems	1.5%	0.0%	0.7%	0.8%	1.4%	1.4%
Costs, other than labor	1.5%	0.0%	0.7%	3.7%	1.2%	1.4%
Seasonal/cyclical issues	2.2%	1.0%	0.1%	3.6%	1.0%	1.9%
Bill collection	0.3%	0.0%	0.0%	0.0%	0.8%	0.4%
Too much work/not enough time	0.4%	0.0%	0.7%	0.0%	0.5%	0.4%
No problems	0.3%	0.4%	0.0%	0.0%	0.4%	0.3%
Not ascertainable	0.2%	0.0%	1.3%	0.0%	0.5%	0.3%

Source: NERA calculations from the 2003 SSBF (n=4072).

Note: Results are weighted.

Table 6.25. Determinants of Loan Denial Rates - USA, 2003

	(1)	(2)	(3)	(4)	(5)
African-American	0.459	0.136	0.105	0.091	0.094
	(8.38)	(5.47)	(4.80)	(5.04)	(4.95)
Asian	0.055	0.020	0.009	0.002	0.001
	(1.51)	(1.59)	(1.01)	(0.49)	(0.18)
Hispanic	0.067	0.008	0.004	0.001	0.001
	(1.74)	(0.83)	(0.58)	(0.30)	(0.25)
Native American and Other	0.184	0.061	0.032	0.021	0.021
	(2.22)	(1.95)	(1.47)	(1.43)	(1.49)
Non-minority Female	0.043	0.003	0.002	0.001	0.002
	(2.17)	(0.70)	(0.49)	(0.57)	(0.76)
Judgments against owner		0.007	0.003	0.003	0.006
		(0.66)	(0.35)	(0.54)	(0.90)
Judgments against firm		0.005	0.005	0.001	0.001
		(1.16)	(1.42)	(0.54)	(0.64)
Firm delinquent		0.032	0.021	0.019	0.021
		(3.78)	(3.23)	(3.89)	(4.08)
Personally delinquent		-0.007	-0.006	-0.003	-0.002
		(0.69)	(1.02)	(0.82)	(0.58)
Owner Bankrupt past 7 yrs		0.046	0.041	0.052	0.044
		(1.36)	(1.35)	(1.81)	(1.66)
Firm Bankrupt past 7 yrs		0.000	0.003	0.001	-0.001
		(0.03)	(0.37)	(0.17)	(0.38)
$1998 sales (*$10^8$)		-0.000	0.000	0.000	0.000
		(1.68)	(0.04)	(0.29)	(0.51)
$1998 firm equity (*$10^8$)		-0.000	-0.000	-0.000	-0.000
		(2.23)	(1.03)	(1.62)	(1.63)
Owner home equity (*10^8)		0.000	0.000	-0.000	-0.000
		(0.28)	(0.02)	(0.45)	(0.26)
Owner net worth (*10^8)		-0.000	-0.000	-0.000	-0.000
		(2.97)	(2.92)	(3.06)	(3.26)
Owner years experience		0.000	0.000	0.000	0.000
		(0.31)	(1.00)	(0.82)	(0.62)
Owners' share of business		0.000	0.000	0.000	0.000
		(0.08)	(0.61)	(0.38)	(0.47)
Dun & Bradstreet credit ratings (4)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Region (8 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	1,664	1,655	1,655	1,655	1,605
Pseudo R^2	.0850	.2267	.2901	.3336	.3681
Chi^2	74.1	192.9	246.8	283.8	310.3
Log likelihood	-399.1	-328.9	-301.9	-283.4	-266.4

Source: See Table 6.24. Notes: "Other firm characteristics" include variables indicating whether the firm had a line of credit, 2003 total employment, firm age, metropolitan area, legal form of organization (sole proprietorship, partnership, LLP, S-corporation, C-corporation, or LLC), existing long run relation with lender, geographic scope of market (local, regional, national, foreign, or international), the value of the firm's inventory, the firm's cash holdings, the value of land held by the firm, and total salaries and wages paid. "Characteristics of the loan" includes the size of the loan applied for.

Table 6.26. Determinants of Loan Denial Rates – ENC, 2003

	(1)	(2)	(3)	(4)	(5)
African-American	0.522	0.174	0.134	0.122	0.126
	(8.45)	(5.66)	(4.92)	(5.23)	(5.13)
Asian	0.071	0.022	0.011	0.003	0.001
	(1.79)	(1.7)	(1.14)	(.68)	(.34)
Hispanic	0.090	0.014	0.009	0.004	0.003
	(2.08)	(1.25)	(1.04)	(.82)	(.74)
Native and Other	0.187	0.062	0.034	0.024	0.022
	(2.22)	(2.01)	(1.55)	(1.55)	(1.59)
Non-minority Female	0.061	0.006	0.004	0.003	0.003
	(2.74)	(1.19)	(.95)	(1.13)	(1.33)
African-American*ENC	-0.063	-0.011	-0.008	-0.004	-0.003
	(1.92)	(1.68)	(1.44)	(1.58)	(1.51)
Asian*ENC	–	–	–	–	–
Hispanic-Other*ENC	–	–	–	–	–
Native-Other*ENC	–	–	–	–	–
Non-minority Female*ENC					
ENC region	0.004	-0.000	0.000	-0.001	-0.002
	(.19)	(.09)	(.03)	(.2)	(.58)
Creditworthiness (4 variables)	No	Yes	Yes	Yes	Yes
Dun & Bradstreet credit ratings (4 variables)	No	Yes	Yes	Yes	Yes
Balance Sheet (4 indicator variables)	No	Yes	Yes	Yes	Yes
Owner Experience (1 indicator variable)	No	Yes	Yes	Yes	Yes
Owner's Share of Business (1 indicator variable)	No	Yes	Yes	Yes	Yes
Owner's Education (6 indicator variables)	No	Yes	Yes	Yes	Yes
Other Firm Characteristics (17 variables)	No	No	Yes	Yes	Yes
Characteristics of the Loan (1 variable)	No	No	Yes	Yes	Yes
Region (7 indicator variables)	No	No	No	Yes	Yes
Industry (8 indicator variables)	No	No	No	Yes	Yes
Year of Application (5 indicator variables)	No	No	No	No	Yes
Type of Financial Institution (11 indicator vars.)	No	No	No	No	Yes
N	1,618	1,609	1,609	1,609	1,559
Pseudo R^2	0.0939	0.2344	0.2966	0.3389	0.3736
Chi^2	81.27	197.8	250.24	285.9	312.32
Log likelihood	-392	-323	-296.7	-278.9	-261.8

Source: See Table 6.24.

Notes: t-statistics in parentheses. Creditworthiness controls include presence of legal judgments against the firm during the previous 3 years, more than 60 days delinquent on any personal obligations the firm's owner during the previous 3 years, more than 60 days delinquent on any business obligations the firm during the previous 3 years, and declaration of owner of firm bankruptcy during the previous 7 years. Balance sheet variables include firm sales in 1998, firm equity in 1998, owner's home equity in 1998, and owner's personal net worth (exclusive of firm equity and home equity) in 1998. For other variables, see notes for Table 6.25.

Table 6.27. Models of Interest Rate Charged, 2003

Specification	African-American	Asian	Hispanic	Native and Other	Non-minority Female
1a) All Loans (as in Column 5 of Table 6.25) n=1,537, US	1.043 (2.01)	0.445 (1.24)	1.006 (2.76)	0.263 (.35)	-0.142 (.72)
1b) All Loans (as in Column 5 of Table 6.26) n=1,537, ENC	1.248 (1.85)	0.464 (1.07)	1.647 (3.49)	0.521 (.56)	-0.113 (.49)

Source: See Table 6.24.

Notes: Each line of this table represents a separate regression with all of the control variables as indicated. Additionally, controls were included for whether the loan required a co-signer or guarantor, whether collateral was required and, if so, the type of collateral required. The sample consists of firms who had applied for a loan and had their application approved.

Table 6.28. Models of Credit Card Use, 2003

Specification	African-American	Asian	Hispanic	Native American and Other	Non-minority Female	Sample Size
1) Business Credit Card	-0.060 (1.13)	0.040 (.91)	0.004 (.08)	-0.001 (.01)	0.002 (.07)	3,676
2) Personal Credit Card	-0.132 (2.68)	0.036 (.84)	-0.080 (1.77)	-0.040 (.48)	0.036 (1.56)	3,676
3) Business Credit Card, ENC	0.211 (1.44)	-0.034 (.2)	0.105 (.75)	–	-0.127 (.44)	557
4) Personal Credit Card, ENC	-0.220 (1.55)	0.111 (.76)	-0.004 (.03)	-0.092 (.39)	0.101 (1.55)	562

Source: See Table 6.24.

Notes: Each line of this table represents a separate regression with the same control variables as Column (5) of Table 6.27, except for loan amount, year of application, and type of lender. The dependent variable indicates whether the firm used business or personal credit cards to finance business expenses. In all specifications, the sample size is all firms. Reported estimates are Probit derivatives with t-statistics in parentheses.

Table 6.29. Racial Differences in Failing to Apply for Loans Fearing Denial, 2003

Specification	African-American	Asian	Hispanic	Native American and Other	Non-minority Female
a) U.S.					
No Other Control Variables (n=3,704)	0.385 (9.48)	0.059 (1.95)	0.138 (4.01)	0.138 (2.14)	0.072 (4.47)
Full Set of Control Variables (n=3,676)	0.166 (4.73)	0.038 (1.4)	0.050 (1.82)	0.052 (1.01)	0.035 (2.46)
b) ENC region					
No Other Control Variables (n=3,704)	0.392 (9.11)	0.061 (1.94)	0.150 (4.14)	0.128 (1.9)	0.060 (3.5)
Full Set of Control Variables (n=3,676)	0.170 (4.55)	0.037 (1.33)	0.061 (2.09)	0.049 (.93)	0.026 (1.73)
c) Construction					
No Other Control Variables (n=705)	0.492 (4.34)	-0.022 (.29)	0.090 (1.22)	0.258 (2.17)	0.026 (.64)
Full Set of Control Variables (n=695)	0.303 (3.16)	0.002 (.04)	-0.009 (.34)	0.137 (1.65)	-0.002 (.11)

Source: See Table 6.24.

Note: Reported estimates are Probit derivatives with t-statistics in parentheses. Full set of control variables as in Column (5) of Table 6.25, except for loan amount, year of application, and type of lender. In Panel (b), interaction terms between race, sex, and SATL were all insignificant, with the exception of the interaction between white female and SATL in the model with no other controls.

Table 6.30. Determinants of Loan Denial Rates – Nine Jurisdictions

	(1)	**(2)**
	Most Recent Application	*Last Three Years*
African-American	0.289 (8.2)	0.293 (7.60)
Hispanic	0.178 (3.86)	0.244 (4.59)
Native American	0.087 (1.69)	0.188 (3.29)
Asian	0.042 (0.72)	0.003 (0.05)
Other race	0.313 (3.07)	0.364 (3.15)
Non-minority female	0.046 (1.83)	0.086 (2.96)
Judgments	0.051 (1.23)	0.119 (2.24)
Firm delinquent	0.022 (2.7)	0.057 (5.90)
Personally delinquent	0.076 (7.38)	0.077 (6.03)
Bankrupt past 3yrs	0.228 (3.99)	0.328 (4.74)
N	1,855	1,855
Pseudo R^2	.1905	.1721
Chi^2	336.0	363.3

Source: NERA Credit Market Surveys, 1999-2007.

Notes: Reported estimates are derivatives from Probit models, t-statistics are in parentheses. Indicator variables are also included for the various jurisdictions.

Table 6.31. Determinants of Interest Rates – Nine Jurisdictions

	(1)	(2)
African-American	1.683 (3.44)	1.491 (2.98)
Asian	1.221 (2.16)	0.789 (1.34)
Hispanic	0.820 (1.48)	0.895 (1.56)
Native American	1.241 (1.52)	1.008 (1.24)
Other race	-1.115 (0.63)	-1.072 (0.61)
Non-minority female	0.046 (0.16)	0.018 (0.06)
Judgments		0.537 (0.85)
Firm delinquent		-0.041 (0.36)
Personally delinquent		0.644 (3.65)
Bankrupt past 3yrs		1.184 (1.13)
Creditworthiness, Firm, and Owner Characteristics	No	Yes
Loan Characteristics	Yes	Yes
N	1,490	1,463
Adjusted R^2	.0831	.1046
F	11.4	11.05

Source: See Table 6.30.

Notes: Reported estimates are OLS regression models, t-statistics are in parentheses. Source: NERA Credit Market Surveys, 1999-2007. Five indicators for primary owner's education level, four indicators for legal form of organization, loan amount applied for, loan amount granted, and month and year of loan application. Seven additional indicators for jurisdiction are also included.

VII.   Cook County's Revised Minority- and Women-Owned Business Enterprise Construction Program

In this Chapter, we summarize business owners' experiences with Cook County's revised Minority- and Women-Owned Business Enterprise Construction Program. These comments provide guidance to the County as it considers additional improvements and modifications to its Program

A.   History of Cook County's Revised Minority- and Women-Owned Business Enterprise Program

In 1988, the County established an affirmative action program to ensure the full and equitable participation of minority- and women-owned businesses in the County's procurement process as both prime contractors and subcontractors. To meet the constitutional requirement of the *Croson* decision, the Board commissioned a Predicate Study of the Program in approximately 1992 ("1992 Study"). The 1992 Study was conducted by the law firm of Vedder, Price, Kaufman & Kammholz, working with other outside consultants. In addition to findings regarding M/WBE participation in County contracts, the 1992 Study also made recommendations of then existing County practices to increase opportunities for M/WBE participation and to comply with legal requirements.

The 1992 Study reviewed the County's purchasing and contract awards procedures and described past M/WBE participation in County contracts from 1988-1992. The consultants also complied documentation on historical discrimination in the local economy, including review of other local jurisdictions' studies, surveys of M/WBEs by local M/WBE organizations and interviews with M/WBEs and representatives of community and business organizations.

Based upon these sources of information, the 1992 Study found that there had been pervasive historical discrimination against M/WBEs in the Chicago area economy. It also concluded that certain aspects of the County's procurement practices, as well as actions by the County's prime contractors, posed significant barriers to M/WBE participation on County contracts.

While M/WBE participation had increased substantially since the 1970s, when these firms received no County awards, utilization remained below that of other local governments and estimated M/WBE availability. By 1992, MBEs received 20 percent and WBEs 8.5 percent of competitively bid contracts over $5.000. Nevertheless, M/WBEs continued to be at a competitive disadvantage in seeking County contracts because of the continuing effects of historical discrimination, resulting in their underutilization on County contracts, especially as prime contractors.

Long-standing and persistent underrepresentation of M/WBEs in public contracts was documented in the 1992 Study. This was especially true in the construction industry, as

indicated by the low levels of utilization of governments such as the Water Reclamation District of Greater Chicago (WRDGC), the Chicago Park District and the Chicago Board of Education. Studies conducted for the City of Chicago in the middle 1980s revealed similar patterns for City procurement.

These statistical data were corroborated by anecdotal information from minority and women business owners in surveys and focus groups conducted by other consultants in the Chicago area and in hearings before the City, WRDGC and the Park District. The most common discriminatory practices cited were:

- Inadequate notice of public bidding opportunities.

- Exclusionary bid specifications.

- Exclusion from the "old boys" network of established relationships between majority male prime contractors and subcontractors.

- Inability to obtain private sector work.

- Price and delivery discrimination by suppliers.

- Discrimination in the ability to obtain surety bonding, contract financing and insurance for larger projects.

Next, using the percentage of M/WBEs on the City of Chicago's vendor lists as the measure of their availability, the consultants found that such firms were underutilized on County contracts from 1988-1991. Further, a large portion of M/WBEs' participation on County contracts resulted from a few relatively large contracts. For example, 52 percent of MBE participation in 1990 was the result on one MBE joint venture on one construction contract. Moreover, what M/WBE participation was reported was not entirely reliable, since many MBEs were self-certified and work was sometimes passed through to non-M/WBEs.

The consultants concluded that voluntary and hortatory methods were insufficient to overcome the identified discrimination. M/WBEs continued to be at a competitive disadvantage in seeking County contracts and subcontracts because of the continuing effect of historical discrimination. They concluded that there was substantial evidence supporting the enactment of a M/WBE ordinance with overall goals of 30 percent MBE participation and 10 percent WBE participation in County contracts. Based on 1992 Study, the ordinance was amended in 1993 to add construction contracts.

No follow up disparity study or Report update was conducted. In addition, the County did not employ any race and gender-neutral measures such as unbundling contracts, prompt payment requirements, bonding and financing assistance to small contractors, etc., to reduce its reliance upon the setaside requirements.

Cook County's Revised Minority- and Women-Owned Business Enterprise Construction Program

The County made strides towards achieving the 30 percent MBE and 10 percent WBE goals. From 1995-2000, M/WBE subcontract awards totaled 23.4 percent, distributed as follows:

- Blacks received 5.1 percent;

- Hispanics received 8.4 percent;

- Asians received .06 percent; and

- White females received 9.3 percent.[222]

In 1996, the Builders Association of Greater Chicago challenged the County's ordinance. In 2000, after a three week bench trial, the court held that the County had failed to establish by strong evidence that it had a compelling interest in its Program and that the Program was narrowly tailored.[223]

Rather than present reports from experts in economics, statistics and M/WBE program issues, the County instead relied upon the anecdotal testimony of M/WBEs and others. Those witnesses testified that prime bidders on County jobs rarely or never used them on jobs without M/WBE goals. The plaintiff presented majority male-owned firms that testified that they used less qualified M/WBEs only to satisfy the County's quota, and that they often were forced to subcontract work that they would otherwise have preferred to perform with their own forces. BAGC also presented the opinions of Professor George LaNoue, a political scientist, that the County lacked adequate statistical proof of discrimination and of M/WBE availability, and that the waiver provision was essentially a sham.

The judge held that the County failed to prove that any barriers to bidding subcontract work were the result of discrimination rather than the fact that M/WBEs tend to be newer and smaller firms. Lacking any statistical evidence, the anecdotal testimony was not the type of "strong evidence" necessary to meet strict scrutiny. Further, "the evidence provides no governmental justification for the minority and female quotas of 30 percent and 10 percent of the total value of every county contract. The record is bare of any suggestion that the quotas are based on a 'plausible lower-bound estimate' of a shortfall in minority representation that is caused by past discrimination."[224]

The County appealed, and the U.S. Court of Appeals for the Seventh Circuit affirmed.[225] In a quirky opinion, Judge Richard Posner rejected the government's position that prime

---

[222] "Review of Compelling Evidence of Discrimination Against Minority-and Women-Owned Business Enterprise in the Chicago Area Construction Industry and Recommendations for Narrowly tailored Remedies for Cook County, Illinois" ("2006 Report"), Colette Holt & Associates, July 2006.

[223] *Builders Association of Greater Chicago v. County of Cook*, 123 F.Supp.2d 1087 (N.D. Ill. 2000).

[224] *BAGC v. Cook County,* 123 F.Supp.2d at 1116.

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

contractors' greater solicitation of M/WBEs on goals projects proved discrimination. "Since the ordinance requires prime contractors on public projects to reserve a substantial portion of the subcontractors for minority contractors, but is inapplicable to private projects, it is only to be expected that there would be more soliciting of these contractors on public than on private projects."[226] There was also no evidence of the County's passive participation in prime contractors' discrimination. Further, the Program was not narrowly tailored. Although the County's briefs failed to discuss the narrow tailoring requirement, the court proceeded to opine that the "County's laundry list of favored minorities" made the ordinance overinclusive.[227] There was no effort to establish that, but for discrimination, the availability of MBEs would be 30 percent and the availability of WBEs would be 10 percent. Lacking an availability or any other statistical analysis, the disparity between M/WBE utilization on County projects and on private projects was insufficient to prove discrimination.

To comply with the permanent injunction, the County ceased setting M/WBE goals on County construction projects in early 2001. For contracts for which prime contractor and subcontractor data were available,[228] the drop off was immediate and drastic. From 2003-2005, M/WBE subcontract awards totaled 3.3 percent, distributed as follows:

- Blacks received 1.1 percent;

- Hispanics received 0.3 percent;

- Asians received 0.0 percent; and

- White females received 1.9 percent.[229]

Based on this drop in M/WBE subcontractor utilization to levels below what might be expected in an open market, and concerned that it was now a passive participant in discrimination, in 2005 the County commissioned a review of the utilization of M/WBEs in its construction contracts since the injunction. The results of this review were presented to the County in a July 2006 Report titled, "Review of Compelling Evidence of Discrimination Against Minority-and Women-Owned Business Enterprise in the Chicago Area Construction Industry and Recommendations for Narrowly tailored Remedies for Cook County, Illinois" ("2006 Report"). The 2006 Report concluded that there is extensive evidence of discrimination against M/WBEs in the Chicago area Construction marketplace, and the participation of Minority- and Women-Owned Business Enterprises in the County's construction prime contracts and subcontracts was below the availability of such firms. The 2006 Report recommended, among other initiatives, the establishment

---

[226] *Id*. at 645.

[227] *Id*. at 647.

[228] Contracts for the purchase of non-construction equipment and supplies were deleted (*e.g.*, medical equipment, office furniture, etc.).

[229] 2006 Report.

of an interim ordinance to remedy the underutilization of M/WBEs in the County's construction contracts and ensure that the County is not passively participating in discrimination against such firms in the Chicago area construction marketplace.

In addition to the evidentiary record in *Builders Association of Greater Chicago v. City of Chicago*,[230] the 2006 Report also reviewed the record in *Northern Contracting, Inc. v. Illinois Department of Transportation*,[231] the most recent judicial review of evidence of discrimination against M/WBEs in the Chicago marketplace. After an almost three week trial, the court held that minorities and women suffer discrimination in the Chicago construction market and that IDOT's DBE Program was narrowly tailored to ameliorate that discrimination.[232] This ruling was affirmed on appeal.

In holding that IDOT met its constitutional and regulatory burdens, the court reviewed the evidence of discrimination against minority and women construction firms in the Illinois marketplace. IDOT had commissioned a study to meet Part 26's requirements from NERA Economic Consulting, Inc., an international economics consulting firm and partner on this Report. 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 comprised 22.77 percent of IDOT's available firms.[233] 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 age of the owner, education, and the like, the Study found that in a race- and gender-neutral marketplace the availability of DBEs would be approximately 20.8 percent higher, for an estimate of DBE availability "but for" discrimination of 27.51 percent.

In addition to the IDOT NERA Study, the court also considered another NERA Study conducted for Metra, the transit agency for suburban Chicago. The Metra Study included a 1999 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 percent of minority- or women-owned professional service 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 capital. Specifically, the Study found that, controlling for creditworthiness, DBEs were more likely to have loan applications denied, and when such loans are approved, 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

---

[230] 298 F.Supp.2d 725 (N.D. Ill. 2003).

[231] 2005 U.S. Dist. LEXIS 19868 (N.D. Ill. Sept. 8, 2005).

[232] The authors of this Report were the expert witnesses for IDOT in the trial.

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

to those found in the IDOT Study. The court then reviewed the evidence presented to the Chicago City Council in support of its revised M/WBE Program ordinance in 2004.

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. 187 people attended the three meetings, 57 witnesses testified, and an additional 10 people submitted written statements. A large number of DBE 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 bids on non-goals projects, despite the fact that, in some instances, the witness' 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. 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. While IDOT took no action to pursue the matter, the court held that IDOT properly concluded from the firms' silence that the witnesses' allegations had merit.

IDOT also presented evidence of "unremediated market data," consisting of DBE participation rates in markets that do not have race- or gender- conscious subcontracting goals in place to remedy discrimination. Such data are evidence of what IDOT market conditions would look like in the absence of DBE goals. Specifically, IDOT examined data from four unremediated markets: the Illinois State Toll Highway Authority (the Tollway), the Missouri Department of Transportation, Cook County construction activities and a "non-goals" experiment conducted by IDOT from 2001 to 2002.

Although involved in the same type of construction as IDOT, the Tollway does not receive federal funding and thus is not bound by 49 C.F.R. Part 26. The Tollway had a voluntary 15 percent DBE subcontracting goal, without any monitoring of DBE attainment or sanctions for failure to meet contractual commitments. An analysis of DBE utilization rates on Tollway subcontracts revealed that DBE utilization was 1.5 percent in 2002 and 1.7 percent in 2003.

In addition, IDOT's "Zero Goals" experiment solicited a portion of its highway construction contracts without DBE goals. DBEs received approximately 1.5% of the total dollar value of all those contracts, and approximately 17% of the total dollar value of all subcontracts awarded.

At trial, DBEs testified regarding the difficulties they face and recounted instances in which they believed they were discriminated against based on their race or gender. The witnesses described 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 witnesses 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. Further, several DBEs testified about incidents of

direct discrimination in the industry. IDOT's witnesses also discussed discrimination in the financing and insurance markets. Finally, the DBEs reported that they encountered difficulties in obtaining prompt payment for their work, leading to serious cash-flow problems and jeopardizing their business success. Since public agencies are most likely to pay slowly, the DBEs desired and were available to perform more non-goals private sector work, where prompter payment is the norm.

The court found that some of this testimony was effectively rebutted by the testimony of Northern Contracting's White male prime contractor witnesses. These witnesses were unanimous in maintaining that they solicit DBEs and non-DBEs equally, and in explaining that their firms look to price and ability, not race or gender, in awarding subcontracts. They testified that a prime contractor has never failed to award a job to a DBE that offered the low bid on a goals job. This testimony was supported by the statistical data presented by IDOT, which shows that at least at the level of subcontracting, DBEs are generally utilized commensurate with their availability on projects with subcontracting goals.

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.

> In light of this data, the court is convinced that the relatively high (or appropriately high) level of DBE participation on goals contracts has resulted not from a lack of discrimination, but from the success of IDOT's DBE program. 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."[234]

---

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

Cook County's Revised Minority- and Women-Owned Business Enterprise Construction Program

The County's 2006 Report made recommendations based upon this extensive evidence. First, there was sufficient evidence to adopt an interim construction program to address the discrimination identified in various reports, trial records and hearings. At the same time, the County was urged to conduct a disparity study to provide the full range of statistical and anecdotal evidence courts have found relevant to meeting strict scrutiny. The 2006 Report also recommended that the County implement race- and gender-neutral measures to reduce barriers to contracting by all firms, including unbundling contracts, where appropriate; ensuring prompt payment of prime contractors by the County and of subcontractors by prime contractors; reviewing surety bonding and insurance requirements; requiring prior County approval of substitutions of subcontractors; adopting a Guaranteed Surety Bonding and Contract Financing Program, a Small Local Business Target Program, and a Mentor-Protégé Program; providing business development assistance; and enacting a commercial discrimination complaint procedure.

In addition to considering the 2006 Report, the County Board held committee hearings in which contractors provided anecdotal evidence of discrimination in the construction industry. M/WBEs testified that without goals, they were denied fair opportunities to bid County construction work. They stated that a revised and strengthened ordinance was necessary to address the continuing effects of discrimination.

Based upon this evidence, Cook County adopted a Minority- and Women-Owned Business Enterprise Construction Interim Ordinance, effective in 2007. [235] The ordinance sets overall, annual aspirational goals of 24 percent for MBEs and 4 percent for WBEs. It establishes the County's market area as the Metropolitan Statistical Area for Chicago, as established by the Bureau of the Census.[236] To be eligible for Program certification, a firm must be owned by an economically[237] and socially disadvantaged[238] individual and not exceed the size standards of the U.S. Small Business Administration[239]. The County is to use race- and gender-neutral remedies to meet the annual goals to the maximum feasible extent. Race- and gender-conscious remedies are limited to project specific goals, and waivers are permitted for bidders that fail to meet a project goal despite their good faith efforts to do so. The ordinance further details pre-award compliance and contract administration procedures. A contractor's failure to comply with the ordinance or the terms of its contract is subject to sanctions for breach and criminal penalties may

---

[235] 06-O-48

[236] Currently, the counties of Cook, DuPage, Kane, Lake, McHenry and Will.

[237] "Economically Disadvantaged" means an individual with a Personal Net Worth less than $1,000,000.00 indexed annually for the Chicago Metro Area Consumer Price Index, published by the U.S. Department of Labor, Bureau of Labor Standards, beginning January 2007.

[238] "Socially Disadvantaged" means a Minority Individual or Woman who has been subjected to racial, ethnic or gender prejudice or cultural bias within American society because of his or her identity as a member of a group and without regard to individual qualities. Social disadvantage must stem from circumstances beyond the individual's control. A Socially Disadvantaged individual must be a citizen or lawfully admitted permanent resident of the United States.

[239] 13 C.F.R. Part 121 *et seq*.

be imposed. The Interim Ordinance is subject to periodic review and requires that a report, such as this Study, be conducted, and that it will sunset on December 31, 2010.

To meet these requirements and to more narrowly tailor its Program, the County commissioned this Study to provide additional data regarding the operations of the Interim Ordinance, so as to consider of the need to continue the Program and enact further remedies.

B.   Business Owner Interviews

In addition to the statistical evidence presented in the previous chapters, we gathered anecdotal evidence of the effectiveness of the interim ordinance in opening up opportunities for M/WBEs. We interviewed 33 construction firms, and the following are summaries of the issues discussed. Quotations are indented, and are representative of the views expressed by many participants.

a.   Effectiveness of M/WBE Programs

In general, minorities and women reported that race- and gender-conscious contracting programs are needed to ensure full and fair access to government contracts. Being certified created opportunities that otherwise would not have presented themselves. Affirmative action contracting programs were seen as vital to the continuing viability of their companies, because M/WBEs generally mostly reported that they received work as subcontractors only on solicitations with goals.

> [I]f there is no contractually obligated numeric goal in the contract value, it will not be reached. You get a song and dance about why or why not, and the contract that we have right now says the goal of the [agency's] is to reach X percent, but it's not in the language of the contract. So, we have found that that has happened. This isn't the first time. So, it has to be part of the contractual language.
>
> ***
>
> I agree that if there are not goals you do not get the work. For example, there was just a [government agency's] fuel contract that has no goals, and so I tried to partner with people and there was no interest or no motivation. I think, especially in the public sector where it is all down to the lowest bid, that if there are no goals, that is going to be a barrier to women- and minority-owned businesses
>
> ***
>
> [In] the building trades, the generals do not self-perform. They do almost nothing by themselves. They manage the parts. So, their staff is only management. They're going to sub out everything; it's just a question of to whom [and it's not to M/WBEs].

One M/WBE reported that when she performed as a general contractor who had to meet goals, M/WBEs often performed poorly. In her experience, firms that do good work will be used on projects without goals.

> [T]he work that you were getting out of minorities was not good. That's unfortunate, but it's true, and that's why a lot of companies did get work and sustain themselves because they would live on public work and did not have a terribly good reputation and if somebody didn't have the requirement to hire them, why would they, because it was a constant battle to get them to do what it was that they were supposed to do. That's an unfortunate stigma, I think, that some minority contractors can have because I think it went on for so long, which is also why I think it's-- I haven't had that problem because we pride ourselves on doing good work and I believe we have an excellent reputation and we get work from the same generals if we are being used as a sub, be it a job that has requirements for minority participation or not. So, I just think it's something that minorities themselves need to try and overcome. Most generals do work in both fields, both private and public, and if you're good, they're going to hire you. It's as simple as that.

Minorities and women reported that they were often perceived as less qualified, despite satisfactory performances.

> Then you get back to the issue of perception. There is that concept that the DBEs will not perform. I heard someone suggest that this was from past history. I would suggest it's also a matter of perspective, because what I've seen in the past is construction is full of problems. It's a question of how you look at it when the problems arise. Do you say that this is something that could have happened to anybody, or do you say look what happened, this is why I don't like having MBEs.… Whereas if it had been somebody else, you may say, "You know what? Are you working on this? Are you trying to solve this? How are you getting around this?" I think the issue of perspective is a very soft issue because even the person who's dealing with the subject may not themselves perceive which direction they're taking the issue, which brings us to what you heard about the matter of goals. If you walk in the door with the perception that you do not wish to engage WBEs or MBEs, you will only take it as far as you are required to because your business sense tells you that this is against your interest.
>
> ***
>
> I do share that concern about the labeling as "We're hiring you on because you're a WBE or MBE contractor." So, I've done some work where that's not been the issue, and I think the challenge is around that positioning; is it the quality of your work or do you only have opportunities on projects with goals? I think that's an ongoing concern of how do you not position yourself that way and still have opportunity?

***

> I've had it where [a large, majority-owned prime contractor] come to me to save the job for them and said, "You're not a minority company; you're a real company!"

b.   Meeting County M/WBE Project Goals

The County's goal setting process and meeting contract goals elicited many comments and suggestions.

Several M/WBEs stated that often prime contractors were not serious about fully including them in the work of the contract.

> If you're in Chicago proper and you're trying to get MBE work or DBE work, everybody's just interested in hitting a goal. They're not interested in who you are or what the quality of your work is. So, they'll take a number from you and just keep it on the shelf. They'll take all your schedules, and at bid time, if they can meet their requirements out of a larger hunk of contract work, they'll take that and just totally ignore you.

***

> I've gone through this several times where they're going to use your number. You know, you're talking to them through the whole pre-bid process. Good number, good number, good number, and then they figure out a way to either get the goal a different way, you know, and then all of a sudden that's it. It's dropped.

***

> I hope that we're on [the County's] future projects, but what's happening now in today's economic climate, people aren't filling out who their intended subcontractors are when they're submitting their bids and then going on to a shopping expedition afterwards. Since it's only a goal and not a requirement, the County is just waiving that and awarding to the lowest bidder…. [The County is] allowing [participation] to come in after the fact, you know, that a contract has been awarded. Now I'm going to go on a shopping expedition, and I'll maybe make 15 percent or 18 percent or 0 percent based on budget.

Several participants raised concerns about the use of suppliers and brokers to meet goals.

> They're getting it passed through because she's a supplier.

***

> I have to question the commercially useful function on just being a DBE or WBE or MBE supplier, because I mean it's work that is accepted, but in reality, you are

just an extra participant in a transaction. So, to me, it seems to me that if you're going to be a supplier, you should be required to be able to perform the distribution of it if that's part of, like in a bulk thing that we're supplying. I see other companies that are certified as suppliers don't have the transportation, so they are just an extra participant, and it is allowed over and over and over.… That really puts a bad name on us because they don't want to use us because it is something they can perform themselves.

Majority-owned general contractors had concerns about goals. In particular, several prime firms commented on their difficulties finding M/WBEs.

[I]n the city of Chicago that's tough [to find enough qualified M/WBEs], so we're currently working overtime to make sure that in every project we have, we have that number. Because we're a member of a billion-dollar roundtable for minority suppliers—we give a billion dollars every year to minority suppliers, and in order to do that, we have to work extremely hard to make sure that we make that goal [otherwise, we would self-perform the work].

***

But it's just very difficult to find qualified MBE/WBEs. They're all wonderful people, but it seems like [highway construction] is such an asset-strong business that there seems to be a lot of turnover, and that makes it very difficult for contractors to bid jobs and build jobs when there is that kind of turnover.… We would love to have steady, qualified subcontractors, but it just seems like it is a constant battle of finding them.

***

[T]he public agencies are trying to demand a level of response [from M/WBE subcontractors] that technologically or financially just isn't there

***

[A] lot of times we'll get a cold call from an MBE, WBE, DBE subcontractor, and they'll say they want to work for our firm, and would we welcome them. When I say, "What are your qualifications?" you know, 10 minutes later we get a faxed copy of their certification. That's it. We're done. They're "qualified".

***

It's all about competitiveness. So yes, if we're working with minorities who for whatever reason can't be as competitive, that's not going to work.

***

So, affirmative action programs, again, finding qualified subcontractors, minority DBEs that can handle certain size work is a big task. You don't want to see anybody, including general contractors, get in over their head.

A few firms stated that unrealistic goals had dissuaded them from bidding County work.

Now on many occasions, if there's requirements that have to be met, we look at those projects and say, "There's no point in pursuing them," in spite of the fact that we think we have a lot to offer on certain projects, because there's enough set asides that it's in a certain formula that, you know, we're negatively discriminated against in that respect. You can't pursue the work.

General contractors rarely, if eve, sought waivers of goals on County contracts, even when there was little or no availability of qualified M/WBEs.

Never asked for a waiver. That would be disastrous.

***

[Y]ou have 30 categories for example, and you say you want a waiver in these five categories, it's not because you can't find a name on the list in that category. It's because the names that are on the list in that category maybe are not qualified for that job.… [But] someone who would reject that waiver request is saying, "No, here's a name right here."

***

You may think they're not qualified, but the agency does… And so they'll say, "Well, you need to be using them," and you're not going to win that battle.

Some majority-owned subcontractors reported that they have been asked to do work passed through from M/WBEs that were unable to perform in order to create the appearance of meeting goals.

[O]ften times [a M/WBE] come to us, and try to get us to work for a shell company, which is a joke, quite frankly, and a distortion of the intention. And quite frankly, they don't grow from it; they don't develop from it. All they do is add cost to the public agency.… [N]ow you have somebody in the leadership chain that can't lead or isn't capable or don't have the technology or the understanding or the ability. And so, beyond the fee, there is the additional cost associated with the process.… [I]n many cases, the market doesn't have the minority expertise. So what do you do? If you're a general, what do you? You've got to respond. What do you do? So, can we supply some of it? Well, maybe some of it if we can sub out or purchase or acquire, but the kind of things that we're purchasing or acquiring are from suppliers that do mega millions, not hundreds of thousands. So, you know, when you're buying steel and concrete and those kind of things, that isn't a minority supplier. So there's no real way to

answer that other than potentially take a sub like me and work for some shell, or joint venture with another minority shell. And sometimes we've done that, and have taken our superintendents or our technical expertise, and gave them to them for the duration of the job just in function only. And, yes, it all meets those qualifications, but it's a bastardization of what the goals are really intended for.

There was strong support for setting goals narrowly tailored to the scope of the particular project.

Maybe this one is 20 [percent], and maybe there's another one that makes sense, do 40 [percent].… Or certain projects, maybe you can get 100 percent participation for a supplier instead of 60 percent, whatever the case may be, because all jobs are a little bit different.

***

[S]et these incentives or objectives more on a project-by-project basis as opposed to just a clean sweep.… [P]articipation [should be]based upon the size and scope and technicality of the project.

c.   Contract Performance Monitoring

M/WBEs reported that monitoring of their use during contract performance needs to be enhanced.

That's something that the County does need to enforce. If they want the participation and they want to see the small businesses succeed, they need to enforce that with their primes. From what I've been hearing, they haven't been doing it.

***

[The Forest Preserves do not] enforce that certified WBEs or MBEs of Cook County are used on the job.

d.   Payment

Slow payments on government contracts in general, and on County projects in particular, was mentioned by many participants, both M/WBEs and majority-owned firms alike.

One reason we [as a MBE] had not pursued public projects is just what we're hearing now about slow pay, and I agree that my payments are very consistent coming out of the private sector.

***

[I]n the public sector, the payment is bad. What's happening, they want the participation, but then your small business, they need to get the payment structure [corrected].

***

You know, credit lines are so slim these days and you have to be able to fund your projects. So, that's been a real problem.

***

One time [the County] didn't pay me for like six months, and I had to talk to the commissioner because it was getting that bad.

***

[T]he County's lousy on paying… [I]t took me almost six months to get paid.

One owner stated that payment varied widely depending on what department issued the contract.

We have had really positive experience with the criminal court division that we have a contract with, and it's also because we have been proactive in making sure we're giving them exactly what they need to get paid. I think that that's really helped us. But then we have the same situation that we've dealt with in the same way and we're sending the appropriate materials to the right person with the Cook County Hospital, and we went six months for payment. Fortunately, [the amount is] much smaller, so we're just like, "Okay, we know we're not going to get this for six months." But the last one with the criminal court division we got within like 35 days.

While most M/WBEs agreed that payment is a universal problem, one woman recounted that sexism was a factor. When she persisted in her efforts to be paid for her work, this was the response from the white male project manager.

"I'm not your husband. Why are you calling me?" and I'm trying to get paid.

Majority contractors recognized the effects of slow payment by the County on M/WBEs.

Money rates, cash flow, getting paid from public agencies can be difficult and time consuming and drawn out. That creates a very challenging situation for not only us the prime contractor but also for the subcontractor, because we are not banks. When we work for [large general contractor], we don't expect [it] to be our bank. It's kind of a trickle down, so unfortunately, it's a domino effect. It makes it very difficult for someone that's a paint stripper or a landscaper—they need money to operate, and if you can't pay them in a timely fashion that makes it very difficult for them. So, it's a challenge that is difficult to overcome.

***

I don't think that's the goal of the program, for us to bust small firms. If we don't smooth out those bumps, that's exactly what's going to happen. If we have to hold our subcontractors to the same rules that the county holds us to as far as payment terms, most of them won't complete the projects. We've done jobs that are 2.5-3 years long, and I don't like being a bank either, but you know what, a lot of times I have to be.… [A] lot of these smaller folks have to make payroll in a week, so I need to pay them oftentimes before I get paid.

***

[O]ur biggest challenge is we need to keep these guys going. We try to mentor them to help them get cash flow, but it is difficult for any majority-owned or anyone, if you don't have some deep pockets to survive.

***

But to mentor and coach these companies, you have to have cash, and without it, it will continue to be very difficult to build long-lasting relationships with MBE/WBEs without proper cash flow. Not every road builder, general contractor, subcontractor can bank; I mean we just can't do it. It's more difficult to get bonds, insurance costs continue to go up. It's a domino effect, and without cash flow-- You know, they promote this program and they want you to do it and they set these goals, but then they don't provide the cash flow to really build the program.

***

What can the County do to help [M/WBEs]? Pay their bills.… Really, a lot of this comes back to cash flow. I mean you cannot mentor, coach, work with, create relationships without cash flow. I mean you just can't do it. You can't get bonding without it. You can't insurance without it. You can't get banking without it.

The County's multi-step and cumbersome payment process, that requires Board approval for larger invoices, was noted as a special burden on everyone in the contracting process.

It all seems to come back down to how can we make cash payments smarter and quicker. Because I've had to invoice the same pay request four times on county projects, and it sits on somebody's desk, "Oh, I missed the board meeting. Sorry, see you next month." And it will add another 30 days without an approved pay request. And maybe it's going to come to this, I'll stop working, and now we're hiring attorneys to decide it. But that's not the ultimate goal here, right. We've got to try to figure out a process that makes a little more sense, because it just isn't working.

***

So, if somebody doesn't walk that invoice through these offices, it's very easy to miss a [Board of Commissioner's]meeting, very easy. There's too many steps, too many people touching the same thing.

***

[S]implify.

An additional reason for payment delays is the County's very antiquated payment processing system. Firms must submit paper invoices attached to paper forms in triplicate.

It's a dinosaur.

***

You have to have a typewriter.

***

We have [a typewriter] just for that purpose.

***

Oh, that [would be] nice [to adopt21st century systems that permit electronic invoicing and payments].

e.   Program Revisions

i.   Small, Local Business Target Market

One suggestion that received significant support is the creation of a race- and gender-neutral Small Local Business Target Market Program that would set aside smaller contracts for bidding only by small contractors. In addition to meeting the constitutional requirement that race- and gender-neutral measures be used to the greatest possible extent, it has the virtue of being a remedy directed towards creating opportunities for M/WBEs to perform as prime contractors, not just as subcontractors to meet a project specific goal.

I'm supportive of the idea [of a small business setaside] because I think it does give smaller companies…who are trying to grow some scale to have some contracts in their portfolio, some projects in their portfolio. So, I think it's a good idea. I think the question is what are the thresholds of those kinds of projects because if you're talking size-wise [so] a small business is anything under $15 million, then a $2 million-company is going to have a tougher time competing against the $33 million-company, particularly as it comes to bonding and access

to preferred pricing and things like that based on volume. But, I think something like that could be scoped appropriately to make it work.

ii.   Mentor-Protégé Program

A Mentor-Protégé Program was discussed as one way to enhance M/WBEs' capacities to perform as both prime bidders and subcontractors. Prime firms would receive goal credit for mentoring M/WBEs on County contracts. This would benefit certified firms as well as prime contractors trying to meet project specific goals.

> [It would be helpful] if a contractor had a mentoring program that might be worth a couple of credits [to us as a prime contractor].

Other general contractors were concerned about the increase in complexity and the potential to develop future competitors a mentor-protégé program would create.

> I'm thinking it might be more administrative [burdens].

> ***

> We need to somehow take stuff out of [the M/WBE Program] to make it simple…the program that exists is still pretty complicated to some people. Adding more stuff might just make it bad.

> ***

> I think if we make it more arduous, I think you have less people interested in participating.

> ***

> Not an official mentor/protégé program, but more along the lines of what we were talking about earlier. Establishing relationships with our subcontractors, and in turn hopefully being able to meet some of their criteria on the jobs for the affirmative action.

> ***

> [M]entoring individuals is a lot easier than mentoring companies, and that the return for your mentoring is your own, versus mentoring your competitor.

iii.   Bonding Assistance

Several general contractors recognized that the inability to obtain surety bonding was a major impediment to M/WBEs increasing their capacities and their availability to meet project specific goals.

One of the hurdles I would think is being able to get bondable packages that are made up such that people can bid work that's applicable to them and not get in over their heads.

***

Most of them can't get the bond.

***

[T]he minority firms that bid [as subcontractors] on this [large] project couldn't get the bond, so therefore the job went to someone else.

***

[A]s a general contractor, if you look at some of these WBEs, MBEs that are trade contractors that can't bond their work, you know, then you draw this perception [that M/WBEs can't compete].

Participants suggested that the County provide bonding assistance to M/WBEs, perhaps similar to the U.S. Small Business Administration's Bonding Assistance Program

Could there be a way of helping those smaller companies that are not able to compete because of the bonding?

VIII. Recommendations for a Revised Minority- and Women-Owned Business Enterprise Construction Program

As detailed in this Study, we have analyzed business related disparities facing minority- and women-owned construction and construction-related firms in Cook County's relevant geographic market area, as well as measured the availability of M/WBEs within this market area. We further gathered anecdotal accounts of firms' experiences with the Interim M/WBE Construction Ordinance, as well as in the economy as a whole. Based upon our results, we make the following recommendations.

A.   Adopt Race- and Gender-Neutral Initiatives

1.   Ensure Prompt Payments on Cook County's Prime Contracts and Subcontracts

Firms of all sizes and composition complained about slow payment by the County, as well as its antiquated, multi-layered and cumbersome procedures. First, we strongly urge the County to amend its current processes to eliminate the need for Board approval of regular payment applications. Many governments process payments without the involvement of legislators. Cook County's highly unusual approach not only adds bureaucratic layers and months to the process, but also requires that staff in offices removed from the contracting process (Commissioners, the County Clerk) are diverted from their core tasks to process payments. While we recognize that elected officials are ultimately responsible for guarding the public purse, this unusual level of micro-management is highly detrimental to M/WBEs, prime bidders, and through the added costs of delay for contractors pricing for slow cash flow, the taxpayers. Second, the County should implement systems to permit electronic invoicing and payments. This will reduce delays, as well as the costs of processing all that paper, and lower the prices of contracts for which sophisticated contractors have included the costs of their cash flows.

2.   Adopt a Small Local Business Target Market Program

The County should adopt a Small Local Business Target Market for small, Chicago area-based firms seeking work as prime contactors. Contracts subject to this market would be reserved for bidding solely by such firms. This approach will permit small firms to compete on a more level playing field with firms of comparable size, thereby somewhat equalizing some of the barriers faced by M/WBEs to obtaining bonding, financing, access to networks, etc., without resort to race- and gender-based preferences.

A size- and location-based setaside will not be subject to the constitutional strictures of *Croson*, since business size and location are not suspect classifications subject to Equal Protection analysis. All that is required is that the ordinance has a "rational basis" to pass judicial muster. Given the judicial prohibition on race-based contract setasides, this is a critical race- and gender-neutral tool to provide opportunities for M/WBEs and other small firms to compete for prime contracts. Providing preferences to small firms on a race- and gender-neutral basis will also reduce the County's reliance on race- and gender-

conscious subcontracting goals to meet the overall annual goals, as most M/WBEs are likely to qualify, and address the narrow tailoring requirement to reduce the burden on non-certified firms to the greatest feasible extent.[240]

Program elements should include eligibility criteria for participation, including the size of the firm[241] and its location; the size of the contracts to be included; the type of work; the availability of at least three eligible businesses to perform the work of the contract, to create adequate competition; and the County's progress towards meeting the annual MBE and WBE goals. There might also be limits on the number of contracts a certified business could be awarded per designated time period. The County should consider providing additional support with payment issues and mobilization payments.

3. Partner with Other Agencies to Adopt a Guaranteed Surety Bonding and Financing Program

A key component of a race- and gender-neutral initiative is a Guaranteed Surety Bonding and Contract Financing Program for M/WBEs and other small firms seeking work as prime contractors. These firms find it difficult to obtain bonding or financing, or cannot obtaining bonding or financing at reasonable rates. As eloquently expressed in the business owner interviews, lack of bonding inhibits the success of the Program for all participants, both M/WBEs and majority-owned general contractors.

This approach has proven to be successful in other jurisdictions in increasing the capacity of small businesses to perform as prime contractors. Necessary participants would be a surety company, a lender, and an experienced construction business development specialist to evaluate each firm's capabilities, financials and other criteria relevant to obtaining bonding and financing. Firms that successfully complete the evaluation and development phase would be guaranteed to receive bonding and contract financing.

In view of current resource constraints, the County could partner with other Chicago agencies to provide this support, especially since their marketplaces very likely overlap. In fact, such a program is authorized by the City of Chicago's Minority- and Women-Owned Construction Program Ordinance.[242]

---

[240] The City of Chicago's Minority- and Women-Owned Construction Program Ordinance, Section 2-92-710(n) of the Municipal Code of Chicago, provides for the creation of a target market program for bidding on city prime construction contracts by small local business enterprises. This provision has never been implemented, however.

[241] To define "small," the County should adopt the size standards of the U.S. Small Business Administration contained at 13 C.F.R. Part 121, which also apply to M/WBE eligibility under the Interim Ordinance.

[242] Section 2-92-710(c) of the Municipal Code of Chicago. Again, provision has never been implemented.

4.   Improve Contracting and Procurement Data Collection and Retention Procedures

a.   Background

The lack of electronic data collection and retention systems pertaining to the County's historical construction contracting records, coupled with significant gaps and inconsistencies in the hard copy records on file at the County, prevented us from producing a detailed analysis of the County's own M/WBE utilization during the time period under study.

When a public entity operates a race- and gender-conscious M/WBE program, such a utilization analysis is not necessarily helpful to an assessment of compelling interest under strict scrutiny, since utilization measures will in theory be higher in the presence of the program than they would be in its absence. However, when a public entity is not operating such a program, a utilization analysis can assist in assessing disparities, just as is the case with the data used above in Chapter V and VI.

At the outset of the study process, we attempted to assemble a listing of all prime construction contracts issued by the County during the time period of the study, 2000-2007 (the "Prime Construction Contract Listing"). These documents were collected with assistance of the MIS, Capital Planning, and Highways Department. Each contract in the file possessed a unique Contract Identification Number, *e.g.*, 02-53-976.

However, these documents contained little or no information concerning the use of subcontractors or suppliers, or payment amounts. Rather, the primary repository of construction contract and subcontract data at the County appeared to be in the materials prepared and submitted to the Board of Commissioners with each contractor's pay application.[243] These materials could include interim and final pay application forms, partial and final lien waivers for prime contractors and subcontractors, and interim and final MBE forms from the County Compliance Department.

Prior to each Board meeting the County's Committee on Finance issues a "Report of the Committee on Finance" detailing what items with financial implications for the County are on the agenda for the upcoming meeting. These items are identified by their Board Communication Number, *e.g.*, 258247.

In our attempt to assemble a complete file of materials relevant to any given construction[244] contract, we took the following steps:

---

[243] We made repeated requests to a variety of county personnel in the Departments of Capital Planning, Highways, and Compliance, and the Office of the Clerk of Cook County to locate other repositories of this material. We were instructed that the Board Communication Number materials offered the best practical opportunity to build the desired database.

[244] The process for Highways contracts was different, as described below.

Recommendations for a Revised Minority- and Women-Owned Business Enterprise Construction Program

1. Assembled all of the "Report of the Committee on Finance" documents for the time period under study, 2000–2007. This electronic file was 11,868 pages long.

2. Electronically searched each page of these Finance Committee Reports for references to the unique contract identification numbers corresponding to each contract in the Prime Construction Contract Listing. For each Contract Identification Number found, we noted its corresponding Board Communication Number. Most construction contracts had multiple Board Communication Numbers associated with them, since there were often multiple pay applications per contract performance period.[245]

3. Once all Board Communication Numbers associated with each relevant construction contract were identified, we attempted to obtain copies of the hard copy documents pertaining to that contract provided in the package for that Board Communication Number. This process involved manually searching the files retained at the County Clerk's office, as well as, for older records, at the Clerk's warehouse facilities.

4. All materials so obtained were rendered into electronic form by our staff (the "Master Contract-Subcontract Database").

5. During the creation of the Master Contract-Subcontract Database, it became apparent that most of the contract-subcontract files were incomplete along several key dimensions:

> Final (as opposed to interim) pay applications were frequently missing for completed contracts;

> Lien waivers frequently did not state the dollar amounts for which the lien was being fully or partially waived;

> Final (as opposed to partial) lien waivers were missing in over 55 percent of contracts in the file;

> Final MBE forms were missing for over 98 percent of contracts in the file;

> Even when interim and/or final MWBE forms were present in the file, the race and sex of MWBE subcontractors or suppliers was almost never recorded; and

> Even when interim and/or final MWBE forms were present in the file, the full business names and addresses of subcontractors and suppliers were missing or incomplete in a significant fraction of cases. Extensive use of shorthand and abbreviations for firm names was noted.

For Highways Contracts, despite repeated and prolonged efforts, we were never able to obtain comparable data through the Board Communication Number process described above. Instead, we had to rely on Highways Department staff to provide the requested

---

[245] It is important to note that this approach, even if it had worked perfectly, would still not have yielded all relevant contract documents, since pay applications below $25,000 did not have to go to the Board for approval. Prior to January 2003, this threshold was $10,000.

materials. For the information that we did obtain, many of the data gaps were similar. For example:

> A majority of the Highways contract files were missing at least some subcontractor award or payment amounts;

> In 16 percent of cases, there was no subcontractor award or payment amount recorded at all. Many of these cases involved suppliers;

> Almost 5 percent of the contracts appeared to have no subcontractors or suppliers at all; however, we were unable to obtain confirmation from Highways Department personnel that this was accurate, despite repeated attempts over a prolonged period;

> More than 12 percent of the contracts appeared to have only DBE subcontractors. Again, we were unable to obtain confirmation from Highways Department personnel that this was accurate, despite repeated attempts over a prolonged period;

> The full business names and addresses of subcontractors and suppliers were often missing or incomplete. Extensive use of shorthand and abbreviations for firm names was noted; and

> There was no race information recorded for any of the DBE subcontractors or suppliers identified in the Highways data.

b. Recommendations

The infirmities in the County's historical contract and subcontract data identified above combined to prevent the production of a reliable analysis of MWBE and DBE utilization in the County's own spending and that of its prime contractors.

The following recommendations, if implemented, would enable the production, in a future disparity study, of a comprehensive analysis of utilization, availability, and disparity with respect to the County's and its prime contractors' own spending patterns.

1. The County should maintain complete files for each construction contract awarded. These files should be maintained and housed separately and independently from the Board Communication Number system currently in use.

2. Each such contract file should contain, at a minimum, the following data items:

    Prime Contractor Data:

    A. Unique identification code or number for prime contract

    B. Unique identification code or number for prime contractor

C. Full Business name, and if relevant, dba name, of prime contractor

D. Date of prime contract award or Notice to Proceed

E. Original dollar amount of prime contract award

F. Total contract amount (inclusive of all change orders)

G. M/WBE goal percentage for original contract (if applicable)

H. M/WBE goal percentage for change orders (if different from original contract)

I. Department for which work was performed.

J. Type(s) of funds used (i.e. federal or state/local)

K. Short description of scope/purpose of contract

L. M/WBE/Non-M/WBE status of prime contractor (including race, ethnicity, and sex)

M. Prime contractor street address, city, state, zip code, telephone number, and e-mail address

N. Prime contractor contact person and title

O. Date of contract completion or substantial completion (for horizontal, substantial completion may mean open to traffic; for vertical it may mean passed final inspections)

P. Final total dollar amount paid to prime contractor, including released retainage if applicable

MWBE/DBE Subcontractor, Subconsultant, or Supplier ("Subcontractor") data:

A. Unique identification code or number for each subcontractor associated with the prime contract

B. Unique identification code or number for the associated prime contract (Same as item "A" above under "Prime Contractor Data")

C. Full Business name, and if relevant, dba name, of each subcontractor

D. Original dollar award amount of each subcontract, if available

E. Short description of scope/purpose of each subcontract

F. Race, ethnicity of ownership (i.e. Black, Hispanic, Asian, or Native American) of each subcontractor

G. Sex of ownership (i.e. male, female or equally male-female) for each subcontractor

H. Subcontractor street address, city, state, zip code, telephone number, and e-mail address

I. Subcontractor contact person and title

J. Other available information concerning firm specialties/work areas.

K. Final total dollar amount paid to each subcontractor (inclusive of all change orders)

Non-MWBE/Non-DBE Subcontractor, Subconsultant, or Supplier data: [246]

A. Unique identification code or number for each subcontractor associated with the prime contract

B. Unique identification code or number for the associated prime contract (Same as item "A" above under "Prime Contractor Data")

C. Full Business name, and if relevant, dba name, of each subcontractor

D. Original dollar award amount of each subcontract, if available

E. Short description of scope/purpose of each subcontract

F. Race, ethnicity of ownership (i.e. White or Caucasian) of each subcontractor

G. Sex of ownership (i.e. male or equally male-female) for each subcontractor

H. Subcontractor street address, city, state, zip code, telephone number, and e-mail address

I. Subcontractor contact person and title

J. Other available information concerning firm specialties/work areas.

K. Final total dollar amount paid to each subcontractor (inclusive of all change orders)

---

[246] For disparity study purposes, Non-MWBE and Non-DBE subcontract data is equally as important as MWBE and DBE Subcontract data.

3. The underlying source of each data item described above may come from a variety of documents currently in use by the County, such as pay applications, lien waivers, MBE forms, and the like. What is most important, however, is that each underlying document be filled in carefully and completely at the time it is created. That is currently not the case with many of the source documents we reviewed for this Study (see discussion above under 4.a).

4. Preferably, the data elements described above would be maintained electronically as well as, or in lieu of, hard copy. However, the storage medium is not nearly as important as the completeness and accuracy of the underlying information.

5. Gather Additional Evidence of Cook County's Compelling Interest in Remedying Discrimination

While this Study provides statistical and anecdotal evidence relevant to the County's interest in continuing its use of race- and gender-conscious remedies, additional evidence should be collected to strengthen the analysis. In particular, the County should:

- Review the operations of its contracting procedures in general (*e.g.*, pre-bid conferences, standard contract language, special conditions for M/WBE utilization, bidding forms, etc.) and the implementation of the Program in particular (*e.g.*, outreach to M/WBEs, staff training, contract monitoring procedures, etc.).

- Gather additional anecdotal evidence through, for example, mail surveys and additional focus groups.

- Conduct an analysis of utilization and disparity in the County's own prime contracting and related subcontracting and supplier activities once the County's data is in a format that will allow such an analysis to be properly performed.

B. Continue and Revise Race- and Gender-Conscious Policies and Procedures

Based upon this Study, the County has evidence to continue to implement its M/WBE Construction Program. This record establishes that M/WBEs in the County's marketplace continue to experience statistically significant disparities in their access to private and public sector contracts and to those factors necessary for business success, leading to the inference that discrimination is a significant cause of those disparities. We make the following suggestions for changes to the Interim Ordinance to more narrowly tailor its scope and operations

1. Review Program Eligibility Standards

The Interim Ordinance requires that firm owners must have a personal net worth under $1 million, exclusive of their equity in their principal residence and the business seeking certification. The County should consider following the lead of the City of Chicago,

which sets a $2 million ceiling. This ceiling could be annually indexed, beginning on the January 1 following the year of adoption, for changes in the Chicago Metro Area Consumer Price Index, published by the U.S. Department of Labor, Bureau of Labor Standards.

The County should continue the current requirements that firms meet the size standards of the U.S. Small Business Administration.

2.   Set Contract Specific Goals

The County must set contract specific goals to meet strict scrutiny's narrow tailoring requirement. It is constitutionally impermissible to use the same goals in every contract without regard to the particulars of the project. While this is labor intensive, there is no option for "constitutional light."

This Study's detailed industry and group availability estimates provide an objective starting point for contract goal setting. A contract goal should reflect the availability of firms to perform the anticipated scopes of the contract, weighted by the extent those scopes represent of the total contract price. The initial estimate based on this Study should then be reviewed based on the current workloads of certified firms, and the County's progress towards meeting the overall, annual aspirational goals.

We also recommend that the minimum number of available M/WBEs be at least three to set a contract goal. This will ensure that there is adequate competition within those industry sectors and reduce the burden on non-certified firms—a key component of narrow tailoring.

As recommended in the 2006 Report, Cook County should also bid some contracts it determines have significant opportunities for M/WBE participation without goals. These "control contracts" will illuminate whether M/WBEs are used or even solicited in the absence of goals. Such unremediated markets data will be probative of whether the County still needs to implement M/WBE contract goals to level the playing field for its contracts.

3.   Review Policies and Procedures for Good Faith Efforts Reviews, Waivers of Contract Goals and Determining a Subcontractor's Commercially Useful Function

The courts have categorically held that narrow tailoring requires that waivers of goals be available to a bidder that made good faith efforts. A bidder that made good faith efforts must also be treated the same as one that met the goals. To do otherwise- that is, to favor utilization above good faith efforts- will undoubtedly 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. Uniform standards for demonstrating good faith efforts must be adopted, so that bidders and County staff have clear guidelines about when good faith efforts have been met.

We recommend the outlines of the good faith efforts provisions of 49 C.F.R. §26.53 as a guide for standardizing and implementing good faith efforts reviews for all agencies and authorities. Additional elements should include documenting good faith efforts to meet goals; the minimum time for subcontractors to submit quotes or proposals; the time for submission and the content of utilization plans; and the requirement that listed subcontractors, subconsultants and suppliers sign the utilization plan that describes their quote or scope of work and, if applicable, price.

Business owners reported that too often M/WBE participation was achieved through the use of brokers or suppliers that provided little or no commercially useful function. The County should consider adopting the standards of the DBE Program, promulgated in 49 C.F.R. § 26.55. In general, "A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, you must examine similar transactions, particularly those in which DBEs do not participate." Brokers not only add nothing to the transaction other than costs, but also they siphon dollars away from M/WBEs that would otherwise be used to meet the goals. It should be noted, however, that for some contracts, the prohibition of brokering will mean that there are few subcontractable scopes of work, which will result in the setting of low or zero contract specific goals.

The good faith efforts policy, the waiver procedure and the rules for commercially useful function, should be widely disseminated, as many interviewees had no information on how to obtain waivers and doubted that waivers would be granted, regardless of the merits. Further, the elimination of credit for brokering will require explanation and monitoring. Training should be provided to County personnel and prime contractors on these changes.

4. Increase Monitoring of Contract Performance

Once a contract with M/WBE commitments has been awarded, it is crucial that those commitments be monitored and that sanctions for non-conformance with the contract be available. Contract closeout is very late in the process to determine that a prime contractor has failed to utilize M/WBEs or that firms have not been paid. As previously discussed, the implementation of a comprehensive data tracking and monitoring system is a necessary element of a successful Program, as well as prompt payment and prohibitions on unauthorized substitutions of subcontractors. It is also obviously preferable to correct problems rather than sanction firms after the fact. In addition, the standards and processes for substituting subcontractors should be clarified and documented. Training to all parties to the process should be provided.

5. Develop Performance Measures for Program Success

While recognizing the systemic barriers faced by minorities and women in competing for Cook County's contracts and subcontracts on a full and fair basis, developing quantitative performance measures for certified firms and overall Program success would provide

measures for evaluating the Program. Possible benchmarks are the achievement of business development plans for M/WBEs similar to those used in the Small Business Administration's 8(a) Program; revenue targets for certified firms; increased prime contracting by M/WBEs; and 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. Further, data should be kept on requests for waivers of goals, to determine the accuracy of goal setting and areas for additional M/WBE outreach.

6.   Mandate Program Review and Sunset

To meet the requirements of strict constitutional scrutiny, the evidentiary basis for the Program must be reviewed at least every five years, and only if there is strong evidence of discrimination should it be reauthorized. The Program's goals and operations must also be evaluated to ensure that they remain narrowly tailored to current evidence. A new sunset date for the Program, when it will end unless reauthorized, is required to meet the constitutional requirement of narrow tailoring that race-conscious measures be used only when necessary.

IX. References

Acs, Z. and D. Evans (1994), "The determinants of variations in self-employment rates across countries and over time," working paper.

Alba-Ramirez, A. (1994), "Self-employment in the midst of unemployment; the case of Spain and the United States," <u>Applied Economics,</u> 2, pp.189-204.

Arai A. B. (1997), "The road not taken, The transition from unemployment to self-employment in Canada, 1961-1994," <u>Canadian Journal of Sociology</u> 22, Summer, pp. 365-382.

Aronson, R. L. (1991), <u>Self-employment</u>. ILR Press, Ithaca, NY, ILR Press.

Bates, T. (1973), <u>Black capitalism, a quantitative analysis</u>. New York, Praeger.

Bates, T. (1989), "The changing nature of minority business, a comparative analysis of Asian, non-minority, and black-owned businesses," <u>The Review of Black Political Economy</u>, pp. 25-42.

Bates, T. (1991a), "Discrimination and the capacity of Chicago metropolitan area minority and women-owned businesses," Report to the City of Chicago Department of Law.

Bates, T. (1991b), "Commercial bank financing of white- and black-owned small business startups," <u>Quarterly Review of Economics and Business</u>, 31(1), pp. 64-80.

Bates, T. (1993), "Banking on black enterprise, the potential of emerging firms for revitalizing urban economies," Washington D.C., Joint Center for Political and Economic Studies.

Bauer, P. W. and B. A. Cromwell (1994), "A Monte Carlo examination of bias tests in mortgage lending," <u>Federal Reserve Bank of Cleveland Economic Review</u>, 30(3), pp. 27-40.

Becker, G. S. (1957), <u>The economics of discrimination</u>, University of Chicago Press, Chicago, Illinois,.

Bernhardt, I. (1994) "Comparative advantage in self-employment and paid work," <u>Canadian Journal of Economics</u>, May 1994, pp. 273-289.

Black, J., D. de Meza, and D. Jeffreys (1996), "House Price, the Supply of Collateral and the Enterprise Economy," <u>Economic Journal</u>, 106(434), January, pp. 60-75.

Blanchflower, D.G. (2000), "Self-employment in OECD countries," <u>Labour Economics,</u> 7, September, pp. 471-505.

Blanchflower, D.G. (2009), "Minority self-employment in the United States and the impact of affirmative action programs," Annals of Finance, (5)3-4, pp. 361-396.

Blanchflower, D.G., D. S. Evans, and A. J. Oswald (1998a), "Credit cards and entrepreneurs," working paper, National Economic Research Associates, Cambridge, Massachusetts, 1998a.

Blanchflower, D.G., D. S. Evans, and A. J. Oswald (1998b), "Credit cards and consumers," working paper, National Economic Research Associates, Cambridge, Massachusetts, 1998b.

Blanchflower, D.G., P. Levine and D. Zimmerman (2003), "Discrimination In The Small Business Credit Market," Review of Economics and Statistics, 85(4), pp. 930-943.

Blanchflower, D.G. and B. Meyer (1994), "A longitudinal analysis of the young self-employed in Australia and the United States," Small Business Economics, 6, pp.1-20.

Blanchflower, D.G. and A. J. Oswald (1990), "Self-employment and the enterprise culture," British Social Attitudes, the 1990 Report. Edited by R. Jowell, and S.

Blanchflower, D.G. and A. J. Oswald (1994), The Wage Curve. Cambridge, MIT Press, 1994.

Blanchflower, D.G. and A. J. Oswald (1998), "What makes an entrepreneur?," Journal of Labor Economics, 16(1), January, pp. 26-60.

Blanchflower, D.G. and A.J. Oswald (2008), "What makes a young entrepreneur?", International Handbook on Youth and Young Adulthood edited by Andy Furlong, in the Routledge International Handbook series.

Blanchflower, D.G., A. J. Oswald, and A. Stutzer (2001), "Latent entrepreneurship across nations," European Economic Review, 45, no.4-6, May, pp.680-691.

Blanchflower, D.G. and C. Shadforth (2007), "Entrepreneurship in the UK," Foundations and Trends in Entrepreneurship, 3(4), pp. 257-364.

Blanchflower, D.G. and J. S. Wainwright (2005), "An Analysis of the Impact of Affirmative Action Programs on Self-Employment in the Construction Industry?," National Bureau of Economic Research Working Paper Series, #11793, November.

Blau, D. (1987), "A time-series analysis of self-employment in the United States," Journal of Political Economy, 95, 445-467.

Bogenhold, D. and U. Staber (1991), "The decline and rise of self-employment," Employment and Society, 5, 223-239.

Borjas, G.J. and S. Bronars (1989), "Consumer discrimination and self-employment," Journal of Political Economy 97, 581-605.

Broussard, N., R. Chami, and G. Hess (2003), "(Why) do self-employed parents have more children?" working paper, September.

Cagetti, M., and M. DeNardi (2006), "Entrepreneurship, frictions and wealth," <u>Journal of Political Economy</u>, 114(5), 835-70.

Browne, L.E. and G. M. B. Tootell (1995), "Mortgage Lending in Boston-A Response to the Critics," <u>New England Economic Review</u>, September-October, pp. 53-78.

Cavalluzzo, K. S. and L. C. Cavalluzzo (1998), "Market Structure and Discrimination, The Case of Small Businesses," <u>Journal of Money, Credit, and Banking</u>, 30(4), November, pp. 771-792.

Cavalluzzo, K. S., L. C. Cavalluzzo, and J. Wolken (1999), "Competition, Small Business Financing, and Discrimination, Evidence from a New Survey," unpublished manuscript, Georgetown University, February.

Cloud, C. and G. Galster (1993), "What Do We Know about Racial Discrimination in Mortgage Markets," <u>Review of Black Political Economy</u>, 22(1), Summer, pp. 101-120.

Coat, S. and S. Tennyson, "Labor market discrimination, imperfect information and self-employment," <u>Oxford Economic Papers,</u> 44, 272-288.

Cole, R. A. (1992), "Availability of Credit to Small and Minority-Owned Businesses, Evidence from the 1993 National Survey of Small Business Finances," unpublished manuscript, Employment Policies Institute, Washington, DC. April 13, 1998.

Cowling, M. and P. Mitchell (1997), "The evolution of UK self-employment, A study of government policy and the role of the macroeconomy," <u>Manchester School of Economic and Social Studies,</u> 65 no.4, September, 427-442.

Day, T. S. and S. J. Liebowitz (1998), "Mortgage lending to minorities, where's the bias?," <u>Economic Inquiry</u>, XXXVI, January, pp. 3-28.

DeWit, G. and F. A. Van Winden (1990), "An empirical analysis of self-employment in the Netherlands," <u>Economics Letters,</u> 32, 97-100.

Dunn, T. A. and D.J. Holtz-Eakin (2000), "Financial capital, human capital, and the transition to self-employment: evidence from intergenerational links," <u>Journal of Labor Economics,</u> 18 (2): 282-305.

Evans, D. and B. Jovanovic (1989), "An estimated model of entrepreneurial choice under liquidity constraints," <u>Journal of Political Economy</u>, 97, pp. 808-827.

Evans, D. and Linda Leighton (1989), "Some empirical aspects of entrepreneurship," <u>American Economic Review</u>, 79, pp. 519-535.

Fairlie, R. W. (1999), "The absence of the African American owned business, an analysis of the dynamics of self-employment," Journal of Labor Economics, 17(1), pp. 80-108.

Fairlie R. W. and B. D. Meyer (1996), "Ethnic and Racial Self-Employment Differences and Possible Explanations," Journal of Human Resources, 31(4), pp. 757-793.

Fairlie, R.W. and B.D. Meyer (2000), "Trends in self-employment among white and black men during the twentieth century," Journal of Human Resources, XXXV(4), pp. 643-669.

Fairlie, R.W. (2006), "Entrepreneurship among Disadvantaged Groups: An Analysis of the Dynamics of Self-Employment by Gender, Race and Education," Handbook of Entrepreneurship, Volume 2, eds. Simon C. Parker, Zoltan J. Acs, and David R. Audretsch, New York: Springer Verlag.

Fairlie, R.W. and H.A. Krashinsky (2006), "Liquidity constraints, household wealth and entrpreneurship revisited," Working Paper, University of California, Santa Cruz.

Fairlie R. W. and B. D. Meyer (1998), "Does immigration hurt Black self-employment?" Help or Hindrance? The Economic Implications of Immigration for Blacks. Edited by D. S. Hamermesh and F. D. Bean. New York, Russell Sage Foundation.

Fairlie R. W. and B. D. Meyer (2000), "Trends in self-employment among White and black men during the twentieth century," Journal of Human Resources, XXXV, no.4, 643-669.

Fairlie R. W. and B. D. Meyer (2003), "The effect of immigration on native self-employment," Journal of Labor Economics, 21(3), pp.619-650.

Fairlie, R.W. and A. Robb (2007a), "Why are black-owned businesses less successful than white-owned businesses? The role of families, inheritances, and business human capital," Journal of Labor Economics, 25(2), pp. 289-323.

Fairlie, R.W. and A. Robb (2007b) "Families, human capital, and small business: evidence from the Characteristics of Business Owners Survey," Industrial and Labor Relations Review, 60(2), pp. 225-245.

Ferri, G. and P. Simon (1997), "Constrained consumer lending, exploring business cycle patterns using the Survey of Consumer Finances," working paper, Princeton University.

Foti, A. and M. Vivarelli (1994), "An econometric test of the self-employment model - the case of Italy," Small Business Economics, 6, no.2, April, 81-93.

Fuchs, V. (1982), "Self-employment and labor force participation of older males," Journal of Human Resources 17, Fall, 339-357.

Goldstein, R., "Friedman's ANOVA & Kendall's Coefficient of Concordance," <u>Stata Technical Bulletin Reprints</u>, Vol. 1, College Station, Texas: Stata Corporation, 1991, pp. 157–158.

Greene, W. H., <u>Econometric Analysis</u>, Third Edition, New Jersey, Prentice-Hall, 1997, pp. 926-931

Hall, R. E. and F. Mishkin (1982), "The Sensitivity of Consumption to Transitory Income, Estimates from Panel Data on Households," <u>Econometrica</u>, 50(2), pp 461-81.

Harrison, G. W. (1998), "Mortgage lending in Boston, a reconsideration of the evidence," <u>Economic Inquiry</u>, XXXVI, January, pp. 29-38.

Hayashi, F. (1985), "The effect of liquidity constraints on consumption, a cross-sectional analysis," <u>Quarterly Journal of Economics</u>, 100(1), February, pp. 183-206.

Heckman, J. J. (1998), "Detecting discrimination," <u>Journal of Economic Perspectives</u>, 12(2), Spring, pp. 101-116.

Holmes T. J. and J. A. Schmitz, "A theory of entrepreneurship and its application to the study of business transfers," <u>Journal of Political Economy</u> 89 (1990), 265-294.

Holtz-Eakin, D. D. Joulfaian, and R. S. Harvey (1994a), "Entrepreneurial decisions and liquidity constraints," <u>Journal of Political Economy</u>, 102, pp. 53-75.

Holtz-Eakin, D. D. Joulfaian, and R. S. Harvey, (1994b),"Sticking it out, entrepreneurial survival and liquidity constraints," <u>Rand Journal of Economics</u>, 25(2), Summer, pp. 334-347.

Horne, D. (1994), "Evaluating the role of race in mortgage lending," <u>FDIC Banking Review</u>, 7(1), Spring/Summer, pp. 1-15.

Hout, M. and H. Rosen (2000), "Self-Employment, family background, and race," <u>Journal of Human Resources,</u> 35 no.4, Fall, 670-92.

Hurst, E. and A. Lusardi (2004), "Liquidity Constraints, Household Wealth, and Entrepreneurship," <u>Journal of Political Economy</u>, April, Vol. 112(2), pp. 319-347.

Jappelli, J. (1990), "Who is credit constrained in the U.S. economy?," <u>Quarterly Journal of Economics</u>, 105(1), February, pp. 219-234.

Kanbur, S.M.R. (1990), "Entrepreneurial risk taking, inequality, and public policy, an application of inequality decomposition analysis to the general equilibrium effects of progressive taxation," <u>Journal of Political Economy,</u> 90, 1-21.

Kidd, M. (1993) "Immigrant wage differentials and the role of self-employment in Australia," <u>Australian Economic Papers,</u> 32, no.60, June, 92-115.

Kihlstrom, R.E. and J. J. Laffont (1979), "A general equilibrium entrepreneurial theory of firm formation based on risk aversion," Journal of Political Economy, 87, 719-848.

King, Miriam, Steven Ruggles, Trent Alexander, Donna Leicach, and Matthew Sobek (2009), Integrated Public Use Microdata Series, Current Population Survey: Version 2.0. [Machine-readable database]. Minneapolis, MN: Minnesota Population Center [producer and distributor].

Kuhn, P.J. and H. J. Schuetze (1998), "The dynamics of self-employment in Canada," working paper, McMaster University.

Ladd, H.F. (1998), "Evidence on discrimination in mortgage lending," Journal of Economic Perspectives, 12(2), Spring, pp. 41-62.

Laferrere, A. and P. McEntee, "Self-employment and intergenerational transfers of physical and human capital, An empirical analysis of French data," Economic and Social Review 27 no.1 (October 1995), 43-54.

Lentz, B. F. and D. N. Laband (1990), "Entrepreneurial success and occupational inheritance among proprietors," Canadian Journal of Economics, 23, 563-579.

Lindh, T. and H. Ohlsson (1996), "Self-employment and windfall gains, Evidence from the Swedish lottery," Economic Journal, 106(439), November, pp. 1515-1526.

Long, J. E., (1982), "The income tax and self-employment," National Tax Journal 35, March, pp. 31-42.

Mach, T.L. and J.D. Wolken (2006). "Financial services used by small businesses: evidence from the 2003 Survey of Small Business Finances," Federal Reserve Bulletin, October 2006.

Maddala, G. S. and R. P. Trost (1994), "On measuring discrimination in loan markets," United Kingdom, Elgar, G.S. Maddala (ed.), Econometric Methods and Applications, 2, pp. 267-290.

Meager, N. (1992)"Does unemployment lead to self-employment?" Small Business Economics, 4, 87-103.

Mora, M.T. and A. Dávila (2006), "Mexican immigrant self-employment along the U.S.-Mexico border: an analysis of 2000 Census data", Social Science Quarterly, 87(1), March.

Munnell, A. G., M. B. Tootell, L. E. Browne, and J. McEneaney (1996), "Mortgage lending in Boston, interpreting HMDA data," American Economic Review, March 1996, 86(1), pp. 25-53.

Myrdal, G. (1944), An American dilemma, the negro problem and modern democracy, Volume 1, New York, Harper & Row.

Oaxaca, R. L. (1973), "Male-female wage differences in urban labor markets," <u>International Economic Review,</u> 14(3), October, pp. 693-709.

Olson, P.D., V. S. Zuiker and C.P. Montalto (2000), "Self-employed Hispanics and Hispanic wage earners: differences in earnings," <u>Hispanic Journal of Behavioral Sciences</u>, 22, pp. 114-130.

Parker, S. C. (2004), <u>The Economics of Self-Employment and Entrepreneurship</u>. Cambridge: Cambridge University Press.

Pickles, A. R. A. R. and P. N. O'Farrell (1987), "An analysis of entrepreneurial behavior from male work histories," <u>Regional Studies,</u> 21, 425-444.

Quinn, J. F. (1980), "Labor force participation patterns of older self-employed workers," <u>Social Security Bulletin,</u> 43, 17-28.

Reardon, E. (1998), "Are the self-employed misfits or superstars?" working paper, Rand Corporation.

Rees, H. and A. Shah (1986), "An empirical analysis of self-employment in the UK," <u>Journal of Applied Econometrics,</u> 1, 95-108.

Robles, B.J. and H. Cordero-Guzmán (2007), "Latino self-employment and entrepreneurship in the United States: an overview of the literature and data sources," <u>The Annals of the American Academy of Political and Social Science</u>, 613; pp. 18-31.

Robson, M. T. (1998), "The rise in self-employment amongst UK males," <u>Small Business Economics,</u> 10, no.3, 199-212

Robson, M. T. (1998), "Self-employment in the UK regions," <u>Applied Economics,</u> 30, no.3, March, pp. 313-322.

Schuetze, H.J. (1998), "Taxes, economic conditions and recent trends in male self-employment; a Canada-U.S. comparison," working paper, McMaster University, Hamilton, Ontario, Canada.

Taylor, M. P. (1996), "Earnings, independence or unemployment; why become self-employed?" <u>Oxford Bulletin of Economics and Statistics,</u> 58, 2, 253-265.

Tootell, G. M. B. (1996), "Turning a critical eye on the critics," <u>Mortgage lending, racial discrimination and federal policy</u>, edited by J. Goering and R. Wienk, Urban Institute Press, Washington, D.C.

U.S. Chamber of Commerce (2005), <u>Access to capital, what funding sources work for you?</u> U.S. Chamber of Commerce, Washington DC.

Yezer, M. J., R. F. Phillips, and R. P. Trost (1994), "Bias in estimates of discrimination and default in mortgage lending; the effects of simultaneity and self-selection," <u>Journal of Real Estate Finance and Economics</u>, 9(3), pp. 196-215.

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

Wainwright, J. S. (2000), "Racial discrimination and minority business enterprise, evidence from the 1990 Census," <u>Studies in Entrepreneurship Series</u>. Edited by S. Bruchey. New York, Garland Publishing.

X. Glossary

Aggregation, aggregated: Refers to the practice of combining smaller groups into larger groups. In the present context this term is typically used in reference to the presentation of utilization, availability, or related statistics according to industry. For example, statistics presented for the "Construction" sector as a whole are more aggregated than separate statistics for "Building Construction," "Heavy Construction," and Special Trades Construction" industries. See also "Disaggregation, disaggregated."

Anecdotal evidence: Qualitative data regarding business owners' accounts of experiences with disparate treatment and other barriers to business success.

Availability: A term of art in disparity studies that refers to the percentage of a given population of businesses owned by one or more groups of interest. *See also* Utilization, Disparity Ratio.

Baseline Business Universe: The underlying population of business establishments that is used in an availability analysis. The denominator in a M/WBE availability measure.

Capacity: This term has no single definition. See Chapter II for an extended discussion of this concept and its role in disparity studies.

Metropolitan Statistical Area (MSA). As defined by the federal Office of Management and Budget, an MSA contains at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.

***De novo*:** "Anew." A *de novo* review is a completely new review of evidence held in a higher or appellate court as if the original trial court's review had never taken place.

Decennial: Refers to the census conducted every decade by the U.S. Census Bureau. The last decennial census was conducted in 2000. The next is currently underway as of this writing (in 2010).

Dependent variable: In a regression analysis, a variable whose value is postulated to be influenced by one or more other, "independent" or "exogenous" or "explanatory," variables. For example, in business owner earnings regressions, business owner earnings is the dependent variable, and other variables, such as industry, geographic location, or age are the explanatory variables. *See also* "Independent variable," "Exogenous variable."

Disaggregation, disaggregated: Refers to the practice of splitting larger groups into smaller groups. In the present context this term is typically used in reference to the presentation of utilization, availability, or related statistics according to industry. For example, statistics presented for "Building Construction," "Heavy Construction," and Special Trades Construction" industries are more disaggregated than statistics for the "Construction" sector as a whole.

Disparate impact: A synonym for "disparity," often used in the employment discrimination litigation context. A disparate impact occurs when a "good" outcome for a given group occurs significantly less often than expected given that group's relative size, or when a "bad" outcome occurs significantly more often than expected.

Disparity ratio: A measure derived from dividing utilization by availability and multiplying the result by 100. A disparity ratio of less than 100 indicates that utilization is less than availability. A disparity ratio of 80 or less can be taken as evidence of disparate impact. *See also* Availability, Constitutional Significance, Utilization.

Econometrics, econometrically: Econometrics is the field of economics that concerns itself with the application of statistical inference to the empirical measurement of relationships postulated by economic theory. *See also* "Regression."

Independent variable: In a regression analysis, one or more variables that are postulated to influence or explain the value of another, "dependent" variable. For example, in business owner earnings regressions, business owner earnings is the dependent variable, and other variables, such as industry, geographic location, or age are the independent or explanatory variables. *See also* "Dependent variable," "Exogenous variable."

Mean: A term of art in statistics, synonymous in this context with the arithmetic average. For example, the mean value of the series 1, 1, 2, 2, 2, 4, 5 is 2.43. This is derived by calculating the sum of all the values in the series (*i.e.* 17) and dividing that sum by the number of elements in the series (*i.e.* 7).

Median: A term of art in statistics, meaning the middle value of a series of numbers. For example, the median value of the series 1, 1, 2, 2, 2, 4, 5 is 2.

Microdata or micro-level data: Quantitative data rendered at the level of the individual person or business, as opposed to data rendered for groups or aggregates of individuals or businesses. For example, Dun and Bradstreet provides micro-level data on business establishments. The Census Bureau's *Survey of Business Owners*, provides grouped or aggregated data on businesses.

Misclassification: In the present context, this term refers to a situation when a listing or directory of minority-owned or women-owned firms has incorrectly classified a firm's race or gender status. For example, when a firm listed as Hispanic-owned is actually African-American owned, or when a firm listed as White female-owned is actually White male-owned. *See also* "Nonclassification."

NAICS: North American Industry Classification System. The standard system for classifying industry-based data in the U.S. Superceded the Standard Industrial Classification (SIC) System in 1997. *See also* "SIC."

Nonclassification: In the present context, this term refers to a type of misclassification when a listing or directory has not identified firms as minority-owned or women-owned when, in fact, they are. See "Misclassification."

PUMS: Public Use Microdata Sample. Both the decennial census and the American Community Survey publish PUMS products.

p-value: A standard measure used to represent the level of statistical significance. It states the numerical probability that the stated relationship is due to chance alone. For example, a p-value of 0.05 or 5% indicates that the chance a given statistical difference is due purely to chance is 1-in-20. *See also* "Statistical Significance."

Regression, multiple regression, multivariate regression: A type of statistical analysis which examines the correlation between two variables ("regression") or three or more variables ("multiple regression" or "multivariate regression") in a mathematical model by determining the line of best fit through a series of data points. Econometric research typically employs regression analysis. *See also* "Econometrics."

SBO: The Census Bureau's *Survey of Business Owners* statistical data series. Part of the five-year *Economic Census* series.

SIC: Standard Industrial Classification System. Prior to 1997, the standard system for classifying industry-based data in the U.S. Superceded by the North American Industry Classification System (NAICS). *See also* "NAICS."

Statistical significance: A statistical outcome or result that is unlikely to have occurred as the result of random chance alone. The greater the statistical significance, the smaller the probability that it resulted from random chance alone. *See also* "p-value."

Stratified: In the present context, this refers to a statistical practice where random samples are drawn within different categories or "strata" such as time period, industry sector, or DBE status.

t-test, t-statistic, t distribution: Often employed in disparity studies to determine the statistical significance of a particular disparity statistic. A t-test is a statistical hypothesis test based on a test statistic whose sampling distribution is a t-distribution. Various t-tests, strictly speaking, are aimed at testing hypotheses about populations with normal probability distributions. However, statistical research has shown that t-tests often provide quite adequate results for non-normally distributed populations as well.

Two-tailed (or two-sided) statistical test: A "two-tailed" test means that one is testing the hypothesis that two values, say u (utilization) and a (availability), are equal against the alternate hypothesis that u is not equal to a. In contrast, a one-sided test means that you are testing the hypothesis that u and a are equal against the alternate hypothesis u is not equal to a in only one direction. That is, that it is either larger than a or smaller than a.

Utilization: A term of art in disparity studies that refers to the percentage of a given amount of contracting and/or procurement dollars that is awarded or paid to businesses owned by one or more groups of interest. *See also* Availability, Disparity Ratio.