

**THE STATE OF
MINORITY- AND WOMEN-OWNED BUSINESS
ENTERPRISES
IN THE
AUSTIN, TEXAS CONSTRUCTION ECONOMY**

**PREPARED FOR
THE CITY OF AUSTIN, TEXAS**

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I. Introduction and Executive Summary

The City of Austin commissioned this Study of the City of Austin's Minority- and Women-Owned Business Enterprise Program for construction and construction-related professional services for two purposes: to meet its constitutional obligations in implementing a race- and gender-conscious program, as well as to examine the Program's operations for effectiveness and best procurement practices. Austin has been operating a Minority- and Women-Owned Business Enterprise (M/WBE) Program since 1987. The City of Austin has become a recognized leader in affirmative action in public contracting, and serves as the model for other governments. To continue its place at the forefront of such initiatives, we undertook the following analyses.

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

Chapter III presents prior evidence of discrimination in the Austin marketplace, as documented in earlier City studies. These studies, going back many years, provide anecdotal and statistical evidence of barriers faced by M/WBEs in obtaining City contracts. These studies formed the bases for Austin's current M/WBE ordinance.

Chapter IV presents quantitative evidence of disparities in the business formation rates of minorities and women compared to similarly situated white male, and the earnings from the businesses that minorities and women do form. Chapter IV also demonstrates that current M/WBE availability in the City of Austin is substantially and

statistically significantly lower than those that would be expected to be observed if commercial markets operated in a race- and sex-neutral manner. This finding suggests that minorities and women are substantially and significantly less likely to own their own businesses as the result of discrimination than would be expected based upon their observable characteristics including age, education, geographic location, and industry. We found that these groups also suffer substantial and significant earnings disadvantages relative to comparable White males whether they work as employees or as entrepreneurs.

Chapter V develops new anecdotal evidence of minorities' and women's experiences with discrimination and Austin's M/WBE Program, through in depth focus groups of minorities, women and non-minority males in the construction industry. In general, minorities and women reported that they still encounter significant barriers to doing business in the public and private sector market places in Austin. They often suffer from stereotypes about their suspected lack of competence and are subject to higher performance standards than similar White men. They encounter discrimination in obtaining loans and surety bonds. While achieving some success in being awarded City contracts and subcontracts, M/WBEs report that it is still unusual for them to receive prime contracts. Further, very few M/WBEs have obtained work in the private sector. Prime contractors and consultants that use them on projects with affirmative action goals seldom or never use them, or even solicit them, for participation on non-goals jobs. Minorities and women attributed this market failure to active and passive discrimination. M/WBEs and non-M/WBEs also commented extensively on the Program, including goal setting, bidding, and contract administration. While there was overall praise for the City's efforts, some areas of operation were reported to need improvement, and many suggestions were offered for consideration.

Chapter VI reviews the operations of the Department of Small and Minority Business Resources (DSMBR), which administers the M/WBE Program. We interviewed City personnel about their experiences with and recommendations regarding all aspects of the Program, including goal setting, data collection, bid and

proposal evaluation, contract administration, M/WBE certification, sanctions and other issues.

II. Legal Standards for Government Affirmative Action Contracting Programs

Like many local governments, Austin has long been committed to including M/WBEs in its contracting activities. The courts have made it clear, however, that in order to implement a race- and gender-based program that is effective, enforceable and legally defensible, Austin must meet the judicial test of constitutional “strict scrutiny” to determine the legality of such initiatives. Strict scrutiny requires current “strong evidence” of the persistence of discrimination and “narrowly tailored” measures to remedy that discrimination.

A. General Overview of Strict Scrutiny

This area of constitutional law is complex and constantly shifting, and cases are quite fact specific. Over the last 17 years, federal appellate and district courts have developed parameters for establishing a government’s compelling interest in remedying discrimination and evaluating whether the remedies adopted to address that discrimination are narrowly tailored. The following are the legal evidentiary and program development issues Austin must consider in evaluating whether to continue to implement a M/WBE Program, and if so, whether to revise the existing Program.

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

City of Richmond v. J.A. Croson Co.,¹ established the constitutional contours of permissible race-based public contracting programs. Reversing long established law, the Supreme Court for the first time extended the highest level of judicial examination to legislation that benefits the historic victims of discrimination. Strict scrutiny requires that a government entity prove both its “compelling interest” in remedying identified discrimination based upon “strong evidence,” and that the measures adopted to remedy that discrimination are “narrowly tailored” to that evidence. However benign the government’s motive, race is always so suspect a classification that its use must pass the highest constitutional test of “strict scrutiny.”

¹ 488 U.S. 469 (1989).

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

In affirming the court of appeal's 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.²

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.³ It further ensures that the means chosen "fit" this compelling goal

² *Id.* at 491-92.

³ See also *Grutter v. Bollinger*, 123 S. Ct. 2325, 2338 (2003) ("Not every decision influenced by race is equally objectionable, and strict scrutiny is designed to provide a framework for carefully examining the importance and the sincerity of the reasons advanced by the governmental decision maker for the use of race in that particular context.").

so closely that there is little or no possibility that the motive for the classification was illegitimate racial prejudice or stereotype. The Court made clear that it is racial stigma that strict scrutiny seeks to expose; racial classifications are said to create racial hostility if they are based on notions of racial inferiority.⁴

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.⁵

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.⁶ 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.⁷ 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

⁴ *Id.* at 493.

⁵ *Id.* at 499.

⁶ *Id.*

⁷ *Id.* at 502.

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.⁸

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."⁹

The foregoing analysis was applied only to Blacks. The Court then emphasized that there was "absolutely no evidence" against other non-Whites. "The random inclusion of racial groups that, as a practical matter, may have never suffered from discrimination in the construction industry in Richmond, suggests that perhaps the City's purpose was not in fact to remedy past discrimination."¹⁰

Having found that Richmond had not presented evidence in support of its compelling interest in remedying discrimination, the Court went on to make two observations about the narrowness of the remedy. 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.¹¹ Further, Justice O'Connor rejected the argument that individualized consideration of Plan eligibility is too administratively burdensome.

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

Nothing we say today precludes a state or local entity from taking action to rectify the effects of identified discrimination within its jurisdiction. If the City of Richmond had evidence before it that non-minority contractors were systematically excluding minority businesses from subcontracting opportunities it could take action to end the discriminatory exclusion. Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service

⁸ *Id.* at 504.

⁹ 488 U.S. at 510.

¹⁰ *Id.*

¹¹ See *Grutter*, 123 S. Ct. at 2343 (quotas are not permitted; race must be used in a flexible, non-mechanical way).

and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise. Under such circumstances, the City could act to dismantle the closed business system by taking appropriate measures against those who discriminate on the basis of race or other illegitimate criteria. In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion. Moreover, evidence of a pattern of individual discriminatory acts can, if supported by appropriate statistical proof, lend support to a local government's determination that broader remedial relief is justified.¹²

2. Strict scrutiny as applied to federal enactments

In *Adarand v. Peña*,¹³ the Court again overruled long settled law and extended the application of strict scrutiny under the Fifth Amendment's Due Process Clause 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.¹⁴

In the wake of *Adarand*, Congress reviewed and revised the Disadvantaged Business Enterprise (DBE) Program statute¹⁵ and implementing regulations¹⁶ 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.¹⁷ While binding strictly only upon the DBE Program, these cases provide important guidance to a local government about the types of evidence necessary to establish its compelling interest in adopting affirmative action contracting remedies and how to narrowly tailor those remedies.

¹² 488 U.S. at 509 (citations omitted).

¹³ 515 U.S. 200 (1995) (*Adarand III*).

¹⁴ *Adarand Constructors, Inc. v. Peña*, 965 F. Supp. 1556, 1569 (D. Colo. 1997) *rev'd*, 228 F.3d 1147 (2000) ("*Adarand IV*"); *see also Adarand III*, 515 U.S. at 227.

¹⁵ Transportation Equity Act for the 21st Century (TEA-21), Pub. L. No. 105-178 (b)(1), 112 Stat. 107, 113.

¹⁶ 49 CFR Part 26.

¹⁷ *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).

For example, in *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*,¹⁸ the court held that Congress had strong evidence of widespread race discrimination in the construction industry.¹⁹ The court took a “hard look” at the evidence Congress considered, and concluded that the legislature had spent decades compiling evidence of race discrimination in government highway contracting, of barriers to the formation of minority-owned construction businesses, and of barriers to entry. In rebuttal, the plaintiff presented evidence that the data were susceptible to multiple interpretations, but failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.²⁰

Next, the regulations were facially narrowly tailored, as was the state’s application of those regulations. Unlike the prior Program, Part 26 provides that:

- The overall goal must be based upon demonstrable evidence of the number of DBEs ready, willing and able to participate on the recipient’s federally assisted contracts.
- The goal may be adjusted upwards 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 only to those severe situations in which no other remedy will be effective.
- The goals must 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.
- Exemptions and waivers from any or all Program requirements are available.

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

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

²⁰ *Id.* at 970; see also *Western States, ibid.*

These elements led the court to conclude that the Program is narrowly tailored on its face. First, the regulations place strong emphasis on the use of race-neutral means to achieve minority and women participation. Relying upon *Grutter v. Bollinger*, the court held that while “[n]arrow tailoring does not require the exhaustion of every conceivable race-neutral alternative ... it does require serious, good faith consideration of workable race-neutral alternatives.”²¹

The DBE Program is also flexible. Eligibility is limited to small firms owned by persons whose net worth is less than \$750,000. There are built-in Program time limits, and the State may terminate its program if it meets its annual overall goal through race-neutral means for two consecutive years. Moreover, required Congressional reauthorization 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*.”²²

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.”²³

Turning to the Minnesota Department of Transportation’s (Mn/DOT) application of the regulations to its individual circumstances, the court also held that the results of the regulations as applied were sufficiently narrowly tailored. Mn/DOT relied upon a study conducted by National Economic Research Associates, Inc. (NERA) and Colette Holt & Associates to set its DBE goal. In addition to an availability analysis, the Mn/DOT Study, like this Austin report, examined disparities in the business formation

²¹ *Sherbrooke*, 345 F.3d. at 972.

²² *Id.* at 973.

²³ *Id.*

rates and business earnings of minorities and women compared to similarly-situated White males. The Eighth Circuit opined that while plaintiff

presented evidence attacking the reliability of NERA's data, it failed to establish that better data was [sic] available or that Mn/DOT was otherwise unreasonable in undertaking this thorough analysis and in relying on its results. The precipitous drop in DBE participation in 1999, when no race-conscious methods were employed, supports Mn/DOT's conclusion that a substantial portion of its 2001 overall goal could not be met with race-neutral measures, and there is no evidence that Mn/DOT failed to adjust its use of race-conscious and race-neutral methods as the year progresses as the DOT regulations require.²⁴

In the most recent judicial review of the constitutionality of the DBE Program, and a recipient's implementation of the regulations, the district court upheld the constitutionality of the Illinois Department of Transportation's (IDOT) DBE Program. In its first opinion, the court held that Part 26 is facially constitutional, relying heavily on *Adarand VII* and *Sherbrooke*.²⁵ After a thorough review of the evidence considered by Congress in reauthorizing and revising the DBE Program, the judge granted summary judgment for the federal defendants because

despite the voluminous "evidence" Plaintiff offers to nullify the data relied on by Congress and the *Adarand VII* court, Plaintiff has not met its burden "of introducing credible, particularized evidence to rebut the government's initial showing of the existence of a compelling interest in remedying the nationwide effects of past and present discrimination in the federal construction procurement subcontracting market." *Adarand VII*, 228 F.3d at 1175.²⁶

In the second opinion, rendering verdict after trial on the claim against the State defendant, the court held that IDOT's DBE Program was narrowly tailored as applied.²⁷ To determine whether IDOT met its constitutional and regulatory burdens, the court reviewed the evidence of discrimination against minority and women construction firms in the Illinois area. IDOT had commissioned a NERA Study to meet Part 26's requirements. 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

²⁴ *Id.*

²⁵ *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2004 U.S. Dist. LEXIS, 3226 (N.D. Ill., Mar. 3, 2004) ("*Northern Contracting I*").

²⁶ *Id.* at 64.

²⁷ *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2005 U.S. Dist. LEXIS 19868 (N.D. Ill. Sept. 8, 2005) ("*Northern Contracting II*"). Ms. Holt and Dr. Wainwright testified as IDOT's expert witnesses at the trial.

percent of IDOT's available firms.²⁸ The IDOT Study next examined whether and to what extent there are disparities between the rates at which DBEs form businesses relative to similarly situated White men, and the relative earnings of those businesses. If disparities are large and statistically significant, then the inference of discrimination can be made. Controlling for numerous variables such as the owner's age, education, and the like, the Study found that in a race- and gender-neutral marketplace the availability of DBEs would be approximately 20.8 percent higher, for an estimate of DBE availability "but for" discrimination of 27.51 percent.

In conformance with Part 26's "step 2" analysis of the availability of DBEs "but for" the operation of the DBE program and the effects of discrimination,²⁹ IDOT relied upon a NERA Study conducted for Metra, the Chicago suburbs' commuter railroad.³⁰ The Metra Study included a survey in which 50.6 percent of minority- or women-owned construction firms reported that firms that use or solicit their services on contracts with race or gender participation goals rarely or never solicit or subcontract with their firms on non-goals projects. Similarly, 54.1 percent of minority- or women-owned professional services firms reported that they were seldom or never solicited to bid for non-goals projects. In addition, the Metra Study found that DBEs suffered discrimination in the markets for construction loans. Specifically, the Study found that, controlling for creditworthiness, DBEs were more likely to have loan applications denied, and when such loans are approved, were more likely to pay higher interest rates. Finally, the Metra Study found disparities in the earnings and business formation rates of minorities and women similar to those found in the IDOT Study.

In addition to the NERA Studies, the court reviewed the evidence presented to the Chicago City Council in support of its revised M/WBE Construction Program ordinance in 2004. In addition to other expert reports, the court relied upon an expert report prepared by Dr. David Blanchflower that examined and compared the rates of business formation for minorities and women with those of white males within the City of

²⁸ This baseline figure of DBE availability is the "step 1" estimate U.S. DOT grant recipients must make pursuant to 49 CFR §26.45(c).

²⁹ 49 CFR §26.45(d).

³⁰ NERA Economic Consulting, 2000, "Disadvantaged Business Enterprise Availability Study," prepared for the Northeast Illinois Regional Commuter Rail Corporation D/B/A Metra.

Chicago. Using 2000 U.S. Census Bureau data, Dr. Blanchflower concluded that, after controlling for relevant variables such as credit worthiness, minorities and women are less likely to form businesses, and that when they do form businesses, those businesses achieve lower earnings than businesses owned by white males.

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

IDOT also presented and the judge relied upon "unremediated market data." This proof established that DBE participation on contracts without race- or gender-conscious subcontracting goals was well below DBE utilization on contracts that had such goals in the same market place. Such data were evidence of what IDOT's market conditions would look like in the absence of DBE goals, and thus were relevant both to the continuing effects of discrimination as well as to whether IDOT could achieve its overall DBE goal without using race-conscious subcontracting goals.

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

At trial, DBEs testified regarding the difficulties they face in obtaining IDOT prime contracts and subcontracts and described instances in which they believed they were discriminated against based on their race or gender. The witnesses recounted their struggles to obtain work in the private sector and unanimously reported that they were rarely invited to bid on such contracts. They explained that they were reluctant to submit unsolicited bids due to the expense involved as well, as the low success rate of such bids. A number of DBEs identified specific firms for which they had successfully completed subcontracting work on goals projects, but who nevertheless rarely solicited them to submit bids for subcontracts on non-goals projects. Several DBEs also testified about incidents of direct discrimination in the industry and recounted discrimination in obtaining financing, bonds and insurance. Finally, DBEs reported that they encountered difficulties in obtaining prompt payment for their work, leading to serious cash-flow problems and jeopardizing their businesses' success. Since public agencies are more likely to pay slowly, the DBEs desired more non-goals private sector work, where prompt payment is the norm. Their greater reliance on public work because of barriers to obtaining private work further increased their vulnerabilities.

Based upon this record, the court held that IDOT's DBE 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."³¹

3. Preferences for women

Whether affirmative action procurement programs that benefit women are subject to the lesser constitutional standard of "intermediate scrutiny" has yet to be settled by the Supreme Court.³² Most courts have applied intermediate scrutiny to preferences for women, and then upheld or struck down the female preference under that standard.³³ This is probably a distinction without meaningful difference, as only one post-*Croson* court has upheld WBE provisions while striking down M/WBE measures.³⁴ Further, as observed by the Seventh Circuit Court of Appeals, applying intermediate scrutiny to gender "creates the paradox that a public agency can provide stronger remedies for sex discrimination than for race discrimination; it is difficult to see what sense that makes."³⁵ Therefore, Austin 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.³⁶ There is no need of

³¹ *Northern Contracting II*, at *82 (internal citations omitted); see *Croson*, 488 U.S. at 492.

³² *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).

³³ 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*, 122 F.3d 895, 907-910 (11th Cir. 1997) ("*Engineering Contractors II*") (WBE program need not be supported by evidence of governmental discrimination nor the remedy of last resort; it must only be the product of analysis rather than stereotype); *Concrete Works, Inc. v. City and County of Denver*, 36 F.3d 1513, 1519 (10th Cir. 2003) ("*Concrete Works II*"); *Contractors Association of Eastern Pennsylvania v. City of Philadelphia*, 6 F.3d 990, 1009 (3rd Cir. 1993) ("*Philadelphia II*"); *Coral Construction Co. v. King County*, 941 F.2d, 910, 930-931 (9th Cir. 1991); but see *Brunet v. City of Columbus*, 1 F.3d 390, 404 (6th Cir. 1993) (applying strict scrutiny).

³⁴ *Coral Construction*, 941 F.2d at 932 (applying intermediate scrutiny); cf. *Western States*, 407 F.3d. at ____ (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).

³⁵ *Builders Association of Greater Chicago v. County of Cook*, 256 F.3d 642, 644 (7th Cir. 2001).

³⁶ *Adarand VII*, 228 F.3d at 1166; *Scott*, 199 F.3d at 219.

formal legislative findings,³⁷ nor “an ultimate judicial finding of discrimination before [a local government] can take affirmative steps to eradicate discrimination.”³⁸ When the statistical information is sufficient to support the inference of discrimination, the plaintiff must prove that the statistics are flawed.³⁹ A plaintiff cannot rest upon general criticisms of studies or other evidence; it must carry the case that the government’s proof is inadequate to meet strict scrutiny, rendering the legislation illegal.⁴⁰ The determination whether a plaintiff has met this burden is a question of law, subject to *de novo* review.⁴¹

5. *Concrete Works of Colorado, Inc. v. City and County of Denver*

Given the crucial status of the Tenth Circuit Court of Appeals’ decision in *Concrete Works of Colorado, Inc. v. City and County of Denver* (“*Concrete Works IV*”), upholding Denver’s M/WBE Program after more than a decade of litigation, and the extensive treatment of the City’s compelling interest in remedying discrimination in its market place in that opinion, a thorough discussion of the case is highly probative for any local government considering an affirmative action contracting program.

a. Procedural background

Denver adopted the challenged M/WBE ordinance in 1990. The Program set annual goals of 16 percent for MBEs and 12 percent for WBEs in construction contracts, and 10 percent for both MBEs and WBEs in professional design and construction services contracts. Bidders were to meet contract specific goals or make good faith efforts to do so. The City revised the Program in 1996 and 1998, reducing the annual goals for both MBEs and WBEs in construction contracts to 10% and prohibiting M/WBEs from counting self- performed work towards the goals.

Plaintiff Concrete Works of Colorado, Inc. (CWC), a large construction firm owned by a White male, sued the City in 1992, alleging that it had been denied three

³⁷ *Webster v. Fulton County, Georgia*, 51 F.Supp.2d 1354, 1364 (N.D. Ga. 1999).

³⁸ *Concrete Works II*, 36 F.3d at 1522.

³⁹ *Engineering Contractors II*, 122 F.3d at 916; *Coral Construction*, 941 F.2d at 921.

⁴⁰ *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).

⁴¹ *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”).

contracts for failure to meet the goals or to make good faith efforts to do so and seeking injunctive relief and money damages. The district court granted the City's motion for summary judgment.⁴² The Tenth Circuit reversed and remanded, holding that genuine issues of material fact precluded summary judgment.⁴³ The district court, after a bench trial, held the ordinance to be unconstitutional.⁴⁴ Denver appealed.⁴⁵

b. Denver's trial evidence

Denver introduced evidence of its contracting activities dating back to the early 1970s. This consisted of reports of federal investigations into the utilization and experiences of local MBEs and of the City's early affirmative action efforts. M/WBE participation dramatically increased when the City implemented its first MBE ordinance in 1984. After conducting surveys and hearings, Denver extended the Program and increased the goals in 1988.

To comply with *Croson*, the City commissioned a study to assess the propriety of the Program. The 1990 Study found large disparities between the availability and utilization of M/WBEs on City projects without goals. It likewise found large disparities on private sector projects without goals. Interviews and testimony revealed continuing efforts by White male contractors to circumvent the goals. After reviewing the statistical and anecdotal evidence, the City adopted the 1990 Ordinance. A 1991 Study of goods, services and remodeling industries also found large disparities for City contracts not subject to goals.

When the Tenth Circuit reversed and remanded for trial in *Concrete Works II*, the City commissioned another study. The 1995 Study used U.S. Census Bureau data to determine MBE and WBE availability and utilization in the construction and design

⁴² *Concrete Works of Colorado, Inc. v. City and County of Denver*, 823 F.Supp. 821 (D. Colo. 1993) ("*Concrete Works I*").

⁴³ *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, (10th Cir. 1994) ("*Concrete Works II*").

⁴⁴ *Concrete Works of Colorado, Inc. v. City and County of Denver*, 86 F.Supp.2d 1042 (D. Colo. 2000) ("*Concrete Works III*").

⁴⁵ The Tenth Circuit held that CWC's claims for prospective injunctive relief against the operation of the 1990 and 1996 ordinances became moot as each was amended and replaced by the 1998 ordinance. Plaintiff's retrospective claim for money damages for the enforcement of the 1990 ordinance was not moot.

industries in the Denver Metropolitan Statistical Area (MSA). It calculated separate disparity indices for firms with and without paid employees. Census data were also used to examine average revenues per employee and rates of self-employment. Disparities in self-employment rates persisted even after holding education and length of work experience constant. A telephone survey to determine the availability and utilization of M/WBEs in the Denver MSA showed large disparities in the construction and professional design industries. The 1995 Study included discussion of a 1993 Study for the Denver Housing Authority that found disparities for M/WBEs in some areas in some years, including those when it implemented an affirmative action program, and a 1992 Study for the Regional Transportation District that found large disparities for both prime and subcontracting in the Denver marketplace. Based upon this evidence, the City enacted the 1996 Ordinance.

In 1997, Denver commissioned a study from NERA to examine whether discrimination limited the opportunities of M/WBEs in construction projects of the type undertaken by the City. The Tenth Circuit found this Study used a "more sophisticated" method to calculate availability by: (1) specifically determining the City's geographic and procurement marketplace; (2) using Dun & Bradstreet's *Marketplace* data to obtain the total number of available firms and numerous directories to determine the number of M/WBEs; (3) conducting surveys to adjust for possible misclassification of the race and gender of firms; and (4) presenting a final result of weighted averages of availability for each racial group and women for both prime contracts and subcontracts.

The 1997 NERA Study next compared M/WBE availability and utilization in the Colorado construction industry. It also examined 1987 Census data, the most current then available. All comparisons yielded large and statistically significant disparities. The 1997 Study also found that the potential availability of M/WBEs, as measured by the rates at which similarly situated White males form businesses, was significantly greater than their actual availability. The Study next examined whether minorities and women in the construction industry earned less than White males with similar characteristics. Large and statistically significant disparities were found for all groups except Asian-Americans. A mail survey was conducted to obtain anecdotal evidence of

the experiences of M/WBEs and non-M/WBEs in the construction industry. Again, with the exception of Asian-Americans, minorities and women with similar characteristics experienced much greater difficulties than their white male counterparts. A follow up telephone survey indicated that the disparities were even greater than first indicated. Based upon the 1997 Study, the City enacted the 1998 Ordinance.

At trial, the City introduced additional anecdotal evidence. M/WBEs testified that they experienced difficulties in pre-qualifying for private sector jobs; their low bids were rejected; they were paid more slowly than non-M/WBEs; they were charged more for materials than non- M/WBEs; they were often required to do additional work not required of White males; and there were barriers to joining trade unions and associations. There was extensive testimony detailing the difficulties M/WBEs suffered in obtaining lines of credit. The "most poignant" testimony involved blatant harassment suffered at work sites, including physical assaults.

c. Legal analysis and holdings

In reversing the judgment in favor of the plaintiff, the Tenth Circuit held that the district court's legal framework "misstate[d] controlling precedent and Denver's burden at trial."⁴⁶ The trial judge had rejected the City's evidence because it did not answer the following questions:

(1) Is there pervasive race, ethnic and gender discrimination throughout all aspects of the construction and professional design industry in the six county Denver MSA? (2) Does such discrimination equally affect all of the racial and ethnic groups designated for preference by Denver and all women? (3) Does such discrimination result from the policies and practices intentionally used by business firms for the purpose of disadvantaging those firms because of race, ethnicity or gender? (4) Would Denver's use of those discriminating firms without requiring them to give work to certified MBEs and WBEs in the required percentages on each project make Denver guilty of prohibited discrimination? (5) Is the compelled use of certified MBEs and WBEs in the prescribed percentages on particular projects likely to change the discriminatory policies and programs that taint the industry? (6) Is the burden of compliance with Denver's preferential program a reasonable one fairly placed on those who are justly accountable for the proven discrimination?⁴⁷

The imposition of this framework was error.

⁴⁶ 321 F.3d at 970.

⁴⁷ *Concrete Works III*, 86 F.Supp.2d at 1066-67.

First, the government need not prove that the statistical inferences of discrimination are "correct." Strong evidence supporting Denver's determination that remedial action is necessary need not be "irrefutable or definitive" proof of discrimination. Statistical evidence creating inferences of discriminatory motivations is sufficient and therefore evidence of marketplace discrimination can be used to meet strict scrutiny. It is the plaintiff who must prove by a preponderance of the evidence that such proof does not support those inferences, and CWC failed to meet this test.⁴⁸

Croson does not require that each group included in the ordinance suffer equally from discrimination. In contrast to Richmond, Denver introduced evidence of bias against each group; that is sufficient.⁴⁹

Denver need not demonstrate that the "ordinances will *change* discriminatory practices and policies" in the local marketplace. Such a test would be "illogical" because firms could defeat the remedial efforts simply by refusing to cease discriminating.⁵⁰

Next, a municipality need not prove that

private firms directly engaged in any discrimination in which Denver passively participates do so intentionally, with the purpose of disadvantaging minorities and women.... Denver's only burden was to introduce evidence which raised the inference of discriminatory exclusion in the local construction industry and link its spending to that discrimination.... Denver was under no burden to identify any specific practice or policy that resulted in discrimination. Neither was Denver required to demonstrate that the purpose of any such practice or policy was to disadvantage women or minorities. To impose such a burden on a municipality would be tantamount to requiring proof of discrimination and would eviscerate any reliance the municipality could place on statistical studies and anecdotal evidence.⁵¹

Similarly, the trial court was wrong to reject the statistical evidence because such evidence cannot identify the individuals responsible for the discrimination.⁵² Such a stricture would render quantitative proof useless and the government helpless to adopt systemic remedies for systemic problems.

⁴⁸ *Concrete Works IV*, 321 F.3d at 975.

⁴⁹ *Id.* at 976.

⁵⁰ *Id.* at 973 (emphasis in the original).

⁵¹ *Id.* at 971.

⁵² *Id.* at 974.

Contrary to the district court's sixth question, the burden of compliance need not be placed only upon those firms accountable for the discrimination. The proper focus is whether the burden on third parties is "too intrusive" or "unacceptable"⁵³

Croson's requirement that more than "mere societal" discrimination is required is met where the government presents evidence of discrimination in the industry targeted by the program. "If such evidence is presented, it is immaterial for constitutional purposes whether the industry discrimination springs from widespread discriminatory attitudes shared by society or is the product of policies, practices, and attitudes unique to the industry.... The genesis of the identified discrimination is irrelevant." The trial court was wrong to require Denver to "show the existence of specific discriminatory policies and that those policies were more than a reflection of societal discrimination."⁵⁴

The court further rejected the notion that a municipality must prove that it is itself guilty of discrimination to meet its burden. Denver demonstrated its compelling interest by "evidence of private discrimination in the local construction industry coupled with evidence that it has become a passive participant in that discrimination ... [by] linking its spending practices to the private discrimination."⁵⁵ Denver further related its award of public dollars to discriminatory conduct through the testimony of M/WBEs that identified general contractors who used them on City projects with M/WBE goals but refused to use or even solicit them on private projects without goals.

The lending discrimination and business formation studies are relevant and probative because they show a strong link between the disbursement of public funds and the channeling of those funds due to private discrimination. "Evidence that private discrimination results in barriers to business formation is relevant because it demonstrates that M/WBEs are precluded *at the outset* from competing for public construction contracts. Evidence of barriers to fair competition is also relevant because it again demonstrates that *existing* M/WBEs are precluded from competing for public contracts."⁵⁶ Plaintiff failed to present evidence to rebut the lending discrimination data

⁵³ *Id.* at 973.

⁵⁴ *Id.* at 972-973.

⁵⁵ *Id.* at 976.

⁵⁶ *Id.* at 977 (emphasis in the original).

because it believed such evidence was irrelevant. Contrary to the trial court's ruling, the business formation studies were not flawed because they did not control for "quality of education," "culture" and "religion." Plaintiff failed not only to define such vague terms but also to conduct its own study controlling for these factors or to produce expert testimony that to do so would eliminate the disparities.⁵⁷

The trial court also erred in rejecting Denver's disparity studies because they did not control for firm size, area of specialization and whether the firm had bid on City projects. The Tenth Circuit relied upon Denver's experts in holding that while it may be true that M/WBEs are smaller in general than White male firms, most construction firms are small and can expand and contract to meet their bidding opportunities. Importantly, Denver established that size and experience are not race- and gender- neutral variables: "M/WBE construction firms are generally smaller and less experienced *because* of discrimination."⁵⁸ Further, plaintiff failed to conduct any study showing that the disparities disappear when such variables are held constant. Likewise, it presented no evidence that controlling for firm specialization explained the disparities. Finally, the number of City bidders was not an accurate measure of availability because it may have included unqualified firms; as long as the same assumptions are applied to M/WBEs and non-M/WBEs disparities must still be explained by the plaintiff. " Additionally, we do not read *Croson* to require disparity studies that measure whether construction firms are able to perform a *particular contract*."⁵⁹

That M/WBEs were overutilized on City projects with goals goes only to the weight of the evidence because it reflects 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

⁵⁷ *Id.* at 979.

⁵⁸ *Id.* at 981 (emphasis in the original).

⁵⁹ *Id.* at 983 (emphasis in the original).

discrimination in public contracting" and supports the position that discrimination was present before the enactment of the ordinances.⁶⁰

There is no requirement that anecdotal testimony be verified. "Denver was not required to present corroborating evidence and CWC was free to present its own witnesses to either refute the incidents described by Denver's witnesses or to relate their own perceptions on discrimination in the Denver construction industry."⁶¹ This "failure" of the legislative body to somehow verify testimony had been a favorite shibboleth of plaintiffs in other cases.⁶²

The court held that because plaintiff had waived its claim that the ordinances were not narrowly tailored at an earlier stage in this litigation, the district court's holding in *Concrete Works I* that the ordinances satisfy the other prong of strict scrutiny was affirmed.

In summary, the court stated that

to meet its initial burden, Denver was not required to unequivocally establish the existence of discrimination nor was it required to 'negate all evidence of non-discrimination.' [citation omitted] ... Denver met its initial burden of producing strong evidence of racial discrimination in the Denver construction industry. Denver has also shown that the gender-based measures were based on reasoned analysis. Moreover, although CWC does not raise the issue, we conclude that Denver had a strong basis in evidence to conclude that action was necessary to remediate discrimination against M/WBEs *before* it adopted both the 1990 Ordinance and the 1998 Ordinance. [citation omitted] ... CWC cannot meet its burden of proof through conjecture and unsupported criticisms of Denver's evidence.... Denver has shown that it has a compelling interest in remedying racial discrimination in the Denver construction industry and that it has an important governmental interest in remedying gender discrimination. CWC has failed to rebut Denver's showing.⁶³

6. Additional judicial analyses of compelling interest

Concrete Works is now the definitive opinion on the application of strict scrutiny to a local government's compelling interest in implementing race- and gender-conscious programs. Other cases have also examined evidence of the disparate impacts of

⁶⁰ *Id.* at 987-988

⁶¹ *Id.* at 989.

⁶² See, e.g., *Builders Association of Greater Chicago v. County of Cook*, 123 F.Supp.2d 1087, 1090 (N.D. Ill. 2000).

⁶³ 321 F.3d at 991-992.

economic factors on M/WBEs and the disparate treatment of such firms by actors critical to entrepreneurial success. Discrimination must be shown through the use of statistics and economic models to examine the effects of systems or markets on different groups, as well as by evidence of personal experiences with discriminatory conduct, policies or systems.⁶⁴ 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.⁶⁵ The following are the types of proof other courts have analyzed to evaluate whether a program passes constitutional muster.

a. Definition of the entity'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.⁶⁶ Therefore, this Study employs long established economic principles to empirically establish the geographic and industry dimensions of Austin's construction contracting marketplace, in order to ensure that the evidence is narrowly tailored.⁶⁷ Both elements are necessary to determine the reach of a M/WBE program.

b. Disparities between the availability and utilization of M/WBEs in the marketplace

Next, statistical examination of the availability of minorities and women to contract with Austin and its history of utilizing M/WBEs is required. Simple disparities between Denver's overall minority population and its utilization of M/WBEs are not enough.⁶⁸ The primary inquiry is whether there are statistically significant disparities between the availability of M/WBEs and 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

⁶⁴ See, e.g., *Adarand VII*, 228 F.3d at 1166 ("statistical and anecdotal evidence are appropriate").

⁶⁵ *Id.*

⁶⁶ 488 U.S. at 508.

⁶⁷ *Concrete Works II*, 36 F.3d at 1520 (to confine data to strict geographic boundaries would ignore "economic reality").

⁶⁸ *Croson*, 488 U.S. at 501-02; *Drabik*, 214 F.3d at 736.

contractors actually engaged by the locality or the locality's prime contractors, an inference of discrimination could arise. In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion.⁶⁹

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.⁷⁰ 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 affirmative action in contracting.⁷¹ 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 public and private sectors.⁷² Flawed availability measures have led to the demise of existing race- and gender-based programs.⁷³

c. Unremediated market data

It is also critical 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"⁷⁴ 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.⁷⁵ The courts are clear that the government

⁶⁹ *Croson*, 488 U.S. at 509; see *Webster*, 51 F.Supp.2d at 1363, 1375.

⁷⁰ See, e.g., *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); *Coalition for Economic Equity*, 950 F.2d at 1414; *Cone Corp. v. Hillsborough County*, 908 F.2d 909, 916 (11th Cir. 1990).

⁷¹ *Philadelphia III*, 91 F.3d at 603; cf. *Webster*, 51 F.Supp.2d at 1372 (no explanation for the source nor any indicia of the accuracy or reliability of availability figures).

⁷² *Webster*, 51 F.Supp.2d at 1372; see *Northern Contracting*, at *70 (IDOT's custom census approach was supportable because "discrimination in the credit and bonding markets may artificially reduce the number of registered" minority- and women-owned firms).

⁷³ See, e.g., "City of Boston Disparity Study," prepared by Mason Tillman Associates, Ltd., 2003.

⁷⁴ "Unremediated market" means "markets that do not have race- or gender-conscious subcontracting goals in place to remedy discrimination." *Northern Contracting*, at *36.

⁷⁵ See, e.g., *Western States*, 407 F.3d at ___ (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).

has a compelling interest in not financing the evil of private prejudice with public dollars.⁷⁶ 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.”⁷⁷ As held by the Tenth Circuit, such an analysis addresses whether Austin has been and continues to be a “passive participant” in such discrimination.⁷⁸ The “dramatic decline in the use of M/WBEs when an affirmative action program is terminated, and the paucity of use of such firms when no affirmative action program was ever initiated,” was proof of the government’s compelling interest in employing race- and gender-conscious measures.⁷⁹ Evidence of unremediated markets “sharpens the picture of local market conditions for MBEs and WBEs.”⁸⁰

d. Anecdotal evidence

Anecdotal evidence of experiences with discrimination in contracting opportunities, including testimony from other governments’ studies and programs, is relevant since it goes to the question of whether observed statistical disparities are due to discrimination and not to some other non-discriminatory cause or causes.⁸¹ Such proof may consist of owner interviews; statistically sound surveys; and public hearings. Anecdotal evidence about discrimination by prime contractors, unions, bonding companies, suppliers and lenders has been found relevant to the creation of barriers both to minority subcontractors’ business formation and to their success on governmental projects.⁸² While anecdotal evidence is insufficient standing alone,⁸³ “[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

⁷⁶ *Drabik*, 214 F.3d at 734-735.

⁷⁷ *Adarand VII*, 228 F.3d at 1174.

⁷⁸ *See also Philadelphia III*, 91 F.3d at 599-601.

⁷⁹ *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725, 737 (N.D. Ill. 2003).

⁸⁰ *Concrete Works II*, 36 F.3d at 1529.

⁸¹ *See, e.g., Webster*, 51 F.Supp.2d at 1363, 1379.

⁸² *Adarand VII*, 228 F.3d at 11168-1172.

⁸³ *Cf. Engineering Contractors I*, 943 F.Supp. at 1580 (anecdotal evidence cannot cure weaknesses in statistical evidence).

conditions are [sic] often particularly probative.”⁸⁴ “ [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.”⁸⁵

B. Narrowly Tailoring a M/WBE Program

The following factors must be considered in determining whether Austin’s race- and gender-based remedies 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.⁸⁶

1. Race- and gender-neutral remedies

Race- and gender-neutral approaches have become a necessary component of a defensible and effective M/WBE program.⁸⁷ Such initiatives include, for example, unbundling of contracts into smaller units, providing technical support, and addressing issues of financing, bonding and insurance important to all small and emerging businesses.⁸⁸ For example, difficulty in accessing the bidding system, restrictive bid

⁸⁴ *Concrete Works II*, 36 F.3d at 1520, 1530.

⁸⁵ *Engineering Contractors II*, 122 F.3d at 926.

⁸⁶ *United States v. Paradise*, 480 U.S. 149, 171 (1987); see also *Sherbrooke*, 345 F.3d at 971; *Drabik*, 214 F.3d at 738.

⁸⁷ *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).

⁸⁸ See 49 CFR § 26.51.

specifications, excessive experience requirements, and overly burdensome insurance and/or bonding requirements can all be corrected by Austin without resort to using race or gender in decision making. Further, governments have a duty to ferret out and punish discrimination against minorities and women by their contractors, staff, lenders, bonding companies or others.⁸⁹ At a minimum, entities must track the utilization of minority and women firms as a measure of their success in the bidding process, including as subcontractors.⁹⁰

However, strict scrutiny does not require that every race-neutral approach must be implemented and then proven to be ineffective before race-conscious remedies may be utilized.⁹¹ While an entity must give good faith consideration to race-neutral alternatives, “strict scrutiny does not require exhaustion of every possible such alternative.... Some degree of practicality is subsumed in the exhaustion requirement.... Localities are not required to pursue irrational, unworkable, ineffective or legally unavailable approaches.”⁹²

2. Goal setting

Numerical goals or benchmarks for M/WBE participation must be substantially related to their availability in the relevant market.⁹³ One unanswered question is whether goals or benchmarks for overall City 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 playing field by setting targets somewhat higher than current headcount. For example, 49 CFR Part 26 requires grant recipients to determine

⁸⁹ *Croson*, 488 U.S. at 502; *Webster*, 51 F.Supp.2d at 1380.

⁹⁰ *See, e.g., Viridi v. DeKalb County School District*, 2005 U.S. App. LEXIS 11203 at n.8 (11th Cir. June 13, 2005).

⁹¹ *Grutter*, 123 S.Ct. at 2344-2345.

⁹² *AGC of California*, 950 F.2d at 1417; *see also Cone Corp.*, 908 F.2d at 916.

⁹³ *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.

the availability of DBEs in their marketplaces absent the presence of discrimination.⁹⁴ 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.).⁹⁵

On the other hand, sheer speculation cannot form the basis for an enforceable measure.⁹⁶

Goals can be set at various levels of particularity and participation. Denver may set overall, aspirational goals for its annual, aggregate spending. Goals may be unitary (e.g., one goal for all eligible groups as in the DBE regulations),⁹⁷ or divided into one goal for MBES and one for WBEs, or separated into goals for each racial and ethnic minority and women. While there is no case law addressing whether and to what extent goals may be disaggregated, that the DBE Program's unitary goal was been upheld by every court suggests that this approach is sufficiently narrowly tailored.

Specific projects must be subject to subcontracting goals based upon availability of M/WBEs to perform the anticipated scopes of subcontracting and the agency's progress towards meeting its annual targets. Not only is this legally mandated,⁹⁸ but also this approach reduces the need to conduct good faith efforts reviews as well as the

⁹⁴ 49 CFR § 26.45(d).

⁹⁵ *Adarand VII*, 228 F.3d at 1181.

⁹⁶ *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).

⁹⁷ 49 CFR §26.45(h).

⁹⁸ See *Sherbrooke*, 345 F.3d at 972; *Coral Construction*, 941 F.2d at 924.

temptation to create “front” companies and sham participation to meet unrealistic contract goals.

3. Flexibility

It is imperative that remedies not operate as fixed quotas. A M/WBE program must provide for contract awards to bidders who fail to meet the subcontracting goals but make good faith efforts to do so. Further, bidders 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.⁹⁹ This feature has been central to the holding that the DBE program meets the narrow tailoring requirement.¹⁰⁰

4. Over-inclusiveness and under-inclusiveness of remedies

The over- or under-inclusiveness of those persons to be included in the program is an additional consideration, and goes to whether the remedies truly target the evil identified.¹⁰¹ The “fit” between the problem and the remedy manifests in three ways: which groups to include, how to define those groups, and which persons will be eligible to be included within those groups.

First, which groups to include must be based upon the evidence.¹⁰² The “random inclusion” of ethnic or racial groups that may never have experienced discrimination in the entity’s marketplace may indicate impermissible “racial politics.”¹⁰³ Similarly, the Seventh Circuit, in striking down Cook County’s program, remarked that a “state or local government that has discriminated just against blacks may not by way of remedy discriminate in favor of blacks and Asian-Americans and women.”¹⁰⁴

⁹⁹488 U.S. at 508; *see also Adarand VII*, 228 F.3d at 1181.

¹⁰⁰*See, e.g., Sherbrooke*, 345 F.3d at 972.

¹⁰¹ *Association for Fairness in Business, Inc. v. New Jersey*, 82 F.Supp.2d 353, 360 (D. N.J. 2000).

¹⁰² *Philadelphia II*, 6 F.3d at 1007 (strict scrutiny requires data for each minority group; data was insufficient to include Hispanics, Asians or Pacific Islanders or Native Americans); *cf. Northeastern Florida Chapter of the AGC v. Jacksonville*, 508 U.S. 656, 113 S.Ct. 2297 (1993) (new ordinance narrowed to African-Americans and women).

¹⁰³ *Webster*, 51 F.Supp.2d at 1380–1381.

¹⁰⁴ *BAGC v. Cook County*, 256 F.3d at 646.

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 white women,¹⁰⁵ to separate goals for each minority group and women.¹⁰⁶ 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.¹⁰⁷

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 TEA21 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."¹⁰⁸ Moreover, anyone can challenge the disadvantage of any firm.¹⁰⁹

5. Sharing of the burden by third parties

Failure to make "neutral" changes to contracting and procurement policies and procedures that disadvantage M/WBEs and other small businesses may result in a finding that the program unduly burdens non-M/WBEs.¹¹⁰ However, "innocent" parties can be made to share some of the burden of the remedy for eradicating racial discrimination.¹¹¹ "Implementation of the race-conscious contracting goals for which

¹⁰⁵ See 49 CFR §26.45(h) (overall goal must not be subdivided into group-specific goals).

¹⁰⁶ See *Dade County II*, 122 F.3d at 901 (separate goals for African-Americans and Hispanics).

¹⁰⁷ *Drabik*, 214 F.3d at 739.

¹⁰⁸ *Sherbrooke*, 345 F.3d at 973; see also *Grutter*, 123 S.Ct at 2345-46; *Gratz v. Bollinger*, 4539 U.S. 244, 123 S.Ct 2411, 2429 (2003); *Adarand VII*, 228 F.3d at 1183-1184 (personal net worth limit is element of narrow tailoring); cf. *Associated General Contractors v. City of New Haven*, 791 F.Supp. 941, 948 (D. Conn. 1992 (definition of "disadvantage" was vague and unrelated to goal).

¹⁰⁹ 49 CFR §26.87.

¹¹⁰ See *Engineering Contractors I*, 943 F.Supp. at 1581-1582 (County chose not to change its procurement system).

¹¹¹ *Concrete Works IV*, 321 F.3d at 973; *Wygant*, 476 U.S. at 280-281; *Adarand VII*, 228 F.3 at 1183d ("While there appears to be no serious burden on prime contractors, who are obviously compensated for any additional burden occasioned by the employment of DBE subcontractors, at the margin, some non-

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.”¹¹²

6. Duration and Review of Programs

“Narrow tailoring also implies some sensitivity to the possibility that a program might someday have satisfied its purposes.”¹¹³ 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.¹¹⁴ 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.”¹¹⁵ Similarly, the USDOT DBE Program’s periodic review by Congress has been repeatedly held to provide adequate durational limits.¹¹⁶

DBE subcontractors such as *Adarand* will be deprived of business opportunities”); *cf. Northern Contracting II*, at *5 (“Plaintiff has presented little evidence that is has suffered anything more than minimal revenue losses due to the program.”).

¹¹² *Western States*, 407 F.3d at ____.

¹¹³ *Drabik*, 214 F.3d at 738.

¹¹⁴ *BAGC v. Chicago*, 298 F.Supp.2d at 739; *see also Webster*, 51 F. Supp. 2d at 1382 (one telling disqualifiers was Fulton County had been implementing a “quota” program since 1979 with no contemplation of program expiration).

¹¹⁵ *Virdi*, at *18.

¹¹⁶ *See, e.g., Western States*, 407 F.3d at ____.

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49 CFR § 26

III. Summary of Prior Evidence of Discrimination in the Austin Construction Contracting Marketplace

A. 1987 Economic Development Commission Review

In 1987, the Austin City Council directed the Economic Development Commission to review the City's policies and experiences relating to City contracting opportunities for M/WBEs and to suggest any revised politics and procedures, if determined necessary. The Commission met with representatives of various City departments as well as with interested individuals and organizations, conducted a public hearing and took numerous public statements. The Commission found significant disparities between the number of M/WBEs and their utilization as prime contactors and subcontractors on City projects. The City Council found that these disparities resulted from discriminatory practices, thereby impairing the competitive position of MBEs and WBEs with the City. To redress this situation, the City Council passed an affirmative action program to address the City's role in perpetuating these disparities.

B. 1993 "Minority Business Enterprise Utilization Report: A Disparity Study for the City of Austin and Capital Metro"

In 1992, the City of Austin and Capital Metropolitan Area Transportation Authority commissioned a disparity study to respond to the *Croson* decision. The Study, conducted by D.J. Miller & Associates, Inc., included:

- An analysis of the legal framework;
- An analysis of the historical framework;
- An analysis of market conditions;
- Survey of business leaders;
- Interviews with business and community leaders;
- Analysis of City and Capital Metro operational policies and procedures;
- Analysis of the availability of M/WBEs for City and Capital Metro contracting;
- Analysis of the utilization of M/WBES by the City and Capital Metro;
- Analysis of disparities in utilization of M/WBEs compared to non-M/WBEs; and
- Analysis of race-neutral programs.

The Study concluded, “there is ample evidence of discrimination against African Americans, Hispanics, Other Minority Groups [sic], and Women [sic]”. Prior legal discrimination is “manifested in the low participation of minorities and women in the general economy as business owners and supervisors compared to their numbers in the general population.... Investigation has yielded information concerning individual instances of discrimination encountered by firms dealing with the City of Austin and Capital Metro, and barriers encountered by MWBEs that wish to contract with those entities. Calculations of the City’s utilization of MWBEs show that governmental entities underutilize MWBEs in contracting. Race neutral business support programs do not result in any lessening of the effects of discrimination.”¹¹⁷ Based upon this evidence, the Study concluded that a race-conscious procurement program was warranted.

After receipt of the study, the City conducted a series of public hearings at which additional statistical and other evidence of discriminatory practices and acts against M/WBEs was presented. The City Council appointed a community-based Disparity Study Ordinance Committee to review the studies and the law, and to draft programmatic changes to the current ordinance. The Committee met over several months and recommended certain changes to the ordinance. Based upon those meetings and the Study, the City adopted a new M/WBE Program in 1995.

C. 2003 M/WBE Program Revisions

In 2003, the City reviewed various availability and disparity studies conducted for Texas governments. These studies indicated that M/WBEs suffer discrimination in access to opportunities in the State of Texas. Austin also commissioned an availability analysis of M/WBEs in construction and construction-related professional services. This analysis, conducted by National Economic Research Associates, Inc. (NERA), found that there was ample availability of M/WBEs in the Austin marketplace.

Based upon this evidence, the City amended the M/WBE Program ordinance and set new goals that reflected the NERA estimates.¹¹⁸

¹¹⁷ “Minority Business Enterprise Utilization Report: A Disparity Study for the City of Austin and Capital Metro,” D.J. Miller & Associates, Inc., at ES11-ES12.

¹¹⁸ Chapter 2-9 *et seq.*, Minority-Owned and Women-Owned Business Enterprise Procurement Program.

IV. Race, Sex, and Business Enterprise: Evidence from the Austin Metropolitan Statistical Area, 1986-2002

The availability figures previously estimated for the City of Austin by NERA represent the percentage of businesses in Austin's construction and construction-related markets that are owned by minorities and/or women. These availability figures will be artificially low if discrimination has led minorities and women to be more reluctant to start businesses or if it has made the businesses they start less profitable and therefore more likely to fail. This is the primary reason, for example, why the federal Disadvantaged Business Enterprise (DBE) regulations¹¹⁹ require state and local recipients of federal highway, transit, and aviation funds to consider whether an adjustment to their baseline DBE availability figure would be necessary in order to approximate the amount of DBE availability that would be expected to be observed in a race-neutral and sex-neutral marketplace.¹²⁰

This section examines local area market evidence relevant to establishing whether expected MWBE availability, absent business-related discrimination, would be higher than the 2003 estimated levels. First, the microeconomic and microeconometric literature on self-employment and entrepreneurship is reviewed. Second, we consider the findings of previous disparity studies that have been conducted in the Austin region. Finally, we present statistical evidence of disparities in wage and salary earnings, business owner earnings, and business formation rates, using microdata from the 2000 Decennial Census and the 1986-2002 Current Population Surveys. The presence of statistically significant business formation and earnings disparities is consistent with present discrimination in the Austin market place and/or the ongoing effects of past discrimination in the Austin market place. Evidence of business formation disparities also form the basis for quantifying the difference between current and expected levels of MWBE availability.

¹¹⁹ 49 CFR Part 26.

¹²⁰ This is referred to as the "Step 2 adjustment," see 49 CFR § 26.45.

A. Introduction

In this section, we examine disparities in business formation and earnings principally in the private sector, where contracting and procurement activities are generally not subject to MWBE requirements. Statistical examination of disparities in the private sector economy surrounding the Austin Metropolitan Statistical Area (MSA) is important for at least three reasons.¹²¹ First, to the extent that discriminatory practices by contractors, suppliers, sureties, insurers, lenders, customers, and others limit the ability of MWBEs to compete, those practices are likely to be reflected in the far larger private sector as well as in the public sector. Second, examining the utilization of MWBEs in the private sector provides an indicator of the extent to which MWBEs are utilized in the absence of affirmative action efforts, since few firms in the private sector make such efforts. Third, the Supreme Court in *Croson* acknowledged that state and local governments had a constitutional duty not to contribute to the perpetuation of racial or ethnic discrimination in the private sector of the local economy.

After years of comparative neglect, research on the economics of entrepreneurship—especially upon self-employment—is beginning to expand (Blanchflower [8]).¹²²

In the U.S. for example, minorities start businesses at much lower rates than non-Hispanic whites. Using the Public Use Microdata Samples (PUMS) data from the 1990 Census, Wainwright demonstrated that these disparities persist even when factors such as geography, industry, occupation, age, education and assets are held constant [54].

¹²¹ The Austin MSA is comprised of the Texas counties of Bastrop, Caldwell, Hays, Travis, and Williamson.

¹²² Microeconomic work includes Fuchs [30], Borjas and Bronars [17], Evans and Jovanovic [22], Evans and Leighton [23], Fairlie [24], Fairlie and Meyer [11, 26], Reardon [48], Wainwright for the United States [54], Rees and Shah [49], Pickles and O'Farrell [46], Blanchflower and Oswald [11, 12, 13], Meager [43], Taylor [53], Robson for the UK [50, 51], DeWit and van Winden for the Netherlands [21], Alba-Ramirez for Spain [2], Bernhardt [6], Schuetze [52], Arai [3], Lentz and Laband [40], and Kuhn and Schuetze] for Canada [38, Laferrere and McEntee for France [39], Blanchflower and Meyer [10] and Kidd for Australia [36], and Foti and Vivarelli for Italy [29]. There are also several theoretical papers including Kihlstrom and Laffonte [36], Kanbur [35], Coate and Tennyson [19], and Holmes and Schmitz [31], plus a few papers that draw comparisons across countries *i.e.* Schuetze for Canada and the U.S. [52], Blanchflower and Meyer for Australia and the U.S. [10], Alba-Ramirez for Spain and the United States [2], and Acs and Evans for many countries [1].

One possible 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 [23], and Evans and Jovanovic [22] 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 probit 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. An alternate possibility, however, is that the correlation between family assets and the movement to self-employment arises because children tend to inherit family firms.

Indeed, Blanchflower and Oswald, find that the probability of self-employment depends positively upon whether the individual ever received an inheritance or gift [12]. This emerges from British data, the National Child Development Study; a birth cohort of children born in March 1958 who have been followed for the whole of their lives. They also find that, when directly questioned in interview surveys, potential entrepreneurs say that raising capital is their principal problem. Additionally, Blanchflower and Oswald find that the self-employed report higher levels of job and life satisfaction than employees, and that psychological test scores play only a small role in explaining entry into self-employment. Work by Holtz-Eakin, Joulfaian and Rosen drew similar conclusions using different methods on U.S. data [32, 33].

The work of Black, Meza, and Jeffreys for the United Kingdom (U.K.), discovers an apparently powerful role for house prices (through its impact on equity withdrawal) in affecting the supply of small new firms [7]. Cowling and Mitchell find a similar result [20]. Again, this is suggestive of capital constraints. Finally, Lindh and Ohlsson adopt the Blanchflower-Oswald procedure and provide complementary evidence for Sweden [41].

Bernhardt, in a study for Canada, using data from the 1981 Social Change in Canada Project also found evidence that capital constraints appear to bind [6]. Using the 1991 French Household Survey of Financial Assets, Laferrere and McEntee, examined the determinants of self-employment using data on intergenerational transfers of wealth, education, informal human capital and a range of demographic variables [39]. They also found evidence of the importance played by the family in the decision to enter self-employment. Intergenerational transfers of wealth, familial transfers of human capital and the structure of the family were found to be determining factors in the decision to move from wage work into entrepreneurship.

Broussard, Chami, and Hess found that the self-employed have between 0.2 and 0.4 more children compared to the non-self-employed [18]. 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 farming, 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 whites. Analogously, Hout and Rosen found that the offspring of self-employed fathers are more likely than others to become self-employed and argued that the historically low rates of self-employment among African Americans and Latinos may contribute to their low contemporary rates [34].

A continuing puzzle in the literature has been why, nationally, the self-employment rate of black males is one third of that of white males and has remained roughly constant since 1910. Fairlie and Meyer (2000) rule out a number of explanations for the difference. They found that trends in demographic factors, including the Great Migration and the racial convergence in education levels “did not have large effects on the trend in the racial gap in self-employment” ([27] 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” ([27] p. 664). Robert Fairlie [24] and Wainwright [54] have shown that a considerable part of the

explanation of the differences between the African American and white self-employment rate can be attributed to discrimination. Timothy Bates finds strong supporting evidence that racial differences in levels of financial capital have significant effects upon racial patterns in business failure rates [5]. Fairlie also found that the black exit rate from self-employment is twice as high as that of whites [24].

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. Now to the second scenario, where we take out the plugs and allow for the possibility that the outflow rates from the two baths are different. Bath A (the minority-owned firms) has a much larger drain and hence the water flows out more quickly than it does from bath B (the white firms). When we return after ten minutes, even though the inflow rates are the same there is much less water in bath A than there is in bath B. Lower exit rates for white-owned firms are perfectly consistent with the observed fact that minority-owned firms are younger and smaller than white-owned firms. The extent to which that will be true is a function of the relative sizes of the inflow and the outflow rates.

Fairlie and Meyer found that immigration had no statistically significant impact at all on black self-employment [26]. In a subsequent paper, Fairlie and Meyer found that self-employed immigrants did displace self-employed native non-African Americans [28]. 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.

There has been relatively little work on how institutional factors influence self-employment. Such work that has been conducted includes examining the role of minimum wage legislation (Blau, [15]), immigration policy (Borjas and Bronars, [17]), and retirement policies (Quinn, [47]). Studies by Long [42], and Blau [15], and more recently by Schuetze [52] have considered the role of taxes. 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 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.

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 provides a useful summary of much of this work [43]. Evans and Leighton found that white men who are unemployed are nearly twice as likely as wage workers to enter self-employment [23]. Bogenhold and Staber also find evidence that unemployment and self-employment are positively correlated [16]. Blanchflower and Oswald 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 [11].

In Blanchflower and Oswald we confirmed this result, finding that the log of the county unemployment rate entered negatively in a cross-section self-employment probits for young people age 23 in 1981, and for the same people aged 33 in 1991 [12]. Taylor 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 [53]. Acs and Evans found evidence from an analysis of a panel of countries that the unemployment rate entered negatively in a fixed effect and random effects formulation [1]. However, Schuetze 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 [52]. 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 found that there is generally a negative relationship between the self-employment rate and the unemployment rate [8]. 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.

There is, however, a good deal of agreement in the literature on the micro-economic correlates of self-employment. Aronson provides a good overview [4]. In the U.S., it appears that self-employment rises with age, is higher among men than women and higher among whites than African Americans. The least educated have the highest probability of being self-employed, however, evidence is also found in the U.S., the most highly educated also have relatively high probabilities. Increases in educational attainment are generally found to lead to increases in the probability of being self-employed. The more children in the family, the higher likelihood of (male) self-employment. Workers in agriculture and construction are also especially likely to be self-employed.

Blanchflower, Oswald and Stutzer found that there is a strikingly large latent desire to be in charge of one's own business [14]. There exists frustrated entrepreneurship on a huge scale in the U.S. and other Organisation for Economic Co-Operation and Development (OECD) countries. In the U.S., seven out of ten 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 (Fairlie and Meyer [27]).¹²³

This latter trend raises an important puzzle. Why do so few individuals in the U.S. and OECD 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, [12]). There is also econometric evidence in its favor. Holding other influences constant, people who inherit cash, who win the lottery, or who have large family assets, are all more likely to both set up and sustain a lasting small business. By contrast, childhood personality test-scores turn out to have almost no predictive power, years later, in telling us who will be running their own businesses.

¹²³ Fairlie and Meyer documented the fact that the self-employment rate for white men fell from 1910 to 1970 but then increased until 1990. That trend appears to have been reversed since 1990.

B. Race and Sex Disparities in Earnings

This section examines earnings to determine whether minority and female entrepreneurs earn less from their businesses than do their White male counterparts. 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 MWBEs will be higher and MWBE formation rates will be lower than would be observed in a race- and sex-neutral marketplace. Both phenomena would contribute directly to lower levels of minority and female business ownership.

Below, we first examine earnings disparities among wage and salary employees, *i.e.*, non-business owners. It is critical to examine this segment of the labor force since a key source of new entrepreneurs in any given industry is the pool of experienced wage and salary workers in that same industry (Blanchflower [8, 9]). Any employment discrimination that adversely impacts the ability of minorities or women to succeed in the labor force directly shrinks the available pool of potential MWBEs. In almost every instance examined, a statistically significant adverse impact on earnings is observed in both the economy at large and in the construction and construction-related professional services sector.¹²⁴

We then examine 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 both construction and the economy as a whole.

The remainder of this section discusses the methods and data employed and presents the specific findings obtained.

¹²⁴ 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. We have written elsewhere regarding racial discrimination in commercial credit and capital markets throughout the U.S. 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. Additionally, see the detailed discussion of this phenomenon in D. G. Blanchflower, P. B. Levine, and D. Zimmerman, "Discrimination in the market for small business credit market", NBER Working Paper W6840, 1999.

1. Methods

The statistical technique known as linear regression analysis was applied to estimate the effect of each of a set of observable characteristics, such as education and age, on an outcome variable of interest. In this case the outcome variable of interest is earnings and we used regression to compare earnings among individuals in similar geographic and product markets at similar points in time and with similar years of education and potential labor market experience and see if any adverse race or sex differences remain. In a discrimination free market place, one would not expect to observe significant differences in earnings by race or sex among such similarly situated observations.

Regression also allows the narrow tailoring of our statistical tests to the Austin MSA and the assessment of whether disparities in the Austin MSA are statistically significantly different from those observed elsewhere in Texas or in the nation as a whole. In the analyses that follow, we have taken the following approach. Starting from an economy-wide data set, we first estimate the basic model of earnings differences just described, including an indicator variable for the Austin MSA. This model appears as Specification (1) in Tables 1 through 12. Next, we estimate Specification (2), which is the same model as (1) but with the addition of indicator variables that interact race, sex, and the Austin MSA. Specification (3) then 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.¹²⁵

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.

¹²⁵ If none of these terms is significant then Specification (3) reduces to Specification (1).

2. Data

Our analyses require individual-level data (*i.e.*, “microdata”) with relevant information on business ownership status and other key socioeconomic characteristics. Two primary sources of such data are available.

The first is the Five Percent PUMS from the 2000 decennial census. The 2000 PUMS contains observations representing five percent of all U.S. housing units and the persons in them (approximately 14 million records). Released in late 2003, the PUMS provides the full range of population and housing information collected in the 2000 census. Business ownership status is identified in the PUMS through the “class of worker” variable, which distinguishes the unincorporated and incorporated self-employed from others in the labor force. The presence of the class of worker variable allows us to construct a detailed cross-sectional sample of individual business owners and their associated earnings.

The second source of data is the Current Population Survey (CPS). The CPS has been conducted monthly by the Census Bureau and the Bureau of Labor Statistics for over 40 years, and is a primary source of official government statistics on employment and is 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.¹²⁶

¹²⁶ Since 1979, about a quarter of the households in each monthly CPS survey have been asked to provide additional information, including usual weekly earnings and weekly hours of work. These households are said to be in “Outgoing Rotation Groups” (ORG) because of the way the CPS rotates households for interviews. Each household selected for the survey is interviewed once a month for four consecutive months, not interviewed for eight months, and interviewed again once a month for four more months. The households in the ORG are those that are in either the fourth or the eighth survey. The ORG files of the CPS include individual data for about 30,000 individuals each month, or over 350,000 per year. Data in which the Austin MSA is identifiable are available in a comparable form from 1986 through 2002. Data from the ORG files are used below in addition to the PUMS to examine earnings disparities among wage and salary workers. The ORG files however, do not contain data on the earnings of the self-employed. Annual earnings, whether from wages or self-employment are available from the March CPS, however, also known as the Annual Demographic File. This latter file also contains the basic monthly demographic and labor force data. In the March CPS, data on employment, earnings, and income refer to the preceding year, although demographic data refer to the time of the survey. The March surveys are therefore included for the years 1987-2003. Because the information relates to the preceding year, the earnings data relate to the years 1986-2002. The

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

Tables 1 through 6 report results from our regression analyses of annual earnings among wage and salary workers. Tables 1 through 3 focus on the economy as a whole, while Tables 4 through 6 focus on construction and construction-related professional services. Tables 1 and 4 are derived from the 2000 PUMS, Tables 2 and 5 are derived from the 1986–1991 CPS, and Tables 3 and 6 are derived from the 1992–2002 CPS. The numbers shown in each of these six tables indicate the percentage difference between the average wages of a given race/sex group and comparable White males.

a. Specification (1) - the Basic Model

For example, in Table 1 Specification (1) the estimated percentage difference in annual wages between African Americans (both sexes) and White males in 2000 was -30.4 percent. That is, average annual wages among African Americans were 30.4 percent lower than for White males who were otherwise similar in terms of geographic location, industry, age, and education. The number in parentheses below each percentage difference is the t-statistic, which indicates whether the estimated percentage difference is statistically significant or not. In Tables 1 through 6, a t-statistic of 1.99 or larger indicates statistical significance at a 95 percent confidence level or better.¹²⁷ In the above example, the t-statistic of 197.61 indicates that the result is statistically significant.

Specification (1) in Tables 1–3 shows negative and statistically significant wage disparities for African Americans, Hispanics, Asians, Native Americans, persons reporting in multiple race categories, and White women consistent with the presence of discrimination in these markets. Observed disparities are large as well, ranging from a low of -16.7 percent for Hispanics in Table 2 to a high of -35.7 percent for White women in Table 1.

Specification (1) in Tables 4 through 6 shows similar results when the basic analysis is restricted to the construction and construction-related professional services sector. Large, negative, and statistically significant wage disparities are observed for all minority

sample consists of any individual who reports positive self-employment earnings in the year preceding the interview.

¹²⁷ From a two-tailed test.

groups and for White women. For African Americans, the large wage disparities observed in the construction sector are similar to those observed economy-wide. Large wage disparities in construction are also observed for Hispanics, Asians, and Native Americans; however, the differences are smaller than those observed in the economy as a whole. For White women, large disparities are observed both economy-wide and in construction—however disparities in construction are larger.

If we compare Specification (1) in, respectively, Tables 2 and 3 and Tables 5 and 6 we can consider changes in observed wage disparities over time. For the economy as a whole, as well as for the construction sector, disparities for African Americans became slightly smaller between 1986–1991 (Tables 2 and 5) and 1992–2002 (Table 3 and 6), but remain large (average wages about 20 percent below comparable White males). For Hispanics, wage disparities increased substantially during the same period and average wages remain 15-20 percent lower than for comparable White males in construction and elsewhere. For White women, wage disparities grew substantially smaller between the two periods, both in construction and in the economy as a whole, although they remain large (average wages 18-25 percent below comparable White males).¹²⁸

Finally, the indicator variable for Specification (1) for the Austin MSA is positive and statistically significant in Tables 1, 3, and 4, providing some evidence that residents of the Austin MSA enjoy a modest wage advantage over their similarly situated counterparts elsewhere in Texas and the rest of the nation. Unfortunately, the observed wage advantages do not come close to offsetting the much larger wage disadvantages observed for minorities and women throughout the nation and including the Austin MSA.

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

In Tables 1 through 6, Specification (2) is the basic regression model enhanced by the addition of a set of interaction terms to test whether minorities and women in the Austin MSA differ significantly from those elsewhere in the Texas and U.S. economy. Specification (2) in Table 1, for example, shows once again the -30.4 percent wage

¹²⁸ It is not possible to perform a similar comparison for Asians or Native Americans, as they were not identified separately in the CPS before 1992 and instead were classified together as “Other Race.”

difference that estimates the direct effect of being African American in 2000. We also see an 8.1 percent wage increment in that year that captures the indirect effect of residing in the Austin MSA and being African American. Therefore, the net wage disparity for African Americans in the Austin MSA is approximately -22.3 percent (-30.4 percent plus 8.1 percent).

Specification (3) repeats Specification (2), dropping any Austin interaction terms that are not statistically significant. In Table 3, for example, the only interaction term included in the final specification was for African Americans, and this term was statistically significant and shows an additional 10.1 percent wage disadvantage for African Americans in Austin as compared to elsewhere in Texas and the nation. The net result of Specification (3) in Table 3 is evidence of large, negative, and statistically significant wage disparities for all minority groups and for White women. Specification (3) in Tables 1 and 2 similarly shows negative and statistically significant wage disparities in 5 out of 6 and 4 out of 4 cases, respectively.¹²⁹ Specification (3) in Tables 4 through 6 also shows negative and statistically significant results in 5 out of 6, 4 out of 4, and 5 out of 5 cases, respectively.

Clearly, prime age minorities and women earn substantially and significantly less from their labors than their White male counterparts do. Such disparities are a symptom of discrimination in the labor force that, in addition to its direct effect on workers, reduces the future availability of MWBEs 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 in the first place. This is more than mere “societal discrimination”; it provides a clear linkage between discrimination in the job market and reduced entrepreneurial opportunities for minorities and women. These reduced entrepreneurial opportunities in turn lead to lower MWBE availability levels than would be observed in a race- and sex-neutral marketplace.

¹²⁹ Although the direct effect for Native Americans is large, negative, and statistically significant, the indirect effect for Native Americans in Austin is positive and significant. The combined effect, however, is not statistically significantly distinguishable from zero.

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

Tables 7 through 12 report results from our regression analyses of earnings from self-employment. Tables 7 through 9 focus on the economy as a whole and Tables 10 through 12 focus on construction and construction-related professional services. Tables 7 and 10 are derived from the 2000 PUMS, Tables 8 and 11 are derived from the 1986–1991 CPS, and Tables 9 and 12 are derived from the 1992–2002 CPS. These tables indicate the percentage difference between the average annual self-employment earnings of a given race/sex group and comparable White males.

a. Specification (1) - the Basic Model

Specification (1) in Tables 7 through 9 shows negative and statistically significant wage disparities for African Americans, Hispanics, Asians, Native Americans, persons of mixed race, and White women consistent with the presence of discrimination in these markets. These differences are large as well. The measured difference for African Americans ranges between 30 percent and 59 percent. For Hispanics it ranges from 19 percent to 39 percent. For Asians it ranges from 4 percent to 22 percent. For Native Americans it ranges from 38 percent to 51 percent. The largest business owner earnings disparities, however, are observed for White women, where they range from 44 percent to almost 73 percent.

Specification (1) in Tables 10 through 12 shows similar results for the construction and construction-related professional services sector. Large negative earnings disparities are observed in virtually every case—in particular for African Americans and White Females. In the large majority of instances, these differences are statistically significant as well.

If we compare Specification (1) in, respectively, Tables 8 and 9 and Tables 11 and 12, we can consider changes in observed business owner earnings disparities over time. For the economy as a whole as well as for the construction sector, already large disparities for African Americans increased between 1986–1991 (Tables 8 and 11) and 1992–2002 (Table 9 and 12). For Hispanics, in the economy as a whole, the large earnings disparities observed in the 1986–1991 period increased substantially during the 1992-2002 period. In

the construction sector, disparities for Hispanics remain large but appear to have fallen in recent years. For White women, disparities have lessened somewhat in the economy as a whole, but not in the construction sector, where they remain among the largest observed in any of our analyses (between 50 percent and 85 percent lower than White males).

Finally, with respect to Specification (1) the indicator variable for the Austin MSA, although generally positive, as in Tables 1 through 6, is no longer statistically significant—highlighting that residents of the Austin MSA enjoy no apparent earnings advantage or disadvantage over similarly situated entrepreneurs elsewhere in Texas or the rest of the nation.

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

Next, we turn to Specifications (2) and (3) in Tables 7 through 12. Again, Specification (2) is the basic regression model enhanced by a set of interaction terms to test whether minorities and women in the Austin MSA differ significantly from those elsewhere in the Texas and U.S. economy. Specification (3) simply repeats Specification (2), dropping any Austin interaction terms that are not statistically significant.

For the economy as a whole (Tables 7 through 9), none of the Austin interaction terms was significant, showing that estimates for Austin are similar to results from elsewhere in Texas or the nation. The results for these three tables then are as in Specification (1). The same is true in the construction sector (Tables 10 through 12) with the exception of Hispanics, for whom the Austin interaction term was statistically significant in Table 10 and Table 12. In Table 10 the interaction term was positive. The combined estimate for Hispanics in Austin is also positive but is not statistically significant.¹³⁰ In Table 12 the Austin interaction term for Hispanics is statistically significant and negative. The combined estimate for Hispanics in Austin is large, negative, and statistically significant.¹³¹

¹³⁰ The t-statistic for the test that the sum of the Hispanic and Austin*Hispanic coefficients is non-zero is 1.62 – beyond even a 10 percent threshold for two-sided significance.

¹³¹ The t-statistic for the test that the sum of the Hispanic and Austin*Hispanic coefficients is non-zero is 2.26 – well below the 5 percent threshold for two-sided significance.

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

C. Race and Sex Disparities in Business Formation

Finally, we turn to the analysis of race and sex disparities in business formation.¹³² In this section, we compare self-employment rates by race and sex to determine whether minorities or women are as likely to enter the ranks of entrepreneurs as similarly-situated White males. We find that they are not as likely to do so and that minority and female business formation rates would likely be substantially and significantly higher if markets operated in a race- and sex-neutral manner.

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

On the other hand, discrimination in the labor market prevents minorities and women from acquiring the very skills, experience, and positions that are often observed among those who leave the ranks of the wage and salary earners to start their own businesses. Many construction contracting concerns have been formed by men who were once employed as foreman for other contractors, fewer by those who were employed instead as laborers. Similarly, discrimination in commercial capital and credit markets, not

¹³² The phrases “business formation rates” and “self-employment rates” are used interchangeably.

to mention 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 enterprise. 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 MWBEs, symptoms of which are evidenced in Section 3.b above and in the focus groups, operates to increase input prices and lower output prices for MWBEs, leading to higher rates of failure for some MWBE firms, lower rates of profitability and growth for others, and preventing some minorities and women from ever starting up businesses at all. All of these phenomena, other things equal, would contribute directly to lower observed rates of minority and female self-employment.

1. Methods and Data

To see if minorities or White women are as likely to be business owners as are comparable White males, we use a statistical technique known as Probit regression. Probit regression is used to determine the relationship between a categorical variable—one that can be characterized in terms of a yes or no response as opposed to a continuous number—and a set of characteristics that are related to the outcome of the categorical variable. Probit regression produces estimates of the extent to which each characteristic is positively or negatively related to the likelihood that the categorical variable will be a yes or no. For example, Probit regression is used by statisticians to estimate the likelihood that an individual participates in the labor force, retires this year, or contracts a particular disease—these are all variables that can be categorized by a response of yes (for example, she is in the labor force) or no (for example, she is not in the labor force)—and the extent to which certain factors are positively or negatively related to the likelihood (for example, the more education she has, the more likely that she is in the labor force).¹³³ In the present case, Probit regression is used to examine the relationship between the choice to own a business (yes or no) the other demographic and

¹³³ 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. 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.

socioeconomic characteristics in our basic model. The underlying data for this section is once again the 2000 PUMS, the 1986-1991 CPS, and the 1992-2002 CPS.

2. Findings: Race and Sex Disparities in Business Formation

Tables A and B provide a summary of business ownership rates in 2000 by race and sex. These latter two tables also serve as a point of reference for the following discussion. A striking feature of both tables is how much higher business ownership rates in the United States are for White males than for any other group. Table A, for example, shows a 9 percentage point difference between the overall self-employment rate of African Americans and White Males in the Austin MSA ($13.7 - 4.7 = 9$), and Table B shows a 9.6 point difference in the construction sector self-employment rate for this group. Results such as this are observed whether we consider the country as a whole, just the State of Texas or only the Austin MSA, and it is apparent in the construction sector as well as in the economy as a whole.

Table A. Self-Employment Rates in 2000 for Selected Race and Sex Groups: All Industries; United States, Texas, and the Austin MSA¹³⁴

Race/Sex	U.S.	Texas	Austin MSA
African American	5.1	5.1	4.7
Hispanic	7.3	7.7	6.5
Asian	10.2	11.4	6.8
Native American	8.5	9.3	6.9
Multiple Races	9.3	9.7	10.0
White female	8.3	8.9	10.7
White male	13.8	14.2	13.7

Table B. Self-Employment Rates in 2000 for Selected Race and Sex Groups: Construction and Related Industries; United States, Texas, and the Austin MSA¹³⁵

Race/Sex	U.S. (%)	Texas (%)	Austin MSA
African American	14.9	13.0	17.7
Hispanic	12.9	14.9	10.8

¹³⁴Source: NERA calculations from the 2000 Decennial Census Five Percent Public Use Microdata Samples.

¹³⁵Source: NERA calculations from the 2000 Decennial Census Five Percent Public Use Microdata Samples.

Asian	16.7	13.5	18.6
Native American	16.7	17.4	39.3
Multiple Races	20.4	24.2	9.2
White female	14.7	14.0	11.7
White male	25.0	25.2	27.3

There is no doubt that part of the group differences shown in Tables A and B are associated with differences in the distribution of individual characteristics and preferences between minorities, women, and White males. It is well established that personal earnings and the propensity toward self-employment increases tend to increase with age (Wainwright [54] p. 86). Since most minority populations in the U.S. have a lower median age than the non-Hispanic white population, we must examine whether the disparities in business ownership evidenced in Tables A and B are largely—or even entirely—due to differences in the age distribution of minorities compared to non-minorities or due to differences in other factors such as education, geographic location, or industry preferences.

The remainder of this section presents a series of regression analyses designed to answer the question of whether or not large, negative, and statistically significant race and sex disparities are found among otherwise similarly-situated individuals. Tables 13 through 18 report results from our regression analyses of the decision to start a business. Tables 13 through 15 focus on the economy as a whole and Tables 16 through 18 focus on construction and construction-related professional services. As in previous sections, the first in each triad of Tables is derived from the 2000 PUMS, the second from the 1986–1991 CPS, and the third from the 1992–2002 CPS. The numbers shown in each of these tables indicate the percentage point difference between the probability of self-employment for a given race/sex group and for comparable White males.

a. Specification (1) - the Basic Model

Specification (1) in Tables 13 through 15 shows negative and statistically significant business formation disparities for African Americans, Hispanics, Asians, Native Americans, persons of mixed race, and White women consistent with the presence of discrimination in these markets. These differences are large as well.

- The remaining difference for African Americans ranges between 4.2 and 4.8 percentage points (approximately 30-35 percent lower than the corresponding White male business formation rate).¹³⁶
- For Hispanics, it ranges from 2.9 to 4.1 percentage points (approximately 21-30 percent lower than the White male business formation rate).
- For Asians, it ranges from 1.5 to 1.6 percentage points (approximately 11-12 percent lower than the White male business formation rate).
- For Native Americans, it ranges from 3.0 to 3.3 percentage points (approximately 22-24 percent lower than the White male business formation rate).
- For White women, it ranges from 2.6 to 3.0 percentage points (approximately 19-22 percent lower than the White male business formation rate).

Specification (1) in Tables 16 through 18 shows similar results for the construction and construction-related professional services sector. Large, negative, and statistically significant business formation disparities are observed in every case.

- For African Americans, the remaining difference ranges between 9.0 and 11.0 percentage points (approximately 36-44 percent lower than the corresponding White male business formation rate).
- For Hispanics, it ranges from 6.4 to 9.1 percentage points (approximately 26-36 percent lower than the White male business formation rate).
- For Asians, it ranges from 5.6 to 7.5 percentage points (approximately 22-30 percent lower than the White male business formation rate).
- For Native Americans it ranges from 7.6 to 8.9 percentage points (approximately 30-36 percent lower than the White male business formation rate).
- For White women, it ranges from 4.8 to 9.5 percentage points (approximately 19-38 percent lower than the White male business formation rate).

Again, a comparison of Specification (1) in, respectively, Tables 14 and 15 and Tables 17 and 18 describes changes in observed business owner earnings disparities over time. For the economy as a whole as well as for the construction sector, disparities for African Americans, Hispanics, Asians and Native Americans have worsened in recent years. In the construction sector, disparities for Hispanics remain large but appear to have fallen in recent years. The opposite is true for White women, however, for whom as a

¹³⁶ Since, from Table A, the overall White male self-employment rate is 13.8 percent, this means that the rate for comparable African Americans are observed to be approximately 30–35 percent lower than expected (i.e. $4.2 \div 13.8 \approx 0.30$; $4.8 \div 13.8 \approx 0.35$).

group business formation disparities lessened somewhat in the economy as a whole, and lessened substantially in the construction sector.

Lastly, with respect to Specification (1), we note that results on the indicator variable for the Austin MSA show a positive self-employment effect, in the construction sector especially, relative to the rest of Texas and the nation.

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

None of the Austin interaction terms included in Specification (2) was significant in any of the six tables. The results for these six tables therefore are as in Specification (1).

D. Conclusion

This discussion demonstrates that observed MWBE availability levels in the Austin MSA, as elsewhere in Texas and in the nation as a whole, are substantially and statistically significantly lower than those that would be observed if commercial markets operated in a race- and sex-neutral manner.

The evidence presented in this chapter suggests that minorities and women are substantially and significantly less likely to own their own businesses than would be expected based upon their observable characteristics including age, education, geographic location, and industry. These groups also suffer substantial and significant earnings disadvantages relative to comparable White males whether they work as employees or as entrepreneurs. This evidence supports the inference that discrimination in the private sector continues to affect minorities and women seeking construction and construction related professional services, such that the City for Austin will be a passive participation this discrimination absent remedial measures by the City.

V. Anecdotal Evidence of the Experiences of Business Owners in the Austin Construction Marketplace

In addition to the statistical evidence of disparities in the Austin marketplace for construction and construction-related professional services contracts, we gathered anecdotal evidence of the experiences of business owners in that marketplace. As discussed in Chapter II, anecdotal evidence of experiences with discrimination in contracting opportunities is relevant to whether observed statistical disparities are due to discrimination and not to some other non-discriminatory cause or causes.¹³⁷ While anecdotal evidence is insufficient standing alone,¹³⁸ “[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.”¹³⁹ “[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.”¹⁴⁰

To obtain anecdotal evidence, we conducted six focus groups sessions, as well as a meeting with the City’s M/WBE Advisory Committee. These sessions identified experiences with discrimination and with City contracting.¹⁴¹ The results are summarized below. The quoted comments are representative of the views expressed.

¹³⁷ *Webster*, 51 F.Supp.2d at 1363.

¹³⁸ *Engineering Contractors I*, 943 F.Supp. at 1580 (anecdotal evidence cannot cure weaknesses in statistical evidence).

¹³⁹ *Concrete Works II*, 36 F.3d at 1520, 1530.

¹⁴⁰ *Engineering Contractors II*, 122 F.3d at 926.

¹⁴¹ In addition to the City of Austin, firms had worked for the Texas Department of Transportation (TxDOT); the City of San Antonio; Capital Metro; Travis County; the Austin Independent School District (AISD); the Lower Colorado River Authority (LCRA); Austin Community College; the University of Texas at Austin (UT-Austin); and the State of Texas Historically Underutilized Business (HUB) Program.

A. Experiences with discrimination

1. Obtaining public sector contracts

a. Stereotypes and unprofessional treatment

Some minorities stated that MBEs continue to be treated unprofessionally and with condescension.

We went to this one general contractor because he was like, “Oh. We have an open door, come visit and ya, ya, ya.” So we go in to give them our proposal for a particular project and he started laughing. He never offered us to sit down. We stood up the whole time while we talked to him. He said, “You know we have a way of getting around this ordinance,” and he started joking and laughing about it. He told us he already had a company that worked with him.

If you are on a project and a problem arises, the City project managers will take the side of the [General Contractor]. A minority subcontractor is guilty until proven innocent. I mean the GC will go in and say that the minority subcontractor is not performing. The minority subcontractor has to prove that he is performing.

I have the number one person here in town in my specialty area. I want to know why do you only award me one percent of the project and you give some other firm that does not have as much experience 17 percent of the project. This firm is sending out personnel to the site that are learning on the job.

And as a sub we're treated really unprofessionally. I mean, it is just awful. It affects us financially, and it affects our staff morale. I have been at a session where it was—what do they call them, not partnering session, but just a kick-off session where you have—pre-design. We were all sitting at a table, and I was drawing with a marker, and I swear to god, this other architect took the marker right out of my hand. Now why I let him, I don't know, but it went on and on.

Well, so just to add to what you were saying is that this concept or this attitude that you constantly have to be proving yourself and being fair or that the attitude of, well, we are forced to use you and now, you know, we're going to watch everything you do. Not everybody is doing that, but that does come out every once in a while, and so you have to fight that.

b. Diminished growth opportunities

Some firms expressed concerns about moving from working as a subcontractor to a prime contractor.

I'm a general contractor, so I'm in construction, and it is true that they hardly ever consider us prime, as if we could never be a prime. Everything is geared in construction to be a sub.

M/WBEs reported that prime contractors who had used M/WBEs as subcontractors resented the new competition from former subcontractors that they had used in the past. There was also the perception that M/WBEs cannot perform larger or more complex projects.

I feel like in the case of [Austin Independent School District] we're not getting credit for the success of a project, and specifically it was a new elementary school. We were on a team with three architects, and the other architect got all the credit, and they kind of forgot about us, but see, where there is overt discrimination is the next time the projects are being handed out we get a little project; whereas, you know, I think we earned our—after 25 years I think we get to the front of the pack—You get a small project. Then you get a small project, you get small fees so it has a huge financial impact on your firm.

Even though we have demonstrated we can do larger projects, there's still an interesting mentality on a lot of people's part that if you are minority owned you are a subcontractor instead of a prime. I do not think we even get invited sometime to even put our hat in the ring because it's always felt that you want to be on someone's else's skirt tail, and that's a real problem.

Some firms, especially professional services firms, felt that if they attempted to negotiate more favorable contract terms, they were perceived as troublemakers and denied work.

There are some larger national firms that would rather not hire us because we will negotiate with them in a more intelligent, knowledgeable way about contracts, and they would rather have somebody who is dumb, fat and pregnant with a wire wrapped around their feet.

The County [Travis], [Texas Department of Transportation] and a number of institutions do that, so everyone knows that it's a subtle intimidation to where if you don't sign [the standard form contract], you are already informed that you have a problem on hand. If you call to attention whatever your concerns might

be, you've got to hope those concerns don't rock the boat, because the subjectivity that exists on the part of the people who make decisions as to whether or not you're going to be interviewed or kept in the process or so forth and so on, it can make you hold your nose and, you know, sign that thing at night in the dark and hope that if you get the job some of the very harsh terms within it don't come back and bite you in the rear later.

c. Contract specifications

M/WBEs were also disproportionately impacted by City insurance requirements. While the costs of insurance are a problem for all small firms, M/WBEs felt that the City's blanket requirements made it particularly hard for them to compete.

We have in [our contracts] that we carry reasonable and customary insurance. It works for all of our other clients. We're not going to go out and buy special insurance for one client. It isn't worth our time to process that.

Several non-M/WBE prime contractors agreed that insurance and bonding requirements made it difficult to utilize otherwise qualified M/WBEs. One majority male owner recounted that a minority firm had performed well on his projects, and he sought to keep them involved "in everything we did, but they're a small company. They couldn't meet insurance requirements and all the other things that were required to be able to perform the work" on City contracts. Another prime contractor implements a diversity program, in part to assist M/WBEs with bonding and insurance requirements. Another firm assists M/WBEs with accessing the Small Business Administration's (SBA) bonding program; however, the SBA program is slow to issue the bonds, and because it uses traditional underwriting standards, those firms that are successful would probably have received bonding without SBA guarantees.

Contract specifications were sometime written to favor the "good ole boys."

We do not submit bids to [the Texas Parks and Wildlife Commission] any more. The particular engineer designed the project and specified out a project for one of her buddies. She specified out the project for him. He was the only person that carried it and the only one that could put it in was him. And we won the bid because we were the lowest. And you know what, she stood and said actually it got very nasty—that—that we were not qualified to install it. Well, not only were—we weren't, because we couldn't buy the product. The only way we could buy the product would be to go to Louisiana to buy the product because they refused to sell it to us here in the state.

An engineering MBE stated that the qualifications are designed to favor the large firms, and make it very difficult for his firm to win projects, even when they are fully capable of performing.

From my perspective, it's feeling like we actually have the chance to get the job, because I—I mean, there has been nothing of the people that I've talked to and the things that I have done gave me any indication that I even had—that our firm even had a remote possibility. Now, with engineers, they—you don't—you don't bid money. You bid qualification. You know, and then they say, well, you have to have 20 engineers or whatever telling—well, you don't. If you're little, you don't have to have many engineers. And so they make the—they make the qualifications particularly with the professional end unattainable. I mean, there are no way they—they write us out. When they write the—when they write the qualifications, they write us out of being able to even bid. I mean, you've got to have certain people in your firm and you don't have it.

There was support for using procurement methods other than invitations for bid for construction contracts. Design-build and construction manager at risk were thought to provide more opportunities for MBEs, based upon the positive experience with the City Hall project.

d. Discrimination complaints

Minorities and women who experienced discrimination were reluctant to file formal complaints because of fears of retaliation.

I bid on a joint Cap Metro and City of Austin project that I should have known I was not going to win. We went into the interview, there were a couple of City folks in the review team, one that used to be a site plan reviewer with whom I butted heads on a lot of site plans. He asked me some questions that the rest of the people at the table recognized were inappropriate. He should not have asked those questions. The questions had nothing to do with project. What happened at that meeting with the City staff is that it left the prime contractor questioning why there was such a personality problem between me and this person. That incident really hurt me.

Minority and woman owned contractors hesitate to use complaint procedures of public entities because they will get blackballed.

When we were on the AIA government grievance committee we went to TxDOT and met with contracting office there because a contract was horrible, one sided,

no mediation, my word is the final word, all that stuff. So what happened? They retaliated. A project came that had our name all over and we did not even get interviewed.

I filed one claim against an agency. Seven years later we still work with each other, but for the longest time I had to go around, justify, get letters from district clerks, county courts in all cities that I practice and show that I did not sue, I did not have these problems, and the problem was minor.

You've got to make the decision whether it's just not easier to walk away, and with this particular engineer— female engineer, it's easier to walk away from her because of—because of the type of a personality that she is and she would take it to an undesirable—I mean, she works very closely with the City by the way.

I heard something similar from my contractor/client of mine working on a City sewer project that they won't even bid one engineer's work. All the problem jobs are traceable to that design firm, because they're never wrong. Everything they design is perfect and it's always the contractor's fault. And so the contractors know this and they just know this is how it works. But I don't—you know, there doesn't seem to be any mechanism for them to really advise the City that they can do better than this choice of engineer.

I learned a long time ago to give my complaints to them anonymously, because if you give it with your name—I did that one time and it sucked up a huge portion of my life trying to keep up with their investigation. And so the next time I just said, huh-uh, you need a hotline for a tip, and you guys do your own investigation.

It's not worth it.

2. Obtaining private sector contracts

Private sector contracts were very difficult to obtain for most firms. The majority of M/WBEs had done little or no work in the private sector, especially on construction jobs. One WBE reported that most of her prime contracting work was in the private sector.

At the same time, private firms have recently become more conscious of the need to make outreach efforts to M/WBEs.

But what I'm finding is that there are now owners that are more conscious about this that are private. Whole Foods just built a project. Whole Foods wanted minority participation. They made it clear to the GC.

I would say, you know, they're doing private work all over the place; they don't call me for it. So I do think that if when the owner makes it clear that that's what they're interested in, then even on private work where the owner has made that clear, then my phone rings.

I have to agree with her, also. Because another thing, when we did some private work, the owner emphasized that he wanted to work with minorities. He also forwarded our name to other companies. One company was from out-of-state, Michigan, and another out-of-state company, when they came here to work, they first called me and asked if I was interested in the project.

3. Access to capital

One WBE stated that she had fewer problems obtaining loans because of her husband's prior dealings with the lenders.

One woman reported difficulty obtaining a \$5000 bank loan.

The banker never looked me in the face. He never acknowledged my presence, really, no more than tell me "No." That's what he did. So I had to become very creative in how I financed, because I have this kind of business that is called "soft." You know, I don't have the things that she has in the back of her because of the nature of the business, construction. So my business is soft, consulting. You know, you don't know if it's going to work or not work. So, I mean, that's the way they feel. But it was just his attitude, his demeanor towards me.

A minority firm owner related the following incident:

I was talking to Bank One. I was trying to do a simple \$20,000 loan line of credit, you know. I was carrying it with a \$20,000 CD. They turned me down, and I was like --I had to curse -- you know, I had to call them up -- and be very firm with them to let them know, this don't -- "I stood up in your office and I told you I want to have an opportunity doing business with Bank One." And you said, "No problem. We can do this." I said, "Well, look" -- "I mean, my credit is this way, that way whatever the case may be. Is that going to be an issue?" We should have no problems with this as long as you have some liquid to be able to do it with." I gave him the money, and I just want to establish a relationship, basically, to me, in banking -- and I'm going to be honest with you, my attitude about banking is that it sucks.

B. Experiences with the City of Austin's M/WBE Program

1. M/WBE certification

Almost all comments regarding the recent outsourcing of the City's certification function to the South Central Texas Regional Certification Authority (SCTRCA) were negative.

The outsourced certification office is terrible. I mean, just recently, because of the airport job, I needed to get my DBE letter, and so I called to request the DBE letter. The agency told me they would fax the letter to me. They never sent it. I called back. Nobody ever answers. You have voice mail from that point on. At least when the City was doing the certification you could physically go to there office.

I got a letter telling me that I needed to verify my Hispanic heritage. I had letters going back from when my great grandmother crossed the damn river in 1912. I had to go back and prove that I was Mexican. I'm talking to the agency in Spanish. But it just goes to show that in 15-16 years of doing business with the City there was never a question. They definitely have poor customer service.

The SCTRCA needs to have a local office and local presence if they're going to be representing local businesses.

Lack of responsiveness and delays in processing applications were mentioned numerous times.

I submitted my application, but I've never heard back from them.

I call, call, e-mail, e-mail. I'd call and I'd tell them that I'm not going to go away until they call me back.

I said I sent all my required information. A SCTRCA official said that in the conversion my information remained in Austin (DSMBR), apparently my information was not delivered to San Antonio. I had to drop everything I was doing on projects and get my staff to hurry up and courier my application to San Antonio. I also had to get my CPA to write another financial statement, and it was on and on. I have been certified for years, and so it was nuts to go through all of those requirements. I finally received my certification letter, but it was missing one of the certifications. I lost a huge project because I did not have my DBE certification.

The agency is understaffed. I had to call the SCTRCA official and if that person is gone, I mean, that's it. They're gone. You have to wait until they return from vacation or sick leave.

Two White women discussed their frustrations at the difficulty of becoming certified as WBEs providing engineering services. The City questioned their ability to manage and control the firms because their husbands were the licensed engineers.

City staff reported that some of the delays in processing certification applications resulted from an increase in the number of firms seeking certification beyond that initially expected when the function was outsourced.

2. Bidding and performing contracts

M/WBEs and non-M/WBEs recounted long waits for payment resulting from change orders.

One WBE complained that the City's project managers do not support the subcontractors. Some project managers appear to have personal relationships with prime contractor personnel.

Some M/WBEs praised recent City efforts to facilitate information for liens and other purposes. Further, biweekly payment has been helpful in managing cash flows.

The City implemented this prompt payment system and pilot tested for a year. The system worked. Now once the GC has been paid, he is allowed ten days after the last day of the month to pay his subs. The Public Works Department has a payment auditor who receives the payment requests and schedule of values.

Mobilization payments have likewise facilitated M/WBEs' ability to work on City contracts. This is especially important given minorities and women's limited access to bank financing.

The City was very gracious to let me have a draw down on my contract to start up my project. They were very open to work with me on that. They gave me the money that I needed to start up the project. From that day forward, that was my creative way of getting the funds that I needed to start up my projects. I would ask the City and other clients to provide me with a nominal percentage for the initial start-up of my projects. I never went in to ask the bank to loan me anything for my

business. I mean, I just had a real disheartening thing about banks and their attitudes.

Some firms complained of insufficient information from prime contractors, and suggested that the City mandate that general contractors provide subcontractors with adequate information on their bonding companies, as well as investigate the financial soundness of the bonding company.

M/WBES stated that Austin should post payments to prime contractors on its website, so that subcontractors can estimate when they should receive their payments from those prime contractors.

There was support for a linked deposit program, whereby City depository institutions would make loans to firms awarded City contracts, using the contracts as collateral. One firm further suggested that the City's Cash Enhancement Program be revived and expanded.

3. M/WBE Program policies and procedures

a. Program's impact on M/WBES

Many interviewees reported that the City's M/WBE Program was essential to their success.

I can say that the program is what made me. I do not think I would have had a chance. I was struggling with the large prime contractors of the world. They had their own little in-house minority. I was struggling against them. It was tough. It was really tough. But I still have to say that the minority program with the City of Austin is probably what made my company. Today we're doing over \$10 million a year. We've expanded and expanded. We've been very successful. We have between 120 and 150 employees.

I also give a lot of credit to the City's M/WBE program for helping me establish relationships with prime contractors who work in the private sector. These relationships helped me get a lot of private sector work. We were introduced to these contractors through our City work. Now they're doing work for developers right now and subdivision work and they're calling us because of our past relationship with them on City work.

I would not be able to start [my business]. Getting on a winning team requires that you know how contracting works. The DSMBR staff provided me with that type of insight. I don't understand the systems. I don't know a lot of people. It's

the staff of the DSMBR that helped me. Without them I would not be here. If the program got squashed, I would be out of job.

Whatever their criticisms, M/WBEs agreed that the elimination of the Program would be catastrophic for minorities and women.

You will see so many small local minority businesses go out of business. We all know that we're not foolish enough to think and I think that I am more than qualified to do a lot more work than I do, but I'm not foolish enough to think not one of them would call me. They would not pee on me if I was on fire and that's all they had to do. I know they would not hire me. The effect would be disastrous.

It would make it a lot worse for minority and woman owned firms.

LCRA is an example. The years that they had zero dollars awarded to African I businesses in construction, they will tell you that "While we encourage the use of minorities and women, we don't give or take any brownie points into your evaluation score." So what happens? The agency does nothing.

However, some Black-owned firms expressed frustration about the lack of growth in their numbers, and the continuing barriers to success.

b. Program's impact on non-M/WBEs

In general, non-M/WBEs supported the overall objectives of the Program.

I don't think anybody has a problem with the idea of minority business development. It's just that we need to get to it in about a way where it's serious and manageable.

One larger White male-owned contractor reported that the City's goals had become more "realistic" recently, but that high and unattainable goals had driven many companies out of bidding City work.

We are trying to kind of force feed it and it really didn't work. So now we need to get it to the point where people are real serious about their business and people should start going into the construction and they're going to run that business the right way, because they're -- you know—and then the Supreme Court rulings rule you really can't make it mandatory.

There are many companies who have given up and they do not bid the City.

We found it very difficult to find, you know, minority participation and we had certain goals that you have to do and it was practically impossible. The contract is on going right now, but, you know, we try to get as much minority participation as we can. And, I mean, we haven't gotten in trouble or anything for it, but it's just the way it was set up was it was just very difficult for us to be able to meet those goals.

First, there are no subcontractors out there. There's not an available pool of them. The way our contract is structured, you have material and labor. There's really no where to get the materials from a minority or woman owned firm. The materials are a big part of the costs of the contract. The way we have to meet our goal is through labor and it's just impossible.

There was concern amongst prime contractors that the City's goal setting process was based upon inadequate information.

What we've experienced in [the underground utility] industry is the availability is not—I mean, when you are going to go do a utility construction job so much of it is materials, so much of it is just your own labor, your equipment and things like that. There's not a lot of sub work out there. There's—and so the goals that they mandate are really unrealistic unless you—and quite frankly, unless you are just kind of playing with it. I mean, you know, you are either going to sub some of the work you do out to another firm, which there's not that many of, or you're going to—you know, you're really restricted by who and where you can use them, because they've narrowed the goals to not just so much women or so much minority They've broken it down to, you know, numerous types of minorities.

Look at each job on an individual basis and when you have a mandatory preconstruction meeting or a pre-bid meeting, you've got all the players right there. Ask them what are you going to sub, okay; then go out and figure out how much of that can be subbed to minority firms, and then set your goals so they're realistic, so that you don't have somebody playing with numbers, for instance, you know, just to make it. They're just brokers, you know. I know they've tried to eliminate most of those brokers. You know, people that are—just get a percentage to watch—and they've eliminated most of those, and that's—that's good.

There was also concern about the quality of the DSMBR lists from which good faith efforts are to be made. Many firms are not capable of performing in the areas of specialty listed, or are otherwise not viable businesses. “You mail 150 of those postcards and you will get one or two calls.” Several prime contractors suggested that DSMBR make the first contact with M/WBEs subcontractors, to relieve the prime

contractors of this burden and ensure that subcontractors are qualified for the particular contract.

Some owners expressed strong concerns that M/WBEs are permitted to remain in the Program indefinitely, so long as they continue to meet the eligibility criteria; there is no “up and out” date similar to that of the SBA’s 8(a) Program.

I have a lot of members [of trade association] that are concerned with how long minority and woman owned firms remain in the program. There should be a deadline or termination date whether it be five years or whatever, but at some point the firms should be graduated from the program.

Overall, DSMBR was commended for its help in meeting the Program’s requirements.

The DSMBR is a great brokerage house. And that’s what they should do. They serve as a brokerage for minority firms. They are a brokerage house for minority firms. And we do have a great DSMBR office.

Those guys that work in there are good. I mean, I think they’re good. We’ve never had any problems with them. You know, they’ve answered our questions. They helped us get people certified. They’ve done what we’ve asked them to do. It’s just the rules they live under are a little sketchy.

One prime contractor suggested that prime contractors should develop their own pre-qualification program for subcontractors.

The other part that was always missing—and I’ve seen this in other cities—is that the large prime contractors, they wait until they see the job that they want to bid, they get the bids in, and all the small contractors who are either new, inexperienced or just slightly experienced—some make the bids and you get a good number, but the subcontractor really doesn’t meet all the qualifications to do the job. So then you, the prime contractor, is stuck not having qualified subcontractors. The preemptive way is for the prime contractor to take the initiative to have some type of pre-qualification for these subcontractors. Consider your pre-qualifications of subcontractors doing some type of business review, for example, they should have insurance. They should find what is required of them to work for your company, not so much to work for the City, to work for your company. And you keep that prequalification list and it also helps you now to find these contractors when you need work—when you need for them to do work for you. But if you wait until you find the job, you send them the stuff that you get from the DSMBR you are going with the eight ball. That’s never

going to change. So the larger companies have to take a proactive approach to help the situation come together.

If you do the prequalification stuff like this, you could sign what you want to, but at that time they determine—you determine whether or not the contractor is bondable. If he or she is not, then you show them how they can be bondable. It's an investment that your company is making anyway. And depending on the size of the contracts that they sub to you, then you have the subcontractors bond back to you and it reduces your exposure. And it works better that way. But it's a process that the large companies have to be a little more pro-active in doing that. What we find in traveling around is that most cases—companies like these, like yours and—they throw yours—they throw the ball back to the City. It's not going to change, because the City has certain responsibilities. They have to have jobs bonded and have to have liability insurance and all that.

c. Good faith efforts to meet contract goals

Minority firms expressed concerns that prime contractors that want to evade contract goals can "package" their good faith efforts to avoid doing so.

I had an incident where I was sent a good faith—I mean, a request for good faith effort. I sent them my request. And then that particular contractor, GC, received the job, but when I called him, he said, "I just sent you that for a request for bid because I have to because of the good faith effort, but I will never use a minority firm for the service that I do." And I said, "Okay. Well, then please don't send me anymore requests," and he said, "No. I will always send them to you because the City requires it." And I don't send them any bids now, but it was just very clear, and, I mean, he was—those were his direct words. And he went on to tell me that the person that he does use, he just writes her in.

One participant suggested following a system similar to how he described the city of San Antonio's process: bidder must include all subcontract quotes with its bid, and must use a subcontractor submitted with the bid.

d. Substitutions of subcontractors

Despite provisions in the City's ordinance and Program Rules prohibiting unauthorized substitutions of subcontractors by prime contractors, some MBEs stated that such substitutions still occur. *"They do whatever the hell they want to do."*

e. Program enforcement

Enforcement of the ordinance remains a major concern. Some firms felt that DSMBR was undercut by other departments.

Everybody—Public Works can interpret that ordinance to be what they want it to be. The utility—Water and Wastewater can interpret the way they want it to be. The staff in charge of it, they know the ordinance—I think they do. They know the ordinance on what they're supposed to be doing, but everybody else from other departments can come in and make an interpretation, and that's what they have to put up and live with. That's not the way it should work. The ordinance has given them the authority to interpret. What it creates in an environment in which the DSMBR staff are afraid to implement the ordinance.

Another example cited was the Robinson Hills Multifamily Project. According to this participant, the Department of Economic Growth and Development was permitted to waive MBE and WBE goals on the project, without the concurrence of DSMBR. Mabel Davis Park was also mentioned, as an instance where goals could have been set on the landscaping portion of the project but were not.

Further, some people felt that DSMBR staff members who attempted to enforce the Program were punished with reassignment or termination.

It's a thankless and tough job and you are going to piss of a lot of people. I mean you're going to step on a lot of big white toes and they don't like it.

We have everything that needs to done in order to be able to do what we got to do to do to get those GCs. Enforcement is the problem. The COA is the owner of the contract, period. The GCs have the regulations they are required to abide, but they do not and no one enforces them.

VI. Review of the City of Austin’s M/WBE Program

An essential element of determining whether a race- and se-based contracting program meets constitutional parameters is whether that program is “narrowly tailored” to any evidence of discrimination. The following factors must be considered in determining whether a race-based remedy is narrowly tailored to achieve its purpose:

- The efficacy of race-neutral remedies at overcoming identified discrimination;
- The relationship of numerical benchmarks for government spending to the availability of 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.¹⁴²

A. Austin’s Program is narrowly tailored

1. Race-neutral initiatives

The City provides extensive assistance to small businesses in its marketplace. These measures were documented in a 2002 report, “Needs Assessment for Small Business Development Services,” prepared by BBC Research & Consulting. In brief, the report described then-existing services to small businesses, and recommended that the City promote greater use of existing services; communicate unmet needs to current service providers; improve its internal processes to make it easier for small business to do business with the City; and examine its strategy for small business assistance to ensure maximum impact and sustainability.

Despite these efforts, there is no evidence that absent the M/WBE Program’s use of race- and gender-conscious subcontracting goals, M/WBEs would be utilized on City contracts commensurate with their availability. To the contrary, minorities and women, as well as City staff, were adamant that without goals M/WBEs would have few opportunities to work on City contracts. The lack of M/WBE participation on private

¹⁴²*United States v. Paradise*, 480 U.S. 149, 171 (1987).

sector projects without affirmative action goals suggests that race- and gender-neutral approaches will be inadequate to remedy the effects of past and current discrimination in the City's construction marketplace.

2. Annual aspirational goals for M/WBE utilization

The current ordinance sets goals based upon the 2003 NERA availability analysis. This approach, which has been upheld in court,¹⁴³ establishes a clear relationship between the benchmark for government spending to the availability of M/WBEs. An updated analysis will provide fresh data to ensure that the Program's goals "fit" the marketplace.

3. Program flexibility

Austin's Program is extremely flexible. Goals on construction contracts are set on a contract by contract basis, to reflect the availability of certified firms to perform the anticipated subcontracting scope of the project. Goals are not quotas; to the contrary, bidders that demonstrate that despite their good faith efforts to meet the goals they were unsuccessful are in full compliance with the ordinance and the Program Rules. Further, the City Manager may grant a waiver of the good faith efforts requirement, if it is in the best interests of the City.

4. Program beneficiaries

The statistical portion of the report suggests that all of the racial and ethnic minority groups and White women experience disparities in the Austin construction marketplace.¹⁴⁴ Groups are not randomly included.¹⁴⁵

5. Adverse impact on third parties

There is no evidence that non-certified firms are unduly impacted by the Program. While majority male-owned firm owners had particular criticisms of the Program, none was shut out of Austin's contracting opportunities or found it impossible to bid City work. There will, of course, be some burden on non-M/WBEs, as that is

¹⁴³ See, e.g., *Northern Contracting II*, at 68 (NERA's custom census approach meets legal and policy concerns).

¹⁴⁴ See *Western State*, 407 F.3d at 37 ("each of the principal minority groups benefited by Washington's DBE program ... must have suffered discrimination within the State").

¹⁴⁵ Cf. *BAGC v. Cook*, 256 F.3d at 64 (a "state or local government that has discriminated just against blacks may not by way of remedy discriminate in favor of blacks and Asian-Americans and women").

inherent in the nature of a remedy but as previously discussed, that is not fatal to the City's efforts to level the playing field for minority- and women-owned firms. Moreover, prime contractors were generally supportive of the objectives of the Program, recognizing that some intervention is necessary to create equal opportunities for City contracts and entrepreneurial opportunities in Austin's minority communities.

6. Program duration

The M/WBE ordinance contains a sunset date. This requires the City Council to periodically review the evidence relevant to the Program and to determine whether race- and sex-conscious remedies must continue. This is sufficient to meet the narrow tailoring requirement. This is also an essential element for a reenacted and revised M/WBE ordinance and Program policies as discussed in VII.B below.

B. Program policies and procedures

To examine the efficacy of the Program's policies and procedures, we met with DSMBR staff and the M/WBE Advisory Committee. While in general the Program was thought to effective, some themes emerged.

1. Contract goal setting

In contrast to construction contracts, the annual goals are used for professional services contracts. While this is less of an administrative burden than setting individual goals, concerns were expressed about the defensibility of this blanket approach.

Requiring every subcontractor to register and receive a vendor number would facilitate contract goal setting and create additional information on "available" firms for that project.

2. Contract monitoring

The recently constituted post-award team at DSMBR has made progress toward increased and thorough monitoring of contractors' compliance with the Program. However, the current team cannot fully review the large number of City projects. Unauthorized substitutions, while fewer, still occur. Three people monitored approximately 450 projects between October of 2004 and July of 2005. Everyone

affected by the Program- staff, M/WBEs, non-M/WBEs- strongly urged that more resources are needed, especially for larger projects like the Convention Center.

While the E-CAPRI system has increased DSMBR's ability to monitor projects, enhancements need to be made. For example, the addition or deletion of subcontractors is often not captured, and contractors can receive progress payments without furnishing this information to the City. There also is no field to track subcontractor substitutions. In fact, E-CAPRI does not appear to be designed as a M/WBE program compliance tool. Staff suggested either modifying E-CAPRI or implementing specialized compliance software packages to meet this critical need.

3. Contract sanctions

Staff expressed frustration at what they see as the lack of sanctions applied to contractors who knowingly and often repeatedly ignore or violate the Program Rules. Examples include making unauthorized subcontractor substitutions and labeling them "emergencies"; failing to pay subcontractors in a timely fashion; and failure to meet goals without adequate explanations.

There is no mechanism to track sanctions. Staff also felt that there were insufficient guidelines about when and what type of sanctions can be imposed. Better coordination with the Law and Procurement Departments was suggested by several participants.

4. Certification

Staff expressed criticisms very similar to those of applicants with the outsourced certification process. In addition, SCTRCA does not communicate adequately with DSMBR and applicants. Program officials are often embarrassed by their inability to respond to questions or to obtain answers from the Agency. Further, there is a lack of integration between SCTRCA's and the City's databases. Finally, and most profoundly, the lack of site visits for construction applicants raised questions about the integrity of the process and whether "front" firms are now being certified.

5. Department responsibilities

DSMBR staff felt that other City departments should take ownership of the Program. In their experience, while there are several project managers who support the

Program and do their best to enforce its provisions, too many project managers and other user department personnel treat compliance as DSMBR's problem, not a City-wide policy and objective. This leads to a lack of communication and a "pass the buck" attitude that hinders the Program and diminishes opportunities for M/WBEs.

Tables

Table 1. Annual Wage Earnings Regressions, All Industries, 2000

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.304 (197.61)	-0.304 (197.45)	-0.304 (197.47)
Hispanic	-0.216 (139.09)	-0.217 (138.96)	-0.217 (138.99)
Asian/Pacific Islanders	-0.292 (139.06)	-0.291 (138.69)	-0.292 (139.08)
Native American	-0.327 (70.23)	-0.328 (70.31)	-0.328 (70.31)
Other Race	-0.281 (89.02)	-0.281 (88.81)	-0.281 (89.03)
White Female	-0.357 (400.16)	-0.357 (399.65)	-0.357 (399.72)
Age	0.177 (680.45)	0.177 (680.45)	0.177 (680.45)
Age ²	-0.002 (588.53)	-0.002 (588.54)	-0.002 (588.54)
Austin	0.054 (7.57)	0.013 (1.15)	0.009 (0.84)
Austin*African American		0.081 (2.47)	0.085 (2.62)
Austin*Hispanic		0.097 (5.07)	0.101 (5.42)
Austin* Asian/Pacific Islanders		-0.034 (0.98)	
Austin* Native American		0.507 (2.89)	0.513 (2.92)
Austin*Other Race		-0.022 (0.39)	
Austin*White Female		0.055 (3.24)	0.059 (3.59)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	3848837	3848837	3848837
R ²	.436	.436	.436
F	18480	17816	18032

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

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

Table 2. Annual Wage Earnings Regressions, All Industries, 1986-1991

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.227 (143.44)	-0.227 (143.35)	-0.227 (143.44)
Hispanic	-0.167 (84.05)	-0.167 (83.90)	-0.167 (84.00)
Other Race	-0.189 (73.81)	-0.189 (73.76)	-0.189 (73.81)
White Female	-0.218 (222.88)	-0.218 (222.79)	-0.218 (222.80)
Age	0.059 (237.20)	0.059 (237.20)	0.059 (237.20)
Age ²	-0.001 (193.45)	-0.001 (193.45)	-0.001 (193.45)
Austin	-0.016 (1.64)	-0.048 (3.21)	-0.032 (2.69)
Austin*African American		0.036 (0.87)	
Austin*Hispanic		0.052 (1.82)	
Austin*Other Race		-0.002 (0.03)	
Austin*White Female		0.065 (2.87)	0.047 (2.34)
Time (6 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	863351	863351	863351
R ²	.472	.472	.472
F	7026	6780	6963

Source: NERA calculations from the Merged Outgoing Rotation Groups of the 1986-1991 Current Population Survey microdata samples.

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

Table 3. Annual Wage Earnings Regressions, All Industries, 1992-2002

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.214 (129.47)	-0.214 (129.21)	-0.214 (129.20)
Hispanic	-0.205 (118.19)	-0.205 (118.00)	-0.205 (118.21)
Asian	-0.194 (78.92)	-0.194 (78.92)	-0.194 (78.92)
Native American	-0.171 (38.07)	-0.171 (37.93)	-0.171 (38.08)
White Female	-0.178 (174.59)	-0.178 (174.44)	-0.178 (174.59)
Age	0.053 (202.38)	0.053 (202.38)	0.053 (202.38)
Age ²	-0.001 (166.93)	-0.001 (166.94)	-0.001 (166.94)
Austin	0.067 (7.10)	0.061 (4.05)	0.074 (7.63)
Austin*African American		-0.089 (2.52)	-0.101 (3.01)
Austin*Hispanic		0.029 (1.16)	
Austin*Asian		0.109 (1.81)	
Austin*Native American		-0.086 (1.13)	
Austin*White Female		0.015 (0.70)	
Time (11 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	933024	933024	933024
R ²	.467	.467	.467
F	6323	6087	6275

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

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

Table 4. Annual Wage Earnings Regressions, Construction and Related Industries, 2000

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.334 (52.33)	-0.334 (52.25)	-0.334 (52.33)
Hispanic	-0.158 (31.74)	-0.158 (31.65)	-0.158 (31.73)
Asian/Pacific Islanders	-0.195 (17.87)	-0.195 (17.86)	-0.195 (17.87)
Native American	-0.296 (22.41)	-0.296 (22.47)	-0.296 (22.47)
Other Race	-0.216 (18.73)	-0.215 (18.68)	-0.216 (18.74)
White Female	-0.395 (103.90)	-0.395 (103.68)	-0.395 (103.90)
Age	0.157 (174.96)	0.157 (174.96)	0.157 (174.96)
Age ²	-0.002 (149.34)	-0.002 (149.34)	-0.002 (149.34)
Austin	0.056 (2.56)	0.039 (1.22)	0.054 (2.46)
Austin*African American		-0.042 (0.28)	
Austin*Hispanic		0.025 (0.53)	
Austin* Asian/Pacific Islanders		0.094 (0.47)	
Austin* Native American		1.766 (2.15)	1.726 (2.12)
Austin*Other Race		-0.062 (0.30)	
Austin*White Female		0.046 (0.69)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	307414	307414	307414
R ²	.268	.268	.268
F	1503	1392	1484

Source: See Table 1.

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

Table 5. Annual Wage Earnings Regressions, Construction and Related Industries, 1986-1991

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.213 (32.07)	-0.213 (31.94)	-0.213 (31.93)
Hispanic	-0.139 (19.87)	-0.139 (19.75)	-0.139 (19.89)
Other Race	-0.098 (8.85)	-0.097 (8.81)	-0.098 (8.85)
White Female	-0.287 (61.23)	-0.287 (61.22)	-0.287 (61.24)
Age	0.070 (72.46)	0.070 (72.47)	0.070 (72.47)
Age ²	-0.001 (57.41)	-0.001 (57.41)	-0.001 (57.42)
Austin	-0.034 (1.09)	-0.039 (0.89)	-0.020 (0.63)
Austin*African American		-0.267 (1.99)	-0.282 (2.16)
Austin*Hispanic		-0.006 (0.08)	
Austin*Other Race		-0.057 (0.29)	
Austin*White Female		0.136 (1.46)	
Time (6 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	57714	57714	57714
R ²	.369	.369	.369
F	527	497	519

Source: See Table 2.

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

Table 6. Annual Wage Earnings Regressions, Construction and Related Industries, 1992-2002

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.196 (25.63)	-0.196 (25.60)	-0.196 (25.63)
Hispanic	-0.175 (29.57)	-0.175 (29.48)	-0.175 (29.57)
Asian	-0.116 (9.06)	-0.116 (9.05)	-0.116 (9.06)
Native American	-0.103 (7.20)	-0.104 (7.26)	-0.103 (7.20)
White Female	-0.245 (48.99)	-0.245 (48.95)	-0.245 (48.99)
Age	0.062 (61.08)	0.062 (61.07)	0.062 (61.08)
Age ²	-0.001 (47.95)	-0.001 (47.95)	-0.001 (47.95)
Austin	-0.003 (0.09)	-0.012 (0.23)	-0.003 (0.09)
Austin*African American		-0.009 (0.05)	
Austin*Hispanic		-0.015 (0.19)	
Austin*Asian		n/a	
Austin*Native American		0.218 (1.03)	
Austin*White Female		0.062 (0.55)	
Time (11 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	60581	60581	60581
R ²	.373	.373	.373
F	433	413	433

Source: See Table 3.

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

Table 7. Annual Business Owner Earnings Regressions, All Industries, 2000

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.300 (26.45)	-0.300 (26.48)	-0.300 (26.45)
Hispanic	-0.190 (18.82)	-0.189 (18.71)	-0.190 (18.82)
Asian/Pacific Islanders	-0.041 (2.85)	-0.040 (2.81)	-0.041 (2.85)
Native American	-0.384 (14.83)	-0.384 (14.83)	-0.384 (14.83)
Other Race	-0.273 (15.11)	-0.272 (15.00)	-0.273 (15.11)
White Female	-0.440 (90.29)	-0.440 (90.14)	-0.440 (90.29)
Age	0.164 (98.38)	0.164 (98.38)	0.164 (98.38)
Age ²	-0.002 (88.40)	-0.002 (88.40)	-0.002 (88.40)
Austin	0.044 (1.17)	0.035 (0.68)	0.044 (1.17)
Austin*African American		0.326 (1.29)	
Austin*Hispanic		-0.040 (0.37)	
Austin* Asian/Pacific Islanders		-0.158 (0.66)	
Austin* Native American			
Austin*Other Race		-0.230 (0.91)	
Austin*White Female		0.042 (0.51)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	401629	401629	401629
R ²	.166	.166	.166
F	497	482	497

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

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

Table 8. Annual Business Owner Earnings Regressions, All Industries, 1986-1991

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.534 (10.75)	-0.533 (10.67)	-0.534 (10.75)
Hispanic	-0.271 (5.97)	-0.274 (6.01)	-0.271 (5.97)
Other Race	-0.251 (4.03)	-0.252 (4.05)	-0.251 (4.03)
White Female	-0.725 (40.96)	-0.725 (40.92)	-0.725 (40.96)
Age	0.203 (23.91)	0.203 (23.89)	0.203 (23.91)
Age ²	-0.002 (21.78)	-0.002 (21.76)	-0.002 (21.78)
Austin	0.308 (1.10)	0.264 (0.69)	0.308 (1.10)
Austin*African American		-0.516 (0.74)	
Austin*Hispanic		0.893 (0.78)	
Austin*Other Race		0.809 (0.37)	
Austin*White Female		0.016 (0.03)	
Time (6 categories)	Yes	Yes	Yes
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	32453	32453	32453
R ²	.160	.160	.160
F	58.27	56.16	58.27

Source: NERA calculations from the Annual Demographic (March) File of the 1986-1991 Current Population Survey microdata samples.

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

Table 9. Annual Business Owner Earnings Regressions, All Industries, 1992-2002

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.591 (14.85)	-0.592 (14.87)	-0.591 (14.85)
Hispanic	-0.389 (9.78)	-0.389 (9.73)	-0.389 (9.78)
Asian	-0.221 (3.41)	-0.222 (3.43)	-0.221 (3.41)
Native American	-0.511 (5.47)	-0.512 (5.46)	-0.511 (5.47)
White Female	-0.617 (31.34)	-0.617 (31.33)	-0.617 (31.34)
Age	0.230 (27.26)	0.230 (27.25)	0.230 (27.26)
Age ²	-0.002 (23.8)	-0.002 (23.79)	-0.002 (23.80)
Austin	0.108 (0.49)	-0.040 (0.14)	0.108 (0.49)
Austin*African American		2.277 (0.82)	
Austin*Hispanic		-0.060 (0.11)	
Austin*Asian		1.045 (0.49)	
Austin*Native American		0.396 (0.16)	
Austin*White Female		0.496 (0.83)	
Time (11 categories)	Yes	Yes	Yes
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	55639	55639	55639
R ²	.128	.128	.128
F	63.90	61.51	63.90

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

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

Table 10. Business Owner Earnings Regressions, Construction and Related Industries, 2000

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.338 (12.11)	-0.337 (12.01)	-0.338 (12.11)
Hispanic	-0.147 (6.86)	-0.151 (7.06)	-0.152 (7.07)
Asian/Pacific Islanders	-0.068 (1.46)	-0.069 (1.47)	-0.069 (1.47)
Native American	-0.353 (7.00)	-0.353 (7.00)	-0.353 (7.00)
Other Race	-0.148 (3.40)	-0.147 (3.36)	-0.149 (3.41)
White Female	-0.505 (30.55)	-0.505 (30.49)	-0.505 (30.56)
Age	0.136 (36.02)	0.136 (36.03)	0.136 (36.03)
Age ²	-0.001 (33.71)	-0.001 (33.72)	-0.001 (33.72)
Austin	0.221 (2.44)	0.128 (1.22)	0.092 (0.94)
Austin*African American		-0.464 (1.19)	
Austin*Hispanic		0.545 (2.29)	0.596 (2.49)
Austin* Asian/Pacific Islanders		n/a	
Austin* Native American		n/a	
Austin*Other Race		-0.824 (1.27)	
Austin*White Female		-0.075 (0.21)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	64853	64853	64853
R ²	.054	.054	.054
F	49	46	48

Source: See Table 7.

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

Table 11. Business Owner Earnings Regressions, Construction and Related Industries, 1986-1991

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.295 (2.31)	-0.296 (2.32)	-0.295 (2.31)
Hispanic	-0.326 (3.42)	-0.336 (3.54)	-0.326 (3.42)
Other Race	-0.089 (0.49)	-0.090 (0.50)	-0.089 (0.49)
White Female	-0.854 (14.90)	-0.856 (14.95)	-0.854 (14.90)
Age	0.147 (7.94)	0.146 (7.91)	0.147 (7.94)
Age ²	-0.002 (7.64)	-0.002 (7.61)	-0.002 (7.64)
Austin	0.181 (0.35)	-0.339 (0.69)	0.181 (0.35)
Austin*African American			
Austin*Hispanic		2.909 (1.34)	
Austin*Other Race			
Austin*White Female		10.781 (1.27)	
Time (6 categories)	Yes	Yes	Yes
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	4907	4907	4907
R ²	.077	.077	.077
F	6.36	6.36	6.36

Source: See Table 8.

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

Table 12. Business Owner Earnings Regressions, Construction and Related Industries, 1992-2002

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.323 (2.40)	-0.323 (2.40)	-0.323 (2.40)
Hispanic	-0.141 (1.33)	-0.124 (1.17)	-0.124 (1.17)
Asian	-0.178 (0.84)	-0.175 (0.82)	-0.175 (0.82)
Native American	-0.208 (0.76)	-0.205 (0.75)	-0.205 (0.75)
White Female	-0.839 (15.71)	-0.839 (15.69)	-0.839 (15.69)
Age	0.190 (8.69)	0.189 (8.67)	0.189 (8.67)
Age ²	-0.002 (7.88)	-0.002 (7.85)	-0.002 (7.85)
Austin	0.585 (0.97)	1.834 (1.87)	1.819 (1.90)
Austin*African American		-0.116 (0.05)	
Austin*Hispanic		-0.893 (2.12)	-0.893 (2.13)
Austin*Asian			
Austin*Native American			
Austin*White Female			
Time (11 categories)	Yes	Yes	Yes
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (88 categories)	Yes	Yes	Yes
N	8446	8446	8446
R ²	.064	.065	.064
F	6.90	6.79	6.90

Source: See Table 9.

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

Table 13. Business Formation Regressions, All Industries, 2000

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.047 (104.85)	-0.047 (104.75)	-0.047 (104.86)
Hispanic	-0.036 (85.06)	-0.036 (84.82)	-0.036 (85.00)
Asian/Pacific Islanders	-0.016 (26.12)	-0.016 (26.06)	-0.016 (26.12)
Native American	-0.033 (26.21)	-0.033 (26.2)	-0.033 (26.22)
Other Race	-0.018 (19.75)	-0.018 (19.77)	-0.018 (19.75)
White Female	-0.030 (105.61)	-0.030 (105.64)	-0.030 (105.64)
Age	0.011 (152.62)	0.011 (152.63)	0.011 (152.63)
Age ²	-0.000 (108.22)	-0.000 (108.23)	-0.000 (108.23)
Austin	0.004 (2.17)	-0.003 (0.88)	-0.000 (0.13)
Austin*African American		0.007 (0.62)	
Austin*Hispanic		0.008 (1.40)	
Austin* Asian/Pacific Islanders		-0.005 (0.43)	
Austin* Native American		-0.004 (0.09)	
Austin*Other Race		0.016 (0.91)	
Austin*White Female		0.017 (3.72)	0.015 (3.49)
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	4406525	4406525	4406525
Pseudo R ²	0.162	0.162	0.162
Chi ²	480000	480000	480000
Log Likelihood	-1255762	-1255754	-1255756

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

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

Table 14. Business Formation Regressions, All Industries, 1986-1991

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.042 (65.99)	-0.042 (65.95)	-0.042 (65.99)
Hispanic	-0.029 (37.91)	-0.029 (37.76)	-0.029 (37.91)
Other Race	-0.017 (17.65)	-0.017 (17.65)	-0.017 (17.65)
White Female	-0.030 (70.08)	-0.030 (70.02)	-0.030 (70.08)
Age	0.013 (121.32)	0.013 (121.32)	0.013 (121.32)
Age ²	-0.000 (93.98)	-0.000 (93.98)	-0.000 (93.98)
Austin	-0.006 (1.61)	-0.007 (1.22)	-0.006 (1.61)
Austin*African American		0.016 (0.68)	
Austin*Hispanic		-0.009 (0.73)	
Austin*Other Race		0.015 (0.49)	
Austin*White Female		0.002 (0.25)	
Time (6 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	1213923	1213923	1213923
Pseudo R ²	.236	.236	.236
Chi ²	2.0e+05	2.0e+05	2.0e+05
Log Likelihood	-321339	-321338	-321339

Source: NERA calculations from the Merged Outgoing Rotation Groups of the 1986-1991 Current Population Survey microdata samples.

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

Table 15. Business Formation Regressions, All Industries, 1992-2002

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.048 (78.35)	-0.048 (78.21)	-0.048 (78.35)
Hispanic	-0.041 (61.73)	-0.041 (61.55)	-0.041 (61.73)
Asian	-0.015 (16.49)	-0.015 (16.43)	-0.015 (16.49)
Native American	-0.030 (19.25)	-0.030 (19.25)	-0.030 (19.25)
White Female	-0.026 (62.43)	-0.026 (62.3)	-0.026 (62.43)
Age	0.013 (125.43)	0.013 (125.43)	0.013 (125.43)
Age ²	-0.000 (89.59)	-0.000 (89.59)	-0.000 (89.59)
Austin	0.011 (3.03)	0.017 (3.09)	0.011 (3.03)
Austin*African American		-0.0223 (1.40)	
Austin*Hispanic		-0.005 (0.51)	
Austin*Asian		-0.019 (0.92)	
Austin*Native American		0.018 (0.58)	
Austin*White Female		-0.009 (1.16)	
Time (11 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	1924167	1924167	1924167
Pseudo R ²	.215	.215	.215
Chi ²	3.1e+05	3.1e+05	3.1e+05
Log Likelihood	-568243	-568243	-568243

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

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

Table 16. Business Formation Regressions, Construction and Related Industries, 2000

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.097 (31.11)	-0.060 (124.15)	-0.097 (31.11)
Hispanic	-0.076 (32.23)	-0.045 (94.74)	-0.076 (32.23)
Asian/Pacific Islanders	-0.056 (10.58)	-0.034 (53.03)	-0.056 (10.58)
Native American	-0.076 (11.82)	-0.038 (26.07)	-0.076 (11.82)
Other Race	-0.030 (5.47)	-0.026 (25.32)	-0.030 (5.47)
White Female	-0.086 (41.45)	-0.043 (148.88)	-0.086 (41.45)
Age	0.026 (63.86)	0.012 (151.29)	0.026 (63.86)
Age ²	-0.000 (46.81)	-0.000 (107.74)	-0.000 (46.81)
Austin	-0.001 (0.05)	0.004 (2.05)	-0.001 (0.05)
Austin*African American		0.035 (0.49)	
Austin*Hispanic		-0.030 (1.41)	
Austin* Asian/Pacific Islanders		-0.185 (0.18)	
Austin* Native American		0.174 (0.66)	
Austin*Other Race		-0.099 (0.98)	
Austin*White Female		-0.039 (1.20)	
Education (16 categories)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (25 categories)	Yes	Yes	Yes
N	376898	376898	376898
Pseudo R ²	.075	.075	.075
Chi ²	30026	30030	30026
Log Likelihood	-184677	-184675	-184677

Source: See Table 13.

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

Table 17. Business Formation Regressions, Construction and Related Industries, 1986-1991

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.090 (17.23)	-0.090 (17.15)	-0.090 (17.23)
Hispanic	-0.064 (10.94)	-0.064 (10.76)	-0.064 (10.94)
Other Race	-0.099 (12.63)	-0.098 (12.59)	-0.099 (12.63)
White Female	-0.095 (23.32)	-0.094 (23.20)	-0.095 (23.32)
Age	0.031 (42.11)	0.031 (42.12)	0.031 (42.11)
Age ²	-0.000 (33.46)	-0.000 (33.47)	-0.000 (33.46)
Austin	0.049 (1.77)	0.104 (2.98)	0.049 (1.77)
Austin*African American			
Austin*Hispanic		-0.085 (1.63)	
Austin*Other Race			
Austin*White Female		-0.148 (1.83)	
Time (6 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	96275	96262	96275
Pseudo R ²	.087	.088	.087
Chi ²	8657	8661	8657
Log Likelihood	-45194	-45189	-45194

Source: See Table 14.

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

Table 18. Business Formation Regressions, Construction and Related Industries, 1992-2002

Independent Variables	Specification		
	(1)	(2)	(3)
African American	-0.110 (23.82)	-0.110 (23.81)	-0.110 (23.82)
Hispanic	-0.091 (20.98)	-0.091 (20.90)	-0.091 (20.98)
Asian	-0.075 (8.92)	-0.075 (8.92)	-0.075 (8.92)
Native American	-0.089 (10.12)	-0.089 (10.06)	-0.089 (10.12)
White Female	-0.048 (13.73)	-0.048 (13.69)	-0.048 (13.73)
Age	0.033 (48.77)	0.033 (48.77)	0.033 (48.77)
Age ²	-0.000 (36.87)	-0.000 (36.87)	-0.000 (36.87)
Austin	0.080 (3.33)	0.083 (2.64)	0.080 (3.33)
Austin*African American		0.056 (0.49)	
Austin*Hispanic		-0.004 (0.08)	
Austin*Asian		n/a	
Austin*Native American		-0.080 (0.56)	
Austin*White Female		-0.023 (0.34)	
Time (11 categories)	Yes	Yes	Yes
Education (continuous)	Yes	Yes	Yes
Geography (51 categories)	Yes	Yes	Yes
Industry (49 categories)	Yes	Yes	Yes
N	153805	153805	153805
Pseudo R ²	.090	.090	.090
Chi ²	15305	15305	15305
Log Likelihood	-77521	-77520	-77521

Source: See Table 15.

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

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Attachment A

ALL INDUSTRIES			
	2000 PUMS	1986-91 CPS	1992-2002 CPS
<i>BUSINESS OWNER EARNINGS DISPARITIES</i>			
BLACK	NEG/SIG	NEG/SIG	NEG/SIG
HISPANIC	NEG/SIG	NEG/SIG	NEG/SIG
ASIAN	NEG/SIG	N/A	NEG/SIG
NATIVE	POS/SIG	N/A	NEG/SIG
OTHER	NEG/SIG	NEG/SIG	N/A
WHITE FEMALE	NEG/SIG	NEG/SIG	NEG/SIG
ALL INDUSTRIES			
	2000 PUMS	1986-1991 CPS	1992-2002 CPS
<i>BUSINESS OWNER EARNINGS DISPARITIES</i>			
BLACK	NEG/SIG	NEG/SIG	NEG/SIG
HISPANIC	NEG/SIG	NEG/SIG	NEG/SIG
ASIAN	NEG/SIG	N/A	NEG/SIG
NATIVE	NEG/SIG	N/A	NEG/SIG
OTHER	NEG/SIG	NEG/SIG	N/A
WHITE FEMALE	NEG/SIG	NEG/SIG	NEG/SIG
ALL INDUSTRIES			
	2000 PUMS	1986-1991 CPS	1992-2002 CPS
<i>BUSINESS FORMATION DISPARITIES</i>			
BLACK	NEG/SIG	NEG/SIG	NEG/SIG
HISPANIC	NEG/SIG	NEG/SIG	NEG/SIG
ASIAN	NEG/SIG	N/A	NEG/SIG
NATIVE	NEG/SIG	N/A	NEG/SIG
OTHER	NEG/SIG	NEG/SIG	N/A
WHITE FEMALE	NEG/SIG	NEG/SIG	NEG/SIG
CONSTRUCTION AND AE INDUSTRIES			
	2000 PUMS	1986-91 CPS	1992-2002 CPS
<i>BUSINESS OWNER EARNINGS DISPARITIES</i>			
BLACK	NEG/SIG	NEG/SIG	NEG/SIG
HISPANIC	NEG/SIG	NEG/SIG	NEG/SIG
ASIAN	NEG/SIG	N/A	NEG/SIG
NATIVE	POS/SIG	N/A	NEG/SIG
OTHER	NEG/SIG	NEG/SIG	N/A
WHITE FEMALE	NEG/SIG	NEG/SIG	NEG/SIG
CONSTRUCTION AND AE INDUSTRIES			
	2000 PUMS	1986-1991 CPS	1992-2002 CPS
<i>BUSINESS OWNER EARNINGS DISPARITIES</i>			
BLACK	NEG/SIG	NEG/SIG	NEG/SIG
HISPANIC	POS	NEG/SIG	NEG
ASIAN	NEG	N/A	NEG
NATIVE	NEG/SIG	N/A	NEG
OTHER	NEG/SIG	NEG	N/A
WHITE FEMALE	NEG/SIG	NEG/SIG	NEG/SIG
CONSTRUCTION AND AE INDUSTRIES			
	2000 PUMS	1986-1991 CPS	1992-2002 CPS
<i>BUSINESS FORMATION DISPARITIES</i>			
BLACK	NEG/SIG	NEG/SIG	NEG/SIG
HISPANIC	NEG/SIG	NEG/SIG	NEG/SIG
ASIAN	NEG/SIG	N/A	NEG/SIG
NATIVE	NEG/SIG	N/A	NEG/SIG
OTHER	NEG/SIG	NEG/SIG	N/A
WHITE FEMALE	NEG/SIG	NEG/SIG	NEG/SIG

NOTES:

"PUMS" - Census data for Austin from the most recent decennial census

"CPS" - Annual Census data for Austin from the Current Population Surveys

"N/A" - CATEGORY IS NOT APPLICABLE

"NEG" - REGRESSION COEFFICIENT(S) MEASURING RACE/SEX EFFECT IS NEGATIVE—INDICATING PRESENCE OF AN ADVERSE DISPARITY

"POS" - REGRESSION COEFFICIENT(S) MEASURING RACE/SEX EFFECT IS POSITIVE

"SIG" - REGRESSION COEFFICIENT(S) MEASURING RACE/SEX EFFECT IS STATISTICALLY SIGNIFICANT (P<0.05, 2-TAILED TEST) - I.E. HIGHLY UNLIKELY TO BE DUE TO RANDOM CHANCE ALONE