WHO COUNTS?: DETERMINING THE AVAILABILITY OF MINORITY BUSINESSES FOR PUBLIC CONTRACTING AFTER *CROSON*

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I. INTRODUCTION

Among the many challenges the Supreme Court decision in *City of Richmond v. J. A. Croson Co.*[1] created for state and local jurisdictions is the need to gather empirical evidence documenting discrimination.[2] After *Croson*, such jurisdictions must identify the existence and source of discrimination in order to establish minority business enterprise (MBE) programs that provide preferences on the basis of race, ethnicity, or gender.

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1. 488 U.S. 469 (1989) (invalidating on equal-protection grounds a 30-percent subcontracting goals program for minority businesses).

2. *See, e.g.*, Shaw v. Hunt, 517 U.S. 899 (1996) (holding that a North Carolina congressional redistricting plan was not narrowly tailored to serve a compelling state interest and violated the Fourteenth Amendment's Equal Protection Clause, and citing *Croson*, 488 U.S. at 499, 500, 505, 507, 509).

As the *Croson* Court instructed, before a jurisdiction may use suspect classifications, it must make

> [p]roper findings . . . to define the scope of the injury and the extent of the remedy necessary to cure its effects. Such findings also serve to assure all citizens that the deviation from the norm of equal treatment of all racial and ethnic groups is a temporary matter, a measure taken in the service of the goal of equality itself.[3]

Justice O'Connor's opinion emphasized that the courts must review those findings because, "[a]bsent searching judicial inquiry into the justification for such race-based measures, there is simply no way of determining what classifications are 'benign' or 'remedial' and what classifications are in fact motivated by illegitimate notions of racial inferiority or simple racial politics."[4] Regarding the evidence that Richmond provided to support its goals program, the Court concluded: "There was no direct evidence of race discrimination on the part of the city in letting contracts or any evidence that the city's prime contractors had discriminated against minority-owned subcontractors."[5]

No longer are rhetorical statements or sweeping generalizations sufficient to establish racial classifications. *Croson* affirmed that, "In the absence of particularized findings, a court could uphold remedies that are ageless in their reach into the past, and timeless in their ability to effect the future."[6] Thus, the *Croson* Court admonished against the use of "a generalized assertion that there has been past discrimination in an entire industry" because such an assertion "provides no guidance for a legislative body to determine the precise scope of the injury it seeks to remedy. . . ."[7] Referring to *Wygant v. Jackson Board of Education*,[8] the *Croson* Court emphasized the distinction between "'societal discrimination' which is an inadequate basis for race-conscious classifications, and the type of identified

3. *Croson*, 488 U.S. at 510.

4. *Id.* at 493.

5. *Id.* at 480; *see also id.* at 500 ("There is nothing approaching a prima facie case of a constitutional or statutory violation by *anyone* in the Richmond construction industry.").

6. *Id.* at 498 (quoting Wygant v. Jackson Bd. of Educ., 476 U.S. 267, 276 (1986) (plurality opinion)).

7. *Id.*

8. 476 U.S. 267 (1986).

discrimination that can support and define the scope of race-based relief."[9]

The Court, however, was prepared to consider properly developed statistical evidence showing disparities in public contracting, as it has considered statistical disparities in other areas where allegations of discrimination are involved.[10] This type of analysis, however, always requires careful measurement of appropriate variables. Perhaps the most complex empirical issue posed by *Croson* is how to determine the availability for public contracting of firms owned by members of various groups. This problem is critical because, if availability is measured incorrectly, not only will any resulting statistical inferences about the existence of discrimination be wrong, but so will any goals based on expected availability. Thus, accurate calculations of availability are essential to both the compelling-basis and narrow-tailoring tests that *Croson* established to determine the constitutionality of an MBE program.

Fortunately, *Croson* provided guidelines for conducting an analysis of statistical disparities. These guidelines focus on what the Court considered the key concepts for measuring availability. Justice O'Connor wrote: "Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise."[11] In other words, rather than comparing the utilization of the general population of minority contractors to the general population of non-minority contractors, *Croson* restricted the disparity analysis to those firms that are "qualified," "willing and able to perform a particular service." As Judge Bechtle wrote in *Contractors Association of Eastern Pennsylvania, Inc. v. City of Philadelphia*[12]: "'Qualified,' 'willing and able' are the pillars of the *Croson* test; *a fortiori*, a municipality may not enact race-based remedial measures unless it determines that qualified, willing and able minority

9. *Croson*, 488 U.S. at 497.

10. *See id.* at 501 (citing Hazelwood Sch. Dist. v. United States, 433 U.S. 299, 307-38 (1977); International Bhd. of Teamsters v. United States, 431 U.S. 324, 337-38 (1977); Mayor of Philadelphia v. Educational Equality League, 415 U.S. 605, 620 (1974)).

11. *Id.* at 509.

12. 893 F. Supp. 419 (E.D. Pa. 1995).

contractors have been excluded from participating in public contracting."[13]

The relevant question, then, is now to determine which firms are qualified, willing, and able to perform a particular service. According to the Supreme Court's decision in *Adarand Constructors, Inc. v. Pena*,[14] the federal government, as well as States and municipalities, must also demonstrate that their racial preferences in contracting are narrowly tailored remedies for past discrimination.[15] Since *Adarand*, the Department of Justice has struggled to develop what it calls "benchmark limits" or defensible goals.[16] Establishing benchmark limits on empirical grounds will require the federal government credibly to determine the availability and capacity of firms seeking federal contracts.

Although this problem has consumed an enormous volume of resources, no consensus has evolved among scholars or practitioners. This Article examines current methods for measuring availability, the development of law concerning

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13. *Id.* at 432.

14. 515 U.S. 200 (1995).

15. Currently, federal MBE program goals are set in round numbers (such as ten percent), usually after congressional compromises. *See, e.g.*, the Foreign Operations, Export Financing, and Related Programs Appropriations Act of 1989, Pub. L. No. 100-461, 102 Stat. 2268 (codified as amended at scattered sections of 3 U.S.C.; 7 U.S.C.; 8 U.S.C.; and 22 U.S.C. (1994)); Public Works Employment Act of 1977, Pub. L. No. 95-28, 91 Stat. 116 (codified at 42 U.S.C. §§ 6701, 6705-08, 6710 (1994)); Energy and Water Development Appropriations Act of 1989, Pub. L. No. 100-371, 102 Stat. 857 (1988) (codified at scattered sections of 16 U.S.C.; 40 U.S.C.; 41 U.S.C.; 42 U.S.C.; and 43 U.S.C. (1994)); Energy and Water Development Appropriations Act of 1993 (Supercollider provision), Pub. L. No. 102-377, 106 Stat. 1315 (1992) (codified at scattered sections of 2 U.S.C.; 5 U.S.C.; 16 U.S.C.; 31 U.S.C.; 33 U.S.C.; 40 App. U.S.C.; 42 U.S.C.; and 43 U.S.C. (1994)); Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776 (codified as amended at 2 U.S.C.; 11 U.S.C.; 15 U.S.C.; 16 U.S.C.; 25 U.S.C.; 26 U.S.C.A.; 30 U.S.C.; 31 U.S.C.; 33 U.S.C.; 38 U.S.C.; 40 U.S.C.; 42 U.S.C.A.; and 48 U.S.C. (1994 & West Supp. 1998)); Surface Transportation Assistance Act, Pub. L. No. 97-424, 96 Stat. 2097 (1983) (amended by Pub. L. No. 100-17, 101 Stat. 170, 220, 240, 241 (1987) (codified at 23 U.S.C. §§ 101 notes, 104 note, 127, 146 notes, 217; 49 U.S.C. §§ 2311, 2314 (1994))). All of these statute set the MBE or DBE (disadvantaged business enterprise) goal at ten percent.

16. Proposed Reforms to Affirmative Action in Federal Procurement, 61 Fed. Reg. 26042 (1996) (proposed May 23, 1996).

> Where the use of all available tools, including direct competition and race-neutral outreach and recruitment efforts, results in minority participation below the benchmark, race-based mechanisms will remain available. Their scope, however, will vary and be recalculated depending on the extent of the disparity between capacity and participation. Where participation exceeds the benchmark, and can be expected to continue to do so with reduced race-conscious efforts, adjustments will be made.

Id. at 26046-47.

availability, and the empirical evidence regarding availability. It concludes with some practical suggestions for making availability assessments.

II. DISPARITY STUDIES

The vast majority of work examining the availability of firms for public contracting is contained in "disparity" studies undertaken by consultants. Such studies usually attempt to satisfy *Croson*'s requirement that "proper findings" be made that justify MBE programs.[17] Typically, jurisdictions incorporate these findings as the "predicate" for their MBE ordinance. On the other hand, occasionally, if the findings are politically controversial or deemed unreliable, the studies will not be adopted.[18]

Since *Croson*, more than 140 state and local jurisdictions have commissioned disparity studies. At least $55,000,000 has been spent on this activity.[19] These studies vary widely in their cost, scope, length, methodologies, and quality.

Unfortunately, many of these studies do not meet the standards established by federal courts. For example, Judge

17. For a discussion of the political context of these studies, see George R. La Noue, *Social Sciences and Minority Set-Asides*, 110 PUB. INTEREST 49 (1993). *See also, e.g.*, Associated General Contractors of America v. City of Columbus, 936 F. Supp. 1363, 1430 (S.D. Ohio 1996) (characterizing a "Predicate Study" as an example of "results-driven research" and holding that the City's equal business opportunity code violated the Equal Protection Clause of the Fourteenth Amendment).

18. In Los Angeles, a disparity study that found that Hispanic-owned, but not black-owned firms, were underutilized was not accepted. *See* James Rainey, *Council Calls Study of Contracts Inadequate*, L.A. TIMES, Dec. 10, 1994, at B4. In Miami, when Peat Marwick completed a disparity study that showed firms owned by white women were underutilized, but not Hispanic-or black-owned firms, Mayor Xavier Suarez rejected the study and said, "We never should have done it." Dorothy Gaiter, *Court Ruling Makes Discrimination Studies a Hot New Industry*, WALL ST. J., Aug. 8, 1993, at A1. Frequently the outcome of the study is dependent on how availability is measured. In Oakland, Hispanic and Asian-owned companies have filed suit in federal court challenging the city's MBE program because a recently completed disparity study was invalid. According to the complaint, the original draft of the study that based availability on firms in Alameda County found only white-owned firms were underutilized. When that proved politically unacceptable, the geographical boundaries for determining availability were changed to the confines of the Oakland city limits. Using the new availability data base, only black firms were underutilized, which prompted the lawsuit. *See* Complaint for Declaratory Judgment, Temporary Restraining Order and Preliminary Injunction, Hispanic Contractors Assoc. v. City of Oakland (N.D. Cal. 1996) (No. C-96-02706).

19. For a general discussion of the role of jurisdictions commissioning disparity studies, see GEORGE R. LA NOUE, LOCAL OFFICIALS GUIDE TO MINORITY BUSINESS PROGRAMS AND DISPARITY STUDIES (1994).

James Graham of the Southern District of Ohio, Eastern Division, has written:

> A municipality which is considering the enactment of legislation which creates race-based and gender-based preferences in the award of public contracts must, in fairness to all of its citizens, fairly and fully investigate the issue of whether or not discrimination has actually occurred in the employment of minorities and females in the construction industry in its community and whether such discrimination has actually occurred in its award of contracts and in the award of subcontracts by the prime contractors it has employed. Only if a thorough and impartial investigation of the facts supports a finding that discrimination has occurred is the municipality justified in considering a scheme in which some of its citizens and firms are excluded from competing for a portion of its total contract dollars.[20]

Looking at the disparity-study industry nationally, five firms have accounted for about 60 percent of all existing disparity studies: (1) Browne, Bortz and Coddington (BBC) and its usual partner, the Minority Business Educational and Legal Defense Fund (MBELDEF); (2) D.J. Miller; (3) MGT of America; (4) Mason Tillman Associates (MTA); and (5) National Economic Research Associates (NERA). Typically these firms have completed 15 to 25 studies each, and their methodologies have varied little from study to study. Despite the evolution of the law and variations in the quality and comprehensiveness of local data, the methodologies used by the national disparity companies have remained largely static.[21] This repetitiveness is partly because the consultants have made an investment in training staff to use those methodologies and partly because to change methodologies now would cast doubt on earlier studies.

Each of the companies has had to solve the problem of calculating availability of firms for public contracts. The availability measure chosen can well determine the conclusion of the study. As NERA has stated:

> Availability analysis is the Achilles heel of *Croson* disparity studies for several reasons. The availability estimate is critical

20. Associated General Contractors of America v. City of Columbus, No. C2-89-705, at 10 (S.D. Ohio June 20 1990) (order denying in part defendant's motion to discuss).

21. Occasionally, as in the case of the Portland Consortium studies completed in June 1996, or the Nashville Metro studies currently underway, clients have insisted on changes in conventional methodologies.

> for determining whether there are disparities. Yet the measure of availability suggested by the *Croson* majority—the percent of available and qualified firms that are minority-owned—tends to be lower because discrimination has impeded the development of minority businesses. It is uncertain whether the Court would insist on this measure of availability. Further complicating the measurement of availability is the fact that reliable data on the number and qualifications of minority firms are sorely lacking. A number of the *Croson* disparity studies that have been done thus far use availability estimates that are inappropriate and which we do not believe would survive a legal challenge. A defective availability analysis can make a *Croson* disparity study worthless.[22]

Nevertheless, no consensus has emerged among disparity study authors about measuring availability. Two of the consulting firms, MGT and NERA, almost always use census data to calculate availability. MTA, on the other hand, specifically rejects the use of census data and relies on lists and surveys. BBC uses census data, as well as lists and surveys. D.J. Miller purports to consider seventeen different sources of availability including the general population, but, in the end, it generally uses local lists of certified MWBEs[23] (minority- and women-owned business enterprises) and compares that number to the numbers of non-MWBE firms that have bid on prime contracts or won subcontracts.

The only concept on which consulting firms agree is that availability is a mere matter of counting heads; each firm that is "available" is treated as equally available.[24] Thus, availability is not viewed as a relative concept in which some firms are more qualified, willing, and able than others depending on the specifications of particular contracts. Such a headcount approach, however, overstates the relative availability of MWBE firms, particularly for prime contracting. MWBE firms are

22. National Economic Research Associates, Inc., et al., An Examination of the Existence and Sources of Disparities Between the Availability and Utilization of Minority and Women-Owned Business Enterprises for New York City Procurements 3 (1990) (draft proposal).

23. Some jurisdictions use the term MFBE, with F standing for female, or HUB, for historically underutilized businesses. This Article will use the most common term MWBE, unless quoting from another source.

24. NERA is a partial exception. Using census data, NERA weights firms by the geographic area and the two-digit SIC (Standard Industrial Code) they are in. While this is an improvement over simple headcounting, it still assumes that all firms in a particular geographical area and in the same SIC code are equally qualified, willing, and able.

generally smaller, newer firms with fewer qualifications, and they tend to be focused in subcontracting specialties. Consequently, statistical disparities will almost always appear when a headcount comparison, rather than the *Croson* criteria, is used.

To defend their market niches, the consulting firms have often disparaged each other's techniques. For example, NERA, which uses census data, has criticized the use of lists as a way of measuring availability:

> Some have suggested using directories of minority and woman-owned businesses, lists of bidders with government agencies, and other business directories to calculate availability. There are problems, however, with relying on such lists. These lists are difficult and expensive to compile, they are invariably incomplete and the accuracy of other data in the lists is generally poor.[25]

MGT, which uses census data, has also commented on the use of lists for determining availability:

> Reviews of existing lists, while appearing at first glance to provide a sound database, in reality do not. Not all firms place themselves on lists. Firms do not have to place their names on vendor lists in order to receive contracts or purchases. Firms change names. Firms go out of business, but their names remain on lists. The lists do not always indicate how long the firms have been in business. Many M/WBE firms do not seek certification, often due to time and expense involved. There is difficulty in determining if the compiled lists are complete, making the results vulnerable to attack. In summary, no way exists to develop a statistically reliable measure of the numbers and percentages of M/WBE firms in the relevant market areas over time from existing lists.[26]

Finally, Dr. Edward Davis, Professor of Decision Sciences at Clark Atlanta University, who has worked on many D. J. Miller disparity studies, has acknowledged:

> Defining a measure of estimation for availability based on the vendor list has appeal in that MBE/FBE [female-owned business enterprises] and non-minority male-owned firms are treated the same. The major limitation with this approach is that there is not uniformity in the manner by which vendor

25. National Economic Research Associates, Inc., State of Texas Disparity Study: A Report to the Texas Legislature as Mandated by H.B. 2626, 73rd Legislature xviii (1994) [hereinafter Texas Disparity Study].

26. MGT of America, Inc., Disparity Study of the Palm Beach County School District 3-11 (1995).

> lists are developed. Sometimes, the lists represent firms that have done business over a period of time; other times, they represent firms that have requested a vendor number, often requiring only that the firm complete and submit a form to the agency.
>
> In either case, some agencies purge these lists with relative frequency, removing firms that have not been active for a period of time, usually 18 months to two years. Other agencies have not purged the lists in ten years or more. The timing of such purgings has an obvious impact on availability estimates.[27]

Conversely, the firms that use lists or surveys have freely criticized the use of census data to measure availability. BBC has written:

> Finally, it is impossible to determine from the Census data a clear sense of which firms are actually capable and willing to do business with the city of Phoenix. For example, the true availability of women-owned firms ready, willing and able to do business with the City is likely to be less than 28 percent of all firms. [The raw census data showed 28 percent of firms were women-owned.][28]

D.J. Miller has reported:

> The first 16 estimates of availability rely upon Census data which must be used with some caution. Because a business meets one or two or three criteria of availability does not mean that business qualifies as available. For example, a business' mere location within the relevant market area does not automatically mean the business meets the greater standard of availability. That is, it may be ready and able, but not willing to participate.[29]

MTA has also criticized the accuracy and comprehensiveness of census counts:

> Determining availability from outdated information can potentially deflate or exaggerate availability. As well as being outdated, discrepancies exist in census data as a result of several methodological and reliability inconsistencies.
>
> More importantly, a company's interest in contracting with an entity cannot be established from Census information.

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27. Edward L Davis, Atlanta Public Schools, MBE/FBE Procurement Study 65 (1995).

28. Browne, Bortz & Coddington, Inc., Disparity Study: City of Phoenix IV-2 (1993).

29. D.J. Miller & Associates, Inc., Memphis/Shelby County Intergovernmental Consortium Disparity Study V-9 (1994) [hereinafter Memphis Study].

> Thus the difficulties associated with the census preclude an accurate assessment of M/WBEs.[30]

MTA and BBC have used surveys that have sought to elicit which firms might be interested in public contracting and the characteristics of those firms. BBC's surveys are analyzed as an independent source of availability. MTA combines firms responding to newspaper advertisements and surveys, firms on lists, and firms that have actively engaged in public contracting to form a single availability data base.

In theory, a survey of different firms might serve as an indicator of availability. In reality, however, the response rate is often poor and the more questions added to the survey to measure qualifications, willingness, and ability, the lower the response rate is likely to be. Many firms, for privacy reasons, hesitate to provide critical business information over the telephone or in a mail questionnaire. The surveys are more likely to ask about attitudes regarding public contracting than specific actions taken to win contracts. Finally, all the survey information is self-reported and often subjective.

In short, the consulting-company critics of census data, lists, and surveys as measures of availability are each in their own way correct. None of these proxies for availability can provide the necessary data.

Census data, while usefully depicting the universe of firms in both a particular geographic area and various Standard Industrial Codes (SIC codes), can not be used to determine the much smaller subset of firms that are qualified, willing, and able to engage in public contracting in a particular jurisdiction. It provides no information on which firms have bonding, licensing, insurance, equipment, experience, or skilled personnel, all of which may be requirements for particular contracts. Of course, census data does not reveal which firms are interested in public contracting or which have bid. Furthermore, census data is not very precise and the smaller the categories measured the higher margins of errors are likely to be.

Even if census data contained appropriate information about firm characteristics as they might relate to public contracting, the surveys of minority- and women-owned businesses are

30. Mason Tillman Associates, Ltd., Alameda County Transportation Authority Disparity Study Final Report 28 (1994) [hereinafter ACTA Study].

particularly problematic as sources for the number of MWBEs. In the first place, the census counts a firm as an MBE or WBE if it is half-owned by a minority or woman, while governments require that firm be owned 51 percent by a minority or woman. Thus, from a jurisdiction's perspective, the census overcounts MWBEs. And even given the less demanding census definition of an MWBE, the Census Bureau has acknowledged in its 1992 surveys of minority-owned businesses that its 1987 census of MWBEs contains a "significant overcount" of MWBEs with employees.[31] Yet about half of the disparity studies completed in the United States have relied on 1987 census data totally or in part to measure availability.

How much is the "significant overcount"? Apparently no one knows for sure. Dr. David Evans, vice president of NERA and the author of most of that company's disparity studies that have relied on census data, has testified:

> I have explored these issues in detail with representatives of the Census Bureau. Although census analysts have determined that the procedures they followed in preparing the 1987 minority [and women-owned business] census probably resulted in an overcount, they cannot at this time determine the precise magnitude. When asked if the overcount was more likely to closer to 5% or 50%, they indicated 5%. The Census Bureau does not have the resources to conduct the necessary analysis to provide a more specific estimate.[32]

To make the problem worse, the census surveys of MWBEs are taken every five years (for example, in 1982, 1987, and 1992), but not published until about four years after the data is gathered. That means the data is often obsolete given the timing of particular studies.[33] To compensate, a number of studies have estimated the current number of MWBEs by projecting the growth rate of MWBEs between 1982 to 1987 to the time of the study. Because the 1987 census overestimated the number of MWBEs, the growth-rate percentages will also be

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31. U.S. CENSUS BUREAU, 1992 SURVEY OF MINORITY-OWNED BUSINESS ENTERPRISES viii (1992) [hereinafter, 1992 SURVEY].

32. Report of the Defendants' Expert, *North Shore Concrete & Associates v. New York*, C.A. No. 94-4017 (ILG), at 38 (E.D.N.Y. June 18, 1997).

33. *See, e.g.*, National Economic Research Associates, An Analysis of the Utilization and Availability of Minority and Women-Owned Businesses in the Los Angeles Metropolitan Area (1994(using 1987 census data).

overestimated.[34] In other ways, census data underestimate some MWBEs. The census undercounts Hispanic- and Asian-owned firms, and MWBE data does not include C corporations owned by persons of those groups.[35] In short, census data does not contain the necessary information, even if the data were accurate, which they are not.

Surveys taken by consultants for particular disparity studies will almost always be incomplete and are easily subject to manipulation.[36] Jurisdictions rarely have comprehensive lists of all purchasing-relevant businesses. The lists they maintain usually contain little detailed information about company characteristics. Construction firms have less need than firms in other industries to be on bidder or vendor lists because they typically receive their information about contract opportunities from other sources.[37] For affirmative-action reasons, local jurisdictions often try to recruit as many MWBEs to be on vendors lists as possible, which means that, as a measure of actual availability, lists frequently are skewed toward overinclusion of MWBEs.[38] Finally and most important, all of these sources yield only headcounts of firms, which cannot properly measure the relative qualifications, willingness, and ability of these firms.

Given the potentially fatal defects in all of the usual modes of measuring availability, many disparity studies simply overlook or misstate the qualified, willing, and able requirement.[39] Yet to be

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34. *See e.g.*, Texas Disparity Study, *supra* note 25, at 60 n.94. (estimating that minority-owned construction firms with employees had grown annually by 9.3 between 1987 and 1990). When the 1992 census data was published, it showed that black-owned construction firms in the State had actually declined by 12.6 percent between 1987 and 1992, while Hispanic-owned construction firms grew by six percent annually. *See* 1992 SURVEY, *supra* note 31, at viii.

35. *See* 1992 SURVEY, *supra* note 31, at viii.

36. *See* Associated General Contractors of America v. City of Columbus, 936 F. Supp. 1363, 1395 (S.D. Ohio 1996) ("The source of the list BBC used to conduct the surveys was not identified or authenticated.").

37. Generally all large contracts will be advertised in local general circulation newspapers and often in the minority press as well. In addition, the Dodge reports provide information on contracts, and many jurisdictions and construction associations have plan rooms where contract specifications may be examined.

38. *See, e.g., Associated General Contractors,* 936 F. Supp. at 1390 ("The City's MFBD [Minority Female Business Development] Division actively recruited minority firms to submit BRF registration forms but did not recruit majority firms.").

39. For example, in its Alameda County Transportation Authority study, MTA stated that, because it could not gather data on the qualifications or capacities of businesses, "all businesses, majority and M/WBEs, that indicated an interest in working on ACTA funded work were assumed to be 'able.'" ACTA Study, *supra* note 30, at 29. Similarly, D. J.

fair, even if a study intended to measure fully firms' characteristics as related to contracting requirements, the problem is very complex. A large city or a State will purchase almost every type of commodity, but not necessarily in the same amounts every year. Special-purpose agencies, such as agencies and districts regulating utilities, transportation, water, sewage systems, and schools, may have distinctive purchasing patterns. In construction, most large contracts will have particular requirements that will limit the number of competitors.[40] Yet, as the Third Circuit pointed out in its recent *Contractors Association of Eastern Pennsylvania v. City of Philadelphia*[41] decision, "It would be highly impractical to review hundreds of contracts awarded each year and compare them to each and every MBE."[42]

III. JUDICIAL PRINCIPLES IN CALCULATING DISPARITIES

The need to consider differences in the characteristics of competitors that might affect disparities in outcomes is a well established legal precedent.[43] Although the national disparity study consultants consistently fail to measure the qualifications of the firms they consider available, many courts in many different contexts have asserted the need to consider qualifications in determining availability in calculating disparities. Obviously, if a disparity is caused by a selection process fairly reflecting different qualifications, that outcome is not discrimination. This observation is critical in public contracting because jurisdictions usually require contractors to have generic qualifications such as bonding, licenses, and insurance, as well as specific qualifications for particular contracts, before a job can be awarded. Consequently, one

Miller uses the term "*ready*" as a substitute for "qualified" but defines "ready" as "simply means that a business exists" thus dramatically diluting the meaning of the qualifications concept. Memphis Study, *supra* note 29, at V-9.

40. For example, in one of the largest contracts at issue in *Engineering Contractors Association of South Florida v. Metropolitan Dade County*, 943 F. Supp. 1546 (S.D. Fla. 1996), to be a qualified bidder, a firm had to show all projects completed in the last five years that demonstrated qualification for work specific to the proposed contract; describe hospital experience in Florida and Dade County; and list whether it was approved by the Agency for Health Care Administration. *See* Jackson Memorial Hospital Consolidation of Mental Health Services Project, Contract No.101.48.411 (issued October, 1995).

41. 91 F.3d 586 (3rd Cir. 1996).

42. *Id.* at 603.

43. *See infra* notes 45-68 and accompanying text.

should understand what courts have said about the need to consider qualifications in different arenas.

In *Croson*, Justice O'Connor noted that gross statistical disparities can show a prima facie case of discrimination, but "'[w]hen special qualifications are necessary to fill particular jobs, comparisons to the general population (rather than to a smaller group of individuals who possess the necessary qualifications) may have little probative value.'"[44] Later the Court criticized the City of Richmond for not knowing "how many MBE's in the relevant market are qualified to undertake prime or subcontracting work in public construction projects."[45]

Legal principles regarding qualifications were first developed in public-employment cases. In *Hammon v. Barry*,[46] for example, the District of Columbia Circuit Court of Appeals stated:

> Under the case law, the critical comparative group is that of the *qualified applicant pool* which may or may not be the *entire work force* in the area. Thus, when the job qualifications involved are ones that relatively few possess, statistical presentations that fail to focus on those qualifications do not have significant statistical probative value.[47]

In *Long v. City of Saginaw*,[48] the Sixth Circuit asserted the need to address the question of qualifications because the City's proposed statistical pool, which was drawn from the census, "failed to disclose the constant age, educational background, general physical fitness, and capabilities of its members and other material factors which would have afforded a basis from which meaningful statistical comparisons could have been fixed, thus disregarding the principles voiced by the Supreme Court . . . ."[49] Additionally, the Sixth Circuit in *Aiken v. City of Memphis*,[50] stated that, "'Special qualifications,' then, winnow out a large enough portion of the general workforce to create a real possibility that the qualified workforce for the position will have

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44. City of Richmond v. J. A. Croson Co., 488 U.S. 469, 501 (1989) (quoting Hazelwood Sch. Dist. v. United States, 433 U.S. 299, 308 n.13 (1977)).

45. *Id.* at 502.

46. 813 F.2d 412 (D.C. Cir. 1987) (concerning the selection of firefighters)

47. *Id.* at 427 n.31.

48. 911 F.2d 1192 (6th Cir. 1992) (concerning the selection of police officers).

49. *Id.* at 1199; *accord* United Black Firefighters Ass'n v. City of Akron, 976 F.2d 999, 1011 (1992).

50. 37 F.3d 1155 (6th Cir. 1994) (en banc) (concerning the selection of firefighters and police officers).

a materially different racial composition than that of the general workforce."[51]

Other types of cases have also developed legal principles regarding qualifications. In *Podberesky v. Kirwan*,[52] the Fourth Circuit struck down a program of race-based scholarships at the University of Maryland, College Park, for lacking a precisely drawn remedial character:

> As to the underrepresentation, our decisions and those of the Supreme Court have made clear that the selection of the correct reference pool is critical. The district court must first determine as a matter of law whether it is appropriate to apply a pool consisting of the local population or whether another pool made up of people with special qualifications is appropriate. In the employment context, this determination is made by looking at the job requirements. If the job is an unskilled one, the general population is more likely the relevant pool. If, however, the job requires some special skills or training, the relevant pool is made up of only those people who meet the criteria.[53]

Applying these principles, the court insisted on rigorous fact-finding in reviewing the qualifications of university applicants.[54]

Similarly, in public contracting, the Tenth Circuit in *Concrete Works of Colorado, Inc. v. City and County of Denver*[55] forcefully emphasized the need to consider qualifications by italicizing the relevant language: "'[W]here special qualifications are necessary, the relevant statistical pool for purposes of demonstrating discriminatory exclusion must be the number of minorities *qualified to undertake the particular task.*'"[56]

Courts have been wary of attributing disparities in contract awards to discrimination when they may be caused by differences in the ability or size of construction firms. For example, in *Michigan Road Builders Association, Inc. v. Milliken*,[57] the Sixth Circuit found that, "Small businesses, *as a result of their size*, were unable to effectively compete for state contracts.

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51. *Id.* at 1165.

52. 38 F.3d 147 (4th Cir. 1994).

53. *Id.* at 156 (citing Johnson v. Transportation Agency, 480 U.S. 616, 631-32 (1987); Maryland Troopers Ass'n v. Evans, 993 F.2d 1072, 1076-77 (4th Cir. 1993)).

54. *See id.* at 156-57.

55. 36 F.3d 1513 (10th Cir. 1994).

56. *Id.* at 1528 (quoting City of Richmond v. J. A. Croson, Inc., 488 U.S. 469, 501-02 (1989)).

57. 834 F.2d 583 (6th Cir.1987).

Consequently, most MBEs, *as a result of their size,* were unable to effectively compete for state contracts."[58] The District of Columbia Circuit voiced a similar concern in *O'Donnell Construction Company v. District of Columbia,*[59] which held that the District of Columbia's MBE program was unconstitutional because its statistical basis was flawed. The court noted a number of non-discriminatory reasons MBEs might not bid: (1) the MBRs were too small to take on large-scale projects; (2) they were fully occupied on other projects; (3) District contracts may not have been as lucrative as other contracts available; or (4) the MBRs may not have the expertise needed to perform the contracts.[60] In *Concrete Works,* the Tenth Circuit even suggested a formula that might be used for adjusting headcount availability to account for the varying capacities of different size firms:

> To use an example to illustrate this point, if MBEs represent 10 percent of the total *number* of firms in the market and receive 5 percent of the total city contract dollars, the disparity index would be .5, and it could be inferred from this that discrimination exists. However, if all the MBEs were small firms averaging only one-fourth the size of the average firm in the market, then the award of 5 percent of the total city contract dollars could be argued not to reflect underutilization of the *capacity* of MBEs in the market to do the work because they represent only [2.5 percent] of the capacity.[61]

Although exceptions exist, firm size is generally relevant to expected revenues. Census data shows a clear relationship between the number of employees and revenues in various industries. In the construction industry, for example, two-thirds of all the construction firms in the United States had no employees in 1992 and generated less than eight percent of all construction revenues. By contrast, the top two percent of all construction firms measured by employee size (all firms with 20 or more employees) garnered more than half of all construction revenues.[62] Consequently, it is misleading to test for

58. *Id.* at 592.

59. 963 F.2d 420 (D.C. Cir. 1992).

60. *See id.* at 426.

61. Concrete Works of Colo., Inc. v. City and County of Denver, 36 F.3d 1513, 1528 n.22 (10th Cir. 1994).

62. *See* U.S. DEP'T OF COMMERCE ET AL., 1992 CENSUS OF CONSTRUCTION INDUSTRIES: UNITED STATES SUMMARY 27-12 tab.8 (1992).

discrimination by creating disparity ratios that assume that firms of very different sizes should produce equivalent revenues.[63]

Courts, as well as social scientists, have also been concerned that a disparity caused by differences in the type of specializations MWBEs hold and the type of specializations jurisdictions are purchasing or employing might falsely be attributed to discrimination. Therefore, courts have not wanted to base conclusions on categories that were overinclusive. The *Croson* Court, for instance, called for comparisons of firms that can "perform a particular service."[64] A Texas federal district court in *Bilbo Freight Lines*[65] faulted a state-commissioned disparity study that combined interstate, intrastate, and local trucking into a single category. The court struck down legislation conferring preferential treatment to MFBEs applying for trucking licenses, declaring that, "A much more narrow study on the availability factor (i.e., those in the relevant market qualified and desiring intrastate authority) could have been conducted."[66] Similarly, the Ninth Circuit in *Associated General Contractors of California, Inc. v. City and County of San Francisco*[67] stated: "Findings that would justify classifications based on race, potentially impairing the constitutional rights of those who are disadvantaged by them, must be drawn much more precisely and based upon more carefully selected and finely tuned data than those upon which the city relies here."[68] In short,

63. However, many disparity-study consultants make such an assumption. For example, MTA's proposal for the Nashville disparity study states that,

> Under a fair and equitable system of awarding contracts, we would expect that the proportion of contract dollars awarded to ethnic/gender-owned enterprises to equal the proportion of those firms in the relevant market area. If these proportions are not equal, or if a disparity exists between these proportions, a statistical test of significance would allow us to determine the likelihood or probability that the disparity is due to chance. If there is a very low probability that the disparity is due to chance, the Court states than an inference of discrimination can be made.

Mason Tillman Associates, Metropolitan Government of Nashville and Davidson County 34 (1996).

64. City of Richmond v. J. A. Croson Co., 488 U.S. 469, 509 (1989).

65. C.A. No. H-3-3808, at 11 (S.D. Tex. Feb. 3, 1994).

66. *Id.* at 9; *see also* Engineering Contractors Ass'n of S. Fla. v. Metropolitan Dade County, 943 F. Supp. 1546, 1560 (S.D. Fla. 1996).

67. 813 F.2d 922 (9th Cir. 1987).

68. *Id.* at 933; *see also* Long v. City of Saginaw, 911 F.2d 1192, 1199 (6th Cir. 1990) (characterizing as "erroneous" the City's argument that an "undifferentiated work force statistic" could be used to support a prima facie case of employment discrimination).

unconstitutional overinclusiveness is the predictable result of statistical oversimplification.

Drs. Richard Boyle and David Rhodes of the University of New Mexico have created a model, based on national census data, that formally illustrates the phenomenon of overinclusiveness.[69] Their study shows that concentration of MBEs in SIC Codes where there is comparatively little public purchasing can exaggerate MBE availability. Indeed, when discrete specialties are combined into one undifferentiated availability total, disparity findings are especially likely. Even if perfect proportionality exists in group purchases within each SIC code, discrepancies in the amounts spent across SIC codes can easily be mistaken for contracting discrimination.[70]

In sum, the need to consider qualifications, willingness, and ability in disparity analysis is well-established in law, and supported by social science. The problem with availability analysis, then, is not one of principle, but of application.

IV. JUDICIAL CONSIDERATIONS OF AVAILABILITY

Despite the consistent recognition in disparity-analysis theory that only qualified, willing, and able firms are "available," federal courts have not consistently applied these standards in MBE cases. Much of the difficulty stems from the fact that many of the early MBE cases were decided on motions for summary judgment or preliminary injunction without full discovery and trial, which might have revealed weaknesses in the defendants' statistics.

In reversing in part and remanding a district court ruling that had upheld an MBE program on the basis of anecdotal evidence, the Ninth Circuit in *Coral Construction v. King County*[71] established that statistics should be the most important element in establishing a prima facie case of discrimination. But it also noted: "[S]tatistics are not irrefutable; they come in infinite

69. *See* Richard P. Boyle & David Rhodes, *Detecting Discrimination: Analyzing Racial Disparities in Public Contracting*, 25 SOC. SCI. RESEARCH 400 (1996).

70. *See id.* at 403. The authors found that MBEs constituted 5.6 percent of the construction companies with employees in the country (as of 1987). If MBEs received 5.6 percent of the dollars, that would amount to $4.02 billion. Yet, controlling for SIC codes, their expected receipts were only $2.43 billion. Thus, the fact that MBEs are concentrated in SIC sectors that receive fewer state and local expenditures on construction may be responsible for false-disparity findings. *See id.*

71. 941 F.2d 910 (9th Cir. 1991).

variety and, like any other kind of evidence, they may be rebutted. In short, their usefulness depends on all of the surrounding facts and circumstances."[72]

Flaws in a statistical analysis may be contained in both a study's basic mathematics as well as in its underlying assumptions and conceptions. The Ninth Circuit's instructions imply plaintiffs are entitled to point out incorrect mathematical manipulations and inappropriate data bases and comparisons. Specifically, when an inference of discrimination has been created by statistical evidence, the plaintiffs can rebut this inference in the following ways: (1) by creating a race-neutral explanation for the disparity; (2) by showing the statistics are flawed; (3) by showing the statistics are not significant or actionable; or (4) by presenting contrasting statistical data.[73] The experience of contracting challenges in several cities illustrates the proposition that statistical evidence has had an uneven application in the courts.

A. *San Francisco*

In the first post-*Croson* challenge to an MWBE program, the contractor plaintiffs in *Associated General Contractors of California, Inc. v. Coalition for Economic Equity*[74] sought a preliminary injunction against a program granting five percent preferences to MWBE bidders for San Francisco's prime contracts. Buoyed by previous victories in *Associated General Contractors of California, Inc. v. City and County of San Francisco*[75] and *Croson*, the plaintiffs did not seek discovery. Therefore, the record consisted chiefly of the City's disparity study and council hearings held to support the ordinance. San Francisco's disparity study included both census data and a list of firms compiled by the City's Human Rights Commission (HRC). Although the two sources yielded drastically different results,[76] neither the trial court nor the circuit court independently evaluated the availability measures.

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72. *Id.* at 919 (quoting International Bhd. of Teamsters v. United States, 431 U.S. 324, 340 (1977)).

73. *See id.* at 921.

74. 950 F.2d 1401 (9th Cir. 1991).

75. 813 F.2d 922 (9th Cir. 1987).

76. According to the census data, there were 275 WBE construction firms available (29.3 percent of the total census firms), but the HRC list included only 21 (7 percent of the firms) on the list. With respect to the number of black-owned construction firms, however, census data showed 80 (8.6 percent), but the HRC list included 40 (13.2

Even assuming that census data is a proper source of information, however, the data was improperly employed in this case. San Francisco's study counted all MWBE firms *with and without* employees as "available," while counting only firms *with* employees as "available" for non-MWBEs. As a result, the study inflated the relative numbers of MWBEs by a factor of six.[77] Without this information in the record, the circuit court compounded the error by accepting San Francisco's conclusion that the disparity could be attributed only to discrimination.[78] In so doing, the court mistakenly assumed that statistical significance is dispositive.

A statistical significance test can determine the likelihood of a result being caused by chance. Although a test for significance is necessary (disparities that could be caused by chance should not be used to meet a strict-scrutiny test), it is by no means sufficient. Statistical analysis must also control for nondiscriminatory variables that can affect the outcome. Because these variables were not considered in the San Francisco study, it reflected a false-positive conclusion, and fell prey to what some scholars call "naive residualism."[79] Social scientists have written that "[r]esidualism can be a weak ground on which to conclude that discrimination is operating because it assumes that all of the variance that cannot be explained is a result of a specific unmeasured variable."[80] In the absence of

percent). *See* BPA Economics, Inc., Statistical Support for San Francisco's MBE/WBE/LBE Ordinance 24 (1989).

77. Instead of 275 construction WBEs, there were only 35 such firms with employees. According to the study, there were 14 black-owned firms instead of 80, two Hispanic-owned firms instead of 100, and 75 Asian-American-owned firms instead of 260. *See* 1992 SURVEY, *supra* note 31, at 44, 161. Had an apples-to-apples comparison of firms with employees from census data been used for availability, black- and Hispanic-owned construction firms would have been overutilized, Asian-American-owned firms somewhat underutilized, and WBEs substantially underutilized. Non-MWBEs made up 82.3 percent of the census headcount of construction firms and received 87.2 percent of the prime dollar awards.

78. *See Coalition*, 950 F.2d at 1414 (finding support in the record for San Francisco's conclusions concerning discriminatory procurement practices). *But see id.* at 1419 (O'Scannlain, J., concurring) (objecting to "detailed discussion of the statistical evidence" during appellate review of a preliminary injunction adjudication).

79. Stephen Cole and Robert Fiorentine, *Discrimination Against Women in Science: The Confusion of Outcome with Process*, *in* THE OUTER CIRCLE: WOMEN IN THE SCIENTIFIC COMMUNITY 213 (Harriet Zuckerman et al., eds., 1991).

80. *Id.* at 213; *see also* Kathleen Cannings, *Interdisciplinary Approach to Analyzing the Managerial Gender Gap*, 44 HUMAN RELATIONS 679, 679-80 (1991) ("As is the case with all unexplained residuals, however, what is being called discrimination may simply indicate the failure to specify the relevant variables that determine earnings differences.").

discovery and trial, however, the plaintiffs could not effectively challenge the disparity ratios or the availability measures on which they were based.

B. *Philadelphia*

The first MBE case to benefit from substantial discovery and trial was *Contractors Association of Eastern Pennsylvania v. City of Philadelphia.*[81] The litigation began in 1989, three months after *Croson,* and included six different decisions. On July 31, 1996, the Third Circuit finally declared all of the City's MWBE construction program goals unconstitutional.[82]

Previously, on motions for summary judgment at trial, the plaintiffs had successfully eliminated women-owned, Hispanic-owned, and Asian-owned businesses from the goals program because the district court was not convinced that enough of such firms were available for meaningful statistical comparison. Specifically, the court found that, although 6.4 percent of the firms licensed by the City were owned by blacks and Hispanics, that statistic did not indicate what proportion of the MBEs "were available or qualified to perform City construction contracts."[83] The Third Circuit later reversed that part of the trial court's summary judgment ruling that involved black-owned contractors because, in light of a disparity study completed by Dr. Andrew Brimmer, material issues of fact remained.[84]

In considering availability, the Brimmer study combined data from the 1982 census and data from a list compiled by the local Office of Minority Opportunity (OMO). For non-MWBEs with employees, the census showed 8,050 firms in the Philadelphia MSA (metropolitan statistical area), but the apples to apples census comparison number for black firms was only 69, or .86 percent availability.[85] Dr. Brimmer, however, decided to base

81. 893 F. Supp. 419 (E.D. Pa. 1995).

82. *See* Contractors Ass'n of E. Pa. v. City of Philadelphia, 91 F.3d 586, 610 (3rd Cir. 1996).

83. Contractors Ass'n of E. Pa. v. City of Philadelphia, C.A. No. 89-2737, at *63 (E.D. Pa. Sept. 22, 1992), *available at* 1992 WL 245851.

84. *See* Contractors Ass'n of E. Pa. v. City of Philadelphia, 6 F.3d 990, 1003 (3rd Cir. 1993).

85. The OMO list did not separate MBEs by group ownership. To estimate the number of firms owned by Hispanics, Asians, and members of other groups, Dr. Brimmer returned to census data. *See id.* at 1007. He never mentioned the census figure for black-owned construction firms, however.

MBE availability on the 195 MBE firms on the OMO list and arrived at 2.4 percent availability.[86] Several difficulties with this number were pointed out at trial. Many of the firms on the OMO list were not in the MSA, had no employees, or were not in the same SIC codes as the comparable census data. In the end, Dr. Brimmer conceded that the correct comparable number was 57 black-owned construction firms.[87]

Plaintiffs, on the other hand, insisted that, because Philadelphia used a pre-qualification system for each separate contract (which some firms failed) in determining which firms could bid on capital projects, only firms that had prequalified were actually available. In this comparison, as many as 318 firms sought to be prequalified in a single year, but over a three-year period, only seven were black-owned, and of these only three were successful.[88] The City had not argued its prequalification system was discriminatory, and Dr. Brimmer had made no examination of this data base. Consequently trial court Judge Bechtle ruled:

> Without first examining the City's prequalification requirements, then comparing these requirements to the qualifications of black firms that actually sought to participate in City public works contracting, it is impossible for Dr. Brimmer to conclude that qualified black contractors were excluded from participating in City construction works because of discrimination.[89]

On appeal, the Third Circuit affirmed Judge Bechtle's ruling,[90] largely because it agreed that Philadelphia's subcontracting goals program, which was set at 15 percent, was not narrowly tailored, regardless of what availability measure was used. The court held that a remedy must be appropriate to the type of discrimination identified.[91] A subcontracting goals program could only be imposed as a remedy for discrimination against MBE subcontractors, and the record did not support that

86. *See* Brimmer & Company, Inc., Disparities and Discrimination in the Marketplace: Philadelphia, Pennsylvania, Part 2, at 99 tab.III-2 (1992).

87. *See* Contractors Ass'n of E. Pa. v. City of Philadelphia, 893 F. Supp. 419, 432 (E.D. Pa. 1995).

88. *See id.* at 433.

89. *See id.* at 433.

90. *See* Contractors Association of E. Pa. v. City of Philadelphia, 91 F.3d 586 (3rd Cir. 1996).

91. *See id.* at 599, 601.

finding. Further, the choice of a 15-percent minority subcontracting goal was arbitrarily chosen or based impermissibly on the minority percentage in the local population.[92]

In determining the correct way to measure availability for prime contractors, the circuit court panel was less decisive. It accepted the principle that qualifications were necessary in determining the availability data base, but it also stated that: "The issue of qualifications can be approached at different levels of specificity, however, and some consideration of the practicality of various approaches is required."[93]

The Third Circuit was reluctant to base the availability measure on firms that had been pre-qualified. If there had been discrimination in city contracting, the court reasoned, firms might have been discouraged from seeking pre-qualification, although there was no confirmed evidence of any discrimination in either the pre-qualification or bid award system.[94] It also speculated that, "In the absence of some reason to believe otherwise, one can normally assume that participants in a market with the ability to undertake gainful work will be 'willing' to undertake it."[95] The court added somewhat inconsistently, however:

> On the other hand, the City's difficulty in the 1980s in getting sufficient numbers of black contractors to bid even on sheltered market prime contracts gives credence to the hypothesis that that under-participation was attributable to a dearth, however it came about, of black contracting capacity available for prime city contracts.[96]

Of the 8,050 construction firms in the Philadelphia MSA, the record showed that about only three percent had ever sought prequalification, suggesting that the overwhelming number of firms owned by members of any group were not willing or did not have the ability to seek prequalification to bid. The court

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92. *See id.* at 607.

93. *Id.* at 603.

94. For the need for direct evidence, see *City of Richmond v. J. A. Croson, Co.*, 488 U.S. 469, 480 (1989). There was some testimony before the city council about discrimination, but the Circuit held that the anecdotal evidence was not sufficient to withstand strict scrutiny. *See* Contractors Ass'n of E. Pa. v. City of Philadelphia, 6 F.3d 990, 1003 (3rd Cir. 1993).

95. *Contractors Ass'n of E. Pa.*, 91 F.3d at 603.

96. *Id.* at 605.

asserted, then, that firms on the OMO list might be a source of qualified and willing firms because, unlike the typical bidder or certified list in most jurisdictions, these firms had to detail their bonding experience, prior experience, the size of prior contracts, number of employees, financial integrity, and equipment owned. Many firms were turned down, though it was not apparent why.[97] But in determining the relative availability of MBEs and non-MWBEs, the problem was that there was no comparable list for non-MWBEs. The pre-qualification process measured firms for specific city contracts, not their general qualifications for federal contracts, as the OMO list did.

Ultimately, the court seemed willing, for the sake of argument at least, to permit an availability comparison, between the firms in the OMO list in the Philadelphia MSA and the non-MWBEs in the MSA in the census, that yielded an MBE availability of .7 percent.[98] This is clearly an apples and oranges comparison. In the end, the court declared that a determination regarding the compelling-interest prong of the *Croson* test was "a close call" not worth making and decided the case on the narrow-tailoring prong.[99]

C. *Columbus*

In 1996, the Third Circuit addressed many availability issues in *Associated General Contractors of America v. City of Columbus*,[100] a decision holding unconstitutional a program proposing to provide various benefits to black- and female-owned

97. None of the underlying information on the firms in the OMO list was in the record. Dr. Brimmer only saw the list with the names and addresses of companies. *See* Contractors Ass'n of E. Pa. v. City of Philadelphia, 893 F. Supp. 419, 437 (E.D. 1995).

98. This was based on a total of 57 black-owned construction firms, the lower, revised figure that came out of the trial. *See id.* at 432. Ironically this yielded a lower percentage than would have been derived if the pre-qualification numbers had been used for both MWBEs and non-MWBEs.

99. *Contractors Ass'n of E. Pa.*, 91 F.3d at 605. Sometimes the court seemed willing to invest more significance in numbers in a disparity ratio in settling the issue of the presence or absence of discrimination than Dr. Brimmer did. In deposition, he stated:

> I never said and I will not say today, that I would infer discrimination in a setting simply by looking at an index. No. I would say there is a presumption of discrimination and I would look at other factors to determine whether it is reasonable to conclude there is discrimination. In other word, the index could be thought of as an alert, as an alert. And then you've got to do more to ascertain whether that alert is justified.

Deposition of Defendant's Expert, at 104.

100. 936 F. Supp. 1363 (S.D. Ohio 1996).

construction contractors. The case's seven disparity studies (prepared by a local consultant, State Senator Otto Beatty, and the national team of BBC and MBELDEF) were produced over a five-year period, at a cost of approximately $800 million.[101] The court's 98-page opinion, including a 20-page appendix, remains by far the most thorough judicial evaluation of different methods for ascertaining availability.

Senator Beatty conducted the first Columbus study in 1989. He used census data to establish availability and made several technical errors. For non-MWBEs, Senator Beatty employed a census of construction firms for Franklin County, in which Columbus is located; for MWBEs, he used numbers from a census of the seven-county Columbus MSA.[102] Additionally, the census Senator Beatty used to measure MWBE availability included firms not in the census construction categories, and thus "overstated the percentage of available M/FBE construction firms."[103]

The court's central criticism, however, was that neither availability source adequately measured qualifications. Senator Beatty had rejected the option of using such an availability data base:

> The Supreme Court reference to MBEs that are "qualified . . . and able to perform a particular service" provides no guidance. Using this method, it would be difficult to determine the actual number of eligible majority firms, let alone MFBEs. In order to use that data which is either available or can be extrapolated, "eligibility" becomes those firms that are considered to be in business.[104]

Finding "no basis for the assumption that all construction firms in business are capable of performing construction services for the city," the court responded:

> City ordinances require bid bonds and performance bonds on all contracts for public improvements. Clearly not every firm "in business" can meet the financial requirements to

101. *See* John Futty, *City Agency Urges Lobbying to Save Program*, COLUMBUS DISPATCH, Aug. 30, 1996, at 3B (estimating that the City's legal fees added $700,000 to the cost of defending the MBE program).

102. *See Associated General Contractors*, 936 F. Supp. at 1386 (characterizing this as an "apples and oranges" comparison).

103. *Id.* at 1385.

104. Beatty & Roseboro, Columbus, Ohio: Disparity Study and Recommendations 38 (1989).

> obtain such bonds. The failure to establish that "eligible" M/FBE firms were qualified to provide construction services to the city as prime contractors deprives the Beatty study of any probative value.[105]

BBC/MBELDEF also used census data in two different studies as a measure of availability, but considered a bidder's registration file (BRF) list and the results of a telephone survey as well. These different sources yielded substantially different availability estimates. Census data confined to the construction industry showed a three percent availability for MBEs, while examining various construction-related activities showed 4.7 percent MBEs. FBEs totaled about five percent in both census calculations. The BRF list included 23.7 percent MBEs and 10.9 percent FBEs in construction, but the survey produced 3.5 percent MBEs and 11.3 percent FBEs.

The court was concerned about the differences in these availability estimates. It stated: "The four methods of calculating availability are inconsistent and contradictory, they cannot all be equally reliable."[106]

The court next addressed each separate availability source. The court found the census data inadequate, even if used to make comparisons of MFBEs and non-MFBEs that were like apples to apples, because "[i]t is apparent . . . that not all of the construction firms . . . are qualified, willing and able to bid on city construction contracts."[107] The court also rejected the bidders list because it had "several limitations which renders it essentially useless for determining the total number of construction firms which are qualified to provide construction services to the city and the proportion thereof which are M/FBEs."[108] Among the list's defects was that it included firms far beyond the Columbus MSA. The list was not normally used to solicit construction bids and the heavy representation of MFBEs on it was in part the result of active recruitment of

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105. *Associated General Contractors of America*, 936 F. Supp. at 1385.

106. *Id.* at 1395-96. The Court also implied the consultant was manipulating the data to achieve the result of underutilization. *See id.* at 1396.

107. *Id.* at 1390; *see also id.* at 1391 (stating that "census data probably overstates the proportions of available M/FBEs"). The court also criticized the use of census subsector data in BBC's second supplement because the SIC codes included were inconsistent with its previous definitions of construction. *See id.* at 1394-95.

108. *Id.* at 1390.

MFBEs by the bureaucracy and the magnetic effect that the previous set-aside had created.[109]

Nor did the court find that the telephone survey was a sufficient basis for determining availability.[110] The survey asked only whether firms would be interested in future city work. It did not ask whether they, in fact, had ever performed work for the city, had previously placed bids, or could comply with bonding and insurance requirements. The court concluded that the survey was "... of no value in determining whether the respondent is qualified to bid on prime contracts."[111]

After considering at length census data, the BRF list, and the telephone survey, the court concluded:

> None of these measures of availability purported to measure the number of M/FBEs who were qualified and willing to bid as prime contractors on city construction projects. In order to be selected as a successful bidder on a prime contract, a firm must be deemed responsible and it must be capable of providing a bid bond and a performance bond. The anecdotal evidence collected by the city clearly showed that only a fraction of all construction firms are capable of meeting these requirements. Generally, only large firms with substantial net worth and a significant history of success in the construction business are able to qualify for bonding. BBC never attempted to determine how many firms in the Columbus MSA have such qualifications or how many M/FBE firms in the Columbus MSA are so qualified. There is no basis in the evidence for an inference that qualified M/FBE firms exist in the same proportions as they do in relation to all construction firms in the market. To the contrary, as BBC acknowledged "M/FBEs tend to be smaller and perhaps less likely to have the capabilities to provide goods, services and construction for the City."[112]

The court then stated its view of the proper measure of availability:

> The city maintains records of all firms which have submitted bids on prime contracts. This would be a ready source of information regarding the identity of the firms which are qualified to provide contracting services as prime contractors.

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109. *See id.*

110. *See Associated General Contractors*, 936 F. Supp. at 395.

111. *Id.*

112. *Id.* at 1389 (citation omitted).

> BBC does not explain why it did not use this data. On prime contracts only the firms which submit bids are "available." [113]

The court finally rejected the concept of creating disparity ratios based on headcounts of firms and expected dollars outcomes. Judge Graham stated:

> The use of statistical methods to investigate possible discrimination in the award of construction contracts on the basis of the amount of dollars awarded is also inappropriate in the instant case because there are relatively few contracts and relatively few firms seeking those contracts, and the amounts of the contracts vary greatly. There is no basis for the assumption that the award of contracts on a nondiscriminatory basis will result in parity in the distribution of dollars. [114]

D. *Dade County*

The most recent evaluation of disparity studies and concepts of availability by a federal court occurred in *Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County.*[115] Like Columbus, Dade County presented multiple studies, conducted over a period of years, to defend its MWBE program. Dade County had first created a Black Business Enterprise program in 1982 that was immediately challenged.[116] Its most recent program set construction goals at 15 percent for black-owned firms, 19 percent for Hispanic-owned firms, and 11 percent for women-owned firms. Slated to last until MWBEs received the same proportion of County expenditures as their proportion of firms in particular market segments, the program authorized set-asides, sub-contractor goals, and bid preferences for MWBEs. A federal district court, however, found the

113. *Id.* at 1389.

114. *Id.* 1400. The court noted that the plaintiff's expert found that on ten of the largest contracts awarded during the period studied by BBC, not a single M/FBE submitted a bid. *See id.*

115. 943 F. Supp. 1546 (S.D. Fla. 1996), *aff'd*, 122 F.3d 895 (11th Cir. 1997).

116. *See* South Fla. Chapter of the Associated General Contractors of America, Inc. v. Metropolitan Dade County, 552 F. Supp. 909 (S.D. Fla. 1982) (striking down the set-aside provisions of the program and upholding its goals provisions). On direct review, however, the Eleventh Circuit upheld the program in its entirety. *See* South Fla. Chapter of the Associated General Contractors of America, Inc. v. Metropolitan Dade County, 723 F.2d 846 (11th Cir. 1984).

disparity studies insufficient and permanently enjoined the County from enforcing its affirmative measures.[117]

In 1991, Dr. Andrew Brimmer completed the first Dade County disparity study. In contrast to his slender Philadelphia study, Dr. Brimmer's work for Dade County culminated in a six-volume, 850-page study, costing approximately $300,000.[118] The core of his disparity analysis, which was based on 1982 census data, compared the proportion of black-owned construction firms in three SIC codes with the proportion of overall revenues they received. After a three-day trial focusing on that study, Dade settled with the plaintiff contractors for $490,000.[119]

The County then expanded its program to include Hispanic- and women-owned businesses, as well as black-owned firms, and commissioned a Florida International University economist, Dr. Manuel Caravajal, to conduct another disparity study. A second trial resulted in which neither the Brimmer study nor the Carvajal disparity study played much of a role.[120] Instead, the court focused on a regression analysis prepared for trial that was termed the defendant's "most compelling data."[121] This work concentrated on firms that bid on County prime construction contracts classified by two-digit SIC codes and by size of contracts. It included 130 tables covering more than 920 pages.[122]

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117. *See* Engineering Contractors Ass'n of S. Fla., Inc. v. Metropolitan Dade County, 943 F. Supp.1546, 1551 (S.D. Fla. 1996).

118. *See* Deposition of Defendant's Expert, Capelleti Brothers, Inc. v. Metropolitan Dade County, No. 90-0678 (S.D. Fla. 1990).

119. *See Capelleti Brothers*, No. 90-0678.

120. Brimmer did not appear during the trial, and the Judge dismissed his analysis by stating that:

> The census data used in both studies simply represent individuals or firms located in Dade County which list themselves as being in the business of construction. The census data do not identify whether these entities have ever done work specifically for the County, or to what degree their reported sales or income stems from private sources versus public sources, much less whether the earnings are primarily a result of work done for Dade County versus Broward County, Palm Beach County, or some other Florida locale, or even sites outside Florida. This lack of specificity makes it difficult, if not impossible, to draw accurate conclusions concerning whether Dade County is itself a participant in gender, racial, or ethnic discrimination to the extent that justifies its use of face, ethnicity, and gender-conscious remedial programs.

Engineering Contractors Ass'n of S. Fla., 943 F. Supp. at 1573-74.

121. *Id.* at 1560.

122. On the troublesome question of the admissibility and evaluation of post-enactment evidence, the court decided to review it because Eleventh Circuit precedent

Evaluating this work, the court accepted the need to examine the data by two digit SIC codes because

> ... these data are more likely to reflect the realities of competition in the construction industry. Firms that build hospitals (SIC 15) do not compete for County contracts with firms that lay asphalt (SIC 16) or firms that install plumbing (SIC 17), therefore comparisons between these disparate entities would not produce a reliable portrait of County contracting trends.[123]

Plowing through this data in exhaustive detail, the court observed that, despite some variations, MWBEs received about as many contract awards as their percentage of bids, although many fewer dollars.[124] Judge Ryskamp noted: "Essentially, defendants are asserting that, despite the fact that BBEs [black-owned business enterprises] are getting their fair share of County construction contracts, the County award process is biased in a way that results in BBEs getting a disproportionate share of lower dollar contracts."[125]

But the court found that the record at a number of places showed that MWBEs were smaller, newer firms.[126] This conclusion was buttressed by an analysis done by the defendants in which contracts were stratified in three categories: those under $500,000, between $500,000 and $2,999,999, and over $3,000,000. Not surprisingly, most MWBEs bid on smaller contracts. For example, only one BBE compared to over 80 non-MWBEs bid on contracts over $3,000,000.[127] Consequently, the court noted:

> It is important to note that the *average* capital construction contract let by Dade County is worth approximately $3 million. In order to bid and win a large contract, it is reasonable to assume that a firm must be sufficiently large and established to achieve the financing, bonding and

made that necessary. The court noted, however, that post-enactment evidence creates a dilemma:

> [I]f the data prove the existence of discrimination, then they also prove that the set-aside program is not achieving its goal of ending discrimination. If the set-aside program is ineffective, it can hardly be considered necessary to promote the County's compelling interest in ending discrimination.

Id. at 1558.

123. *Id.*

124. *See id.* at 1563.

125. *Engineering Constructors Ass'n of S. Fla.* 943 F. Supp at 1563.

126. *See id.*

127. *See id. at* 1564.

> insurance requisites necessary to put forth a successful bid. Given this, it is likewise reasonable to conclude that larger firms may, on average, have higher dollar contract awards. Concomitantly, smaller firms would be expected to have smaller average dollar awards. If, as the evidence indicates, MWBEs tend to be, on average, smaller, and non-MWBEs tend to be larger, this could account for disparities in the average size of the County contract awarded.[128]

Aware of this problem, the defendants tried to use regression analysis to prove that even when controlling for size MWBEs received fewer dollars, but the court found the data inadequate to test the hypothesis and the results inconclusive.[129]

Concluding that the County's prime contracting analysis did not create a strong basis in evidence for an MWBE program, the court turned to the analysis of subcontracting.[130] The County, however, had not collected or at least did not release any data on the utilization of MWBE subcontractors on its prime contracts. The court noted that *Croson* had criticized Richmond's failure to have subcontractor data.[131] Faced with this reality, the disparity-study authors then attempted to compare the average total receipts of MWBE and non-MWBE firms that had filed subcontractors release of lien forms.[132] But this pool of firms was not a valid source of subcontractor availability because many firms worked as subcontractors on some jobs and prime contractors on others. Furthermore, their revenues could come from any geographical source, including any government or private clients, and not just from Dade County. Thus, these revenue figures were not relevant to measuring potential discrimination on Dade County subcontracts.

In summary, the court found none of the statistical analysis persuasive because it did not control for the necessary variables. Judge Ryskamp declared:

> Every expert economist who testified in this case stated unequivocally that the existence of numerical disparities do not lead to the conclusion that discrimination exists. This is because simple disparity indices do not account for the myriad factors that can legitimately result in disparities, such

128. *Id.* (citations omitted)
129. *See id.* at 1565-66.
130. *See Engineering Constructors Ass'n of S. Fla.* 943 F. Supp at 1566-67.
131. *See id.* at 1567.
132. *See id.*

> as the availability of MWBEs that are actually qualified to perform the contract requirements, the size of a firm, which will impact the dollar value of contracts which can be successfully bid for, the capacity of a firm to handle multiple County contracts at the same time, etc. Only when these and other factors which affect the qualifications, ability, and willingness of a firm to compete for County construction work are taken into account through using appropriate data and performing regression analyses can the County accurately determine whether there are actual disparities in the number of willing able and qualified MWBEs and the amount of work they are performing in the local construction industry.[133]

Croson requires, Judge Ryskamp concluded, that any disparity study filter out of any statistical analysis such factors as a deficiency in working capital, inability to meet bonding requirements, unfamiliarity with bidding procedures, and disparity caused by inadequate track records because "[t]hese problems face any new entrant into the construction industry."[134]

On appeal, the Eleventh Circuit unanimously affirmed the trial court decision.[135] After reviewing the evidence at length, the appellate court seemed impressed that, when the percentage of MWBE bidders was compared to the number of contacts awarded, few disparities existed.[136] Greater disparities did exist when one compared the percentage of bidders from various categories to the percentage of dollars awarded to each category. The Circuit noted, however, that, when the defendants controlled for firm size, those disparities largely disappeared.[137] Consequently, the court concluded:

> Because they are bigger, bigger firms have a bigger chance to win bigger contracts. It follows that, all other factors being equal, and in a perfectly non-discriminatory market, one would expect the bigger (on average) non-MWBE firms to get a disproportionately higher percentage of total construction dollars awarded than smaller MWBE firms.[138]

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133. *Id.* at 1582-83.

134. *Id.* at 1555.

135. *See* Engineering Contractors Ass'n of S. Fla. Inc. v. Metropolitan Dade County, 122 F.3d 895 (11th Cir. 1997).

136. *See id.* at 913.

137. *See id.* at 917-18.

138. *Id.* at 917.

V. EXAMINING BIDDING

In calculating availability, one should not conflate two analytically distinct problems. As the Third Circuit emphasized in its 1996 *Contractors Association of Eastern Pennsylvania* decision, the analysis of possible discrimination by the city in the awarding of prime contracts and the possible discrimination by prime contractors in the awarding of subcontracts are separate considerations.[139] (The court also noted the possibility of discrimination by contractors associations in admitting members.)[140] Consequently, the court stated: "Since these three forms of discrimination involve discrimination by different decisionmakers in different markets, we must independently determine whether there is a strong basis in the evidence for believing that each particular form of evidence existed."[141]

The district court in *Associated General Contractors of America, Inc. v. City of Columbus*[142] made the same point: "Instead of conducting a separate disparity analysis of prime and subcontract awards, BBC combined them. This is mixing apples and oranges. The qualifications for prime contractors and subcontractors are significantly different, and the decisionmakers and the methods of selection are entirely different."[143] The court continued:

> If, as BBC itself acknowledged, fewer M/FBEs are qualified to bid as prime contractors, and therefore their proportionate share of large prime contracts is less than their proportionate share of smaller subcontracts, then combining the prime and subcontracting [utilization] data would skew the data in the direction of underutilization of M/FBEs.[144]

As a result, one must create a separate availability data base for prime contractors and subcontractors, if statistical analysis is to be done correctly.

In determining availability for prime contracting, one should first determine the firms that bid. With the exception of the few small or special-circumstance contracts, Judge Graham of the

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139. *See* Contractors Ass'n of E. Pa. v. City of Philadelphia, 91 F.3d 586, 599 (3rd Cir. 1996).

140. *See id.*

141. *Id.* at 599.

142. 936 F. Supp. 1363 (S.D. Ohio 1996).

143. *Id.* at 1391.

144. *Id.*

Third Circuit was surely correct as a practical matter that "[o]n prime contracts only the firms which submit bids are 'available.'"[145] Jurisdictions should not award contracts to firms that are merely found in the census universe of businesses, or that are on some list or respond to a survey. All these measures are mere proxies for availability. In almost all circumstances, unless a firm makes a bid, it should not be considered actually available for selection.

Bidding creates costs of time and money and entails risks in performing the contract.[146] Consequently, it may be realistically assumed that bidding firms are willing and believe they have the qualifications and ability to fulfill the contract and provide the required construction, service, or good. A company that consistently makes mistakes by bidding too high or too low, or by bidding for contracts it can not perform, will not long survive.[147]

Almost universally, statutes require public agencies to award contracts to the responsible bidder with the lowest bid. Unless a pattern exists in which bidders are found to be nonresponsive for subjective reasons (and that is unusual), the process of awarding contracts is a far more objective process than in other areas, such as employment or housing, where issues of discrimination are frequently contested. Consequently, examining the bidding process and outcomes is preferable to the use of any proxies for availability for prime contracts.

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145. *Id.* at 1389.

146. William Park has pointed out:

> The contractor has the opportunity to bid on hundreds of jobs each year, many more than he has the time to estimate or the capacity to perform. And since bidding a job necessarily entails considerable expense in both time and money, it is imperative that jobs be selected that offer at least a fair chance of earning a profit.

William R. Park, CONSTRUCTION BIDDING FOR PROFIT 49 (1979).

147. For example, see the affidavit of Francis McArdle, currently managing director of the General Contractors Association of New York and former Commissioner of the New York City Department of Environmental Protection. He testified in *North Shore Concrete v. City of New York*, C.A. No. 94-4107 (ILG) (E.D.N.Y. Oct. 31, 1997), that:

> Improperly estimating the cost of a job and incorrectly gauging the firm's capabilities, and bidding too high or bidding too low can be fatal, especially to a new firm. If the firm bids too high it will not be the low bidder, and will not get the contract; if this occurs frequently, the firm will not have enough work. If the firms bids too low, it may well get the contract, but will lose money on it; if this happens often, the firm will run out of money and fail. The failure rate for construction firms is high.

Id. at 3-4.

As the court stated in *Associated General Contractors of America v. City of Columbus*:

> The concept of investigating discrimination in the award of prime contracts by indirect statistical analysis is inappropriate in this case. The process of awarding prime contracts is not the equivalent of a lottery in which every bidder has an equal chance. Prime contracts are awarded to the lowest responsible bidder. The city maintains complete records of all bidders and the amounts of their bids. If a contract is awarded to a bidder who did not submit the lowest bid, then the director of the city agency seeking the contract must furnish a written explanation to the mayor and city council. If the award of prime contracts is being manipulated in a discriminatory fashion, that will be evident by reviewing the records. If there is no manipulation of the bidding process and if M/FBEs are nevertheless receiving a disproportionately low amount of prime contracts, then there is a non-discriminatory reason for that disparity—they were underbid.[148]

Thus, direct evidence from actual bids for prime contracts is preferable to the indirect statistical proxies that most disparity studies employ. Yet only two studies have published results that include bidding data.

One of these two studies resulted when the Port Authority of New York and New Jersey decided in 1993 to "resuscitate[ ]" the use of mandatory race-conscious programs it had suspended after *Croson*.[149] These actions were based on an in-house disparity study that had made bidding the availability measure because "complete reliance on headcounts of enterprises would tend to overstate the active participation of contractors in the construction market."[150] Overall, the study found that MBEs constituted 12.9 percent of all bidding firms, issued 11.2 percent of the bids, and were successful 9.6 percent of the time, yet were awarded only 2.8 percent of the contract dollars.[151]

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148. 936 F. Supp. 1363, 1400 (S.D. Ohio 1996).

149. *See* Richard W. Roper, *Participation and Performance of Minority-Owned (MBEs) and Women-Owned (WBEs) Business Enterprises in the Port Authority's Prime Contract Markets* 26 URB. LAW. 471, 471 (1994).

150. *Park*, *supra* note 146, at 475; *see also id.* ("[S]ince a simple count of firms tends to overestimate the capacity of MBEs or WBEs because they are generally smaller and newer relative to non-M/WBEs, businesses pursuing contracts in specific contract ranges were grouped together and analyzed separately on the assumption that these enterprises possessed comparable abilities.").

151. *See id.* at 479.

Two considerations, however, may explain this apparent underutilization. First, the Authority's disparity ratios divided the percentage of bids into the percentage of dollars received. Had it divided bids into contracts awarded, it would have found that MBEs were much more successful.[152] Second, MWBEs bid twice as often on small contracts as on large contracts, accounting for their smaller share of contract dollars.[153]

Disparity studies conducted for a consortium of government institutions in Oregon also published bidding data.[154] MTA, the disparity study author, estimated MWBE availability for construction by combining firms that had attended pre-bid conferences (or received contract specifications) with firms that were on a certified list (or had responded to contract advertisements in six mostly minority newspapers). Although this data projected an MBE availability of 10.9 percent, MBEs had actually provided only 3.3 percent of the prime contract bids. Further, WBE availability was estimated to be 9.2 percent, but was actually only 6.3 percent when bids were examined.[155]

Because it lacked bidding data for subcontractors, however, MTA dismissed the use of bidders in its availability analysis. MTA also complained that bidding activity does not take into account "M/WBEs who reported that they were willing to work for the Consortium agencies, but had refrained from bidding due to the perceived and actual barriers documented in the anecdotal study."[156]

But factors such as bonding, licensing, and experience are perfectly legitimate barriers. A jurisdiction's insistence on qualifications should not negate bidding data as an availability measure. If bidding data were to be used in future disparity studies as the measure of availability in calculating disparity ratios, how should comparisons with utilization be made? That depends on which measure of utilization is used for comparison.

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152. The MBE disparity ratio of contracts awarded per bid attempt was .85 (or near parity of 1), compared to ratio of dollars awarded per available firms of .22. Furthermore, there were major differences among groups. For example, black-owned MBEs were the most successful: they made 5.7 percent of all bid attempts and received 5.8 percent of all contracts. *See id.* at 480 tab.1.

153. *See id.* at 479, 481 tab.2, 482 tab.3, 483 tab.4.

154. *See* 2 Mason Tillman Associates, Ltd., Oregon Regional Consortium Disparity Study: City of Portland (1996).

155. *See id.* at 9-10 tab.9.4.

156. *Id.* at 9-10.

There are three types of utilization or outcome measures, focusing on the following: (1) the percentage of firms engaged; (2) the percentage of contracts awarded; and (3) the percentage of dollars awarded. Dramatic differences often result depending on which utilization measure is used. *Croson* literally asks for a comparison of the number of qualified, willing, and able MWBE firms and their non-MWBE counterparts who are actually engaged or selected by the locality as prime contractors.[157] Overwhelmingly, however, disparity studies have compared the dollars awarded to MWBEs and non-MWBEs, or less frequently the number of contracts awarded, as the utilization measure.

If disparity ratios are to be based on firm participation (type 1), then availability percentages should be calculated by dividing the percentage of different firms owned by each group that have bid into the total of all firms that have bid and then dividing that percentage into the percentage of firms owned by each group that actually won contracts. Thus, WBEs might comprise five percent of all the firms bidding and also five percent of the percentage of firms that won contracts. That would create a disparity of one and show parity.

If disparity ratios are to be based on contracts awarded (type 2), then availability should be calculated by dividing the percentage of bids made by firms owned by each group into the total number of bids of all firms, and then dividing that percentage into the percentage of contracts awarded to firms owned by each group. Thus WBEs might have provided seven percent of all bids and might have won ten percent of contracts, for a disparity ratio of 1.4, which would show overutilization.

If disparity ratios are to be based on dollars awarded (type 3), then one should calculate availability by multiplying the number of times firms owned by each group bid by the dollar amount of the contracts bid on and then dividing that amount into the total bid dollars a jurisdiction has received to create a percentage reflecting the frequency and size of bids offered by firms owned by each group. That percentage should then be divided into the percentage of the dollar amounts awarded to firms owned by each group. Thus, WBEs might have made bids accounting for three percent of all dollars bids. If they were awarded about two percent of the total dollars spent on prime

157. *See* City of Richmond v. J. A. Croson, 488 U.S. 469, 509 (1989).

contracts, the disparity ratio would be .67, reflecting bidding underutilization. That might result because WBEs were not as effective competitors for very large contracts or were judged non-responsive when they were low bidders relatively more often than other firms. The latter might indicate discrimination. Further analysis could test both explanations.

In addition to arguing that bidding outcomes on contracts should be stratified by two-digit SIC codes, Judge Ryskamp insisted that the cause of any disparities be tested through regression analysis.[158] Although the major consulting firms have not attempted to use regression analysis to control for the effect of qualified, willing, and able availability variables on contracting utilization outcomes, scholars taken interest in such analyses. A few professors involved in studies have attempted to use regression techniques to determine availability. The most sophisticated use of regression thus far has been the Louisiana I study completed by Professor John Lunn, then of Louisiana State University, and Hugh Perry of Southern University.[159] After controlling for firm size and other variables, their study did not find a disparity in the utilization of MBEs.[160]

Nevertheless, regression analysis as applied to contracting outcomes will be complex. First, because of the diversity of contracts and the diversity of firms competing for them, it is very difficult to acquire the data needed to quantify the substantial number of necessary variables to do the regression. Second, although regression may buttress a finding that a disparity does or does not exist if certain variables are controlled, it will rarely be helpful in identifying the source of the discrimination, if the disparity indicates that possibility. Without such identification, creating a narrowly tailored remedy is unlikely.

Additional studies will be necessary before one can determine the relative accuracy and efficiency of research that carefully stratifies contracts by SIC code and size as contrasted to studies

158. *See* Engineering Contractors Ass'n of S. Fla. v. Metropolitan Dade County, 943 F. Supp. 1546, 1567 (S.D. Fla. 1996) (finding subcontracting study "insufficiently probative" where regression data lacked statistical significance).

159. *See generally* John Lunn & Hugh Perry, An Analysis of Disparity and Possible Discrimination in the Louisiana Construction Industry and State Procurement System and Its Impact on Minority- and Women-Owned Firms Relative to the Public Works Arena (1990).

160. *See id.* at 14.

that attempt a full-regression analysis. But using either method, one should base availability on firms that bid.

VI. CONCLUSIONS

In addition to reflecting qualifications, willingness, and ability, the examination of bidding has several advantages in measuring availability for prime contracts. It does not require examination of each contract to determine which selection factors have screened out which firms. As the Third Circuit suggested, this is not practical.[161] It does not require the creation of exceedingly complex mathematical weighting systems to reflect generic requirements such as bonding, licensing, and insurance, or the diverse requirements of particular contracts. Yet, when proxies are used for availability, without such a weighting system, no way exists for one to compensate for the inaccuracy of basing availability on headcounts that unrealistically assume all firms are equally qualified, willing, and able.

Jurisdictions also can evaluate their bidding data periodically without depending on outside consultants. Focusing on bidding also avoids the problem that basing availability on snapshots of proxy measures causes. During any significant span of years, some firms enter, and other firms exit a market. Bidding data captures all the instances the firm is an active participant in a market. Basing availability on bidding also eliminates the controversial issue of determining a single market area on which to focus a disparity study.[162] If MWBEs or other small disadvantaged firms are not bidding as frequently as expected, then a jurisdiction can conduct information and outreach sessions to encourage more participation. Examination of the patterns of bids may suggest whether breaking contracts into smaller units would produce more success for small firms. If MWBEs are bidding regularly, but too high, then jurisdictions can inquire into the reason. Perhaps the problem can be solved by training firms in the bidding procedures. If the inquiry shows

161. *See* Contractors Ass'n of E. Pa. v. City of Philadelphia, 91 F.3d 586, 603 (3rd Cir. 1996).

162. For example, in a Palm Beach County (Florida) school-board study, the consultant estimated that a portion of all the firms in the census from Hennepin County, Minnesota; Milwaukee County, Wisconsin; and Onandaga County, New York were available to the Board because one or two firms from those counties had received large contracts. *See* MGT of America, Inc., Disparity Study of the Palm Beach County School District app. B. (1995).

that MWBEs are paying more than other comparably situated companies for bonding, insurance, capital, or supplies, then jurisdictions can consider regulatory changes, if the differences are caused by discrimination.[163] In most cases, imbalances between bidding and outcomes can be addressed by race-neutral policies, though a jurisdiction has no legal obligation to ensure proportional outcomes when the differences are caused by fair competition.

Of course, instances might exist where bidding might not reflect fair competition. If a jurisdiction has set aside contracts or created price preferences for some contractors, that clearly might deter non-preferred bidders.[164] The more difficult problem is the claim or perception that a bidding system that is formally open is in reality not. The fact is that, after the enormous expenditure of time and resources invested in disparity studies in jurisdictions across the country, one can hardly find a specific example of a bidding outcome on a single contract that was discriminatory, let alone find a discriminatory system. Nevertheless, it is useful to survey firms that are potential bidders, but do not actually bid, to determine why they do not participate.

Claims of statistical underutilization abound, but examples of discrimination regarding particular contracts are virtually non-existent. Public procurement procedures are generally quite precise and subject to considerable scrutiny. Losing contractors almost always have a bid protest option and will be concerned by any irregularity. Consequently, a perception of discrimination,

163. For instance, if the higher costs for MWBEs are caused by race-neutral patterns of volume discounts, then jurisdictions can consider creating pools of small firms that can collectively purchase insurance and supplies. at reduced costs.

164. That can occur either to benefit MWBEs or some other category of bidders such as local firms. Under other circumstances, jurisdictions can use a single source or blanket-purchase method of purchasing. Such methods are used when there is a limited number of suppliers and a negotiated contract is preferable, or when a local jurisdiction is taking advantage of the discounts that can be obtained when a large order is placed by a larger government. For example, in Florida, the State negotiates a price for the purchase of police cars from the manufacturer that local governments can then share. Obviously more discretion exists when there is not competitive bidding. When bidding occurs, the availability and outcomes should be examined separately for special categories of bidders.

without further evidence, should not be enough to substitute proxies for bidding as an availability measure.[165]

For subcontracting, jurisdictions need more complex data to measure availability. Although most governments have data on which firms bid on prime contracts, few have data on which firms provide bids or quotes as subcontractors to prime contractors. Prime contractors often have no formal process for receiving or recording this information, but rely instead on informal networks that can be discriminatory. Consequently, some jurisdictions have good-faith requirements mandating prime contractors to take steps to make known the existence of subcontracting opportunities on the public-works contracts on which they intend to bid and then to record the results of the quotes received. Sometimes the good-faith systems are abused. Bureaucracies can turn them into quota systems by making it very difficult for prime contractors to use a non-MWBE subcontractor that has emerged from a fair competition, even though that firm may be the most qualified and may have provided the lowest bid.[166] Nevertheless, the information gathered in a properly administered race-neutral, good-faith system could provide the necessary data for determining subcontractor availability. Prime contractors could submit such data along with their bids, or they could be required to keep such data for possible periodic audits. Jurisdictions could levy significant penalties for providing fraudulent data. If a jurisdiction knew which firms were submitting quotes on which subcontract and the price, it could better monitor the improper use of discretion in soliciting and using subcontractors on public contracts.

Measuring availability is the key issue in performing a disparity analysis. Despite the substantial efforts made by consultants thus far, they have achieved no consensus about this measurement.

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165. *See, e.g.*, Maryland Troopers Ass'n, Inc. v. Evans, 993 F.2d 1072, 1076-77 (4th Cir. 1993) (finding that the perception of discrimination is not enough to substitute a race-based selection system for a race neutral one).

166. *See, e.g.*, Monterey Mechanical Co. v. Sacramento Reg'l County Sanitation Dist., 52 Cal. Rptr. 2d 395, 409 (1996). The County paid the contractor plaintiff $3.2 million after the California Court of Appeals ruled that the County had abused its discretion by requiring more of the contractor in meeting good-faith efforts than state law required. *Id; see also* Monterey Mechanical Co. v. Wilson, 125 F.3d 702, 711 (9th Cir. 1997) (holding that a race-conscious good-faith effort system caused prime contractors to discriminate against non-minority subcontractors).

Studies based on measures considered invalid by courts can not be a basis for any race-conscious programs and may prove misleading in diagnosing problems. Focusing on bidders in competitively bid contracts offers the most objective, fair, and inexpensive method of measuring availability.