FULL COMMITTEE HEARING ON SMALL BUSINESS PARTICIPATION IN THE FEDERAL PROCUREMENT MARKETPLACE

HEARING

BEFORE THE

COMMITTEE ON SMALL BUSINESS
UNITED STATES
HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

SECOND SESSION

HEARING HELD
March 24, 2010

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FULL COMMITTEE HEARING ON SMALL BUSINESS PARTICIPATION IN THE FEDERAL PROCUREMENT MARKETPLACE

Wednesday, March 24, 2010

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON SMALL BUSINESS,
Washington, DC.

The Committee met, pursuant to call, at 1:00 p.m., in Room 2360 Rayburn House Office Building, Hon. Nydia Velázquez [chairman of the Committee] presiding.

Present: Representatives Velázquez, Dahlkemper, Clarke, Graves, Buchanan and Luetkemeyer.

Chairwoman VELÁZQUEZ. Good afternoon.

This hearing is now called to order.

Whether we are talking about the credit crunch or the small business regulatory burden, there's no question that the last few years has been challenging for entrepreneurs. According to a recent survey, however, their greatest stumbling block isn't a lack of capital or an excess of a red tape—it is a shortage of customers. With consumer spending sluggish and new clients in short supply, the federal marketplace has become an increasingly attractive option. In the last decade, it has more than doubled in size—outpacing by virtually all other markets and reaching $528 billion in 2009.

Given its remarkable growth, you would think this sector would be an oasis of small business opportunity. In reality, it's more of a mirage. While it is true that the U.S. Government is the single largest buyer of goods and services, the fact of the matter is that it has purchased very little from small firms. Small companies represent 99 percent of American businesses, and yet they account for than a quarter of federal contracts. When you factor in overseas contracts, the market share shrinks into the teens.

In today's hearing, we will examine the state of small business procurement. In doing so, we will look for ways to improve the process for entrepreneurs, and ensure they have the tools they need to win contracts and create jobs.

In 2009, federal agencies missed their small business goals by 2 percent. Procurement officers will tell you that number is negligible, and no big deal. But while a two percent shortfall may not sound like a lot, it ultimately cost entrepreneurs $10 billion in missed opportunity. Or, to put it another way, it cost American $10 billion in lost job creation. Small contractors, like all other firms, create roughly 70 percent of all new jobs. So when their ability to win contracts is compromised, employment number are too.

SBA's contracting programs should be a critical tool for small firms. However, many of these initiatives are outdated, and have fallen into disrepair. In some cases, the agency has failed to implement altogether. Recent reports from the IG and GAO suggest significant room for improvement. Perhaps most notably, investigators have uncovered hundreds of billions of dollars in fraud within both the HUBZone and Service Disabled Veterans programs. As a Committee, we have held several hearings on that issue, and are working to root out waste, fraud and abuse at SBA.

But the Committee's concerns are not limited to SBA programs alone. Overall, procurement has become increasingly complex for small companies. Misguided efforts to streamline the process have contributed to a surge in contract bundling and a culture of cutting corners. Yes, these changes have made things simpler for agencies and easier for procurement officer—but at what cost to our economy? Every one percent increasing the small business contract share generates 100,000 new jobs. With unemployment at 9.7 we should not be looking for ways to make the process easier for bureaucrats—we should be looking for ways to make it easier for entrepreneurs to find work. After all, they are the ones out there creating jobs.

We are always talking about the need for diversification in business models. The recession has made that particularly important, especially for small firms. For these businesses, government contracts put another option on the table. By restoring integrity to the federal marketplace, we can ensure entrepreneurs have an opportunity to win new customers in a new market. This is key, because while our economy is showing promise, the recovery remains fragile. Before we can really turn a corner, we will need to see significant job growth—the kind that can only come from small businesses.

With that, I would like to thank all our witnesses for being here today. I know that you are quite busy trying to get contracts in the federal marketplace. So I want to thank you for being here.

I now yield to Ranking Member Graves for his opening statement.

Mr. GRAVES. Thank you, Madam Chair, for holding this hearing on the role small businesses play in the government contracting process.

And I also want to thank all of our witnesses for being here today.

Each year the government dedicates nearly half a trillion dollars to the purchase of goods through federal contracts. Because this is a significant amount of federal dollars, we owe it to the taxpayer to make sure that we are using them wisely and efficiently.

Government contracting offers a unique opportunity to invest in small businesses while also stimulating our economy. Small businesses play a central role in our economy and job growth, creating 7 out of every 10 private sector jobs in recent years. With unemployment still hovering around 10 percent, it is more important than ever to invest in small businesses that support our communities and provide opportunities for our families.

While several important provisions have been built into the federal procurement system in an effort to ensure small businesses re-

ceive a fair share of government contracts and opportunities, these provisions are not being properly enforced. Programs are abused and significant portions of contracting dollars are not properly allocated. As members of the House Small Business Committee we must make it a top priority to fix these problems, not only to make sure taxpayer dollars have maximum impact, but also for the sake of our economy.

To start, we should reduce the flawed practice of contract bundling which occurs when the government consolidates smaller contracts into very large contracts for the sake of convenience. This process can virtually shut small businesses out of the contracting opportunities because they simply lack the capacity or resource to fulfill the requirements of a bundled contract.

Additionally, we must work to strengthen the enforcement mechanisms built into the federal contracting system. Managers and senior executive personnel should be held accountable for not reaching out or not reaching outlying small business goals or for failing to properly enforce subcontracting plans. All federal agencies need to make this a priority, which may require reallocation of resources in order to ensue that no one is able to gain an unfair advantage of the contracting process.

In coordination with limiting contract bundling and strengthening enforcement mechanisms, we should also increase the percentage of federal contracting funds that are set aside for small businesses. This is an easy step that would provide smaller firms with more opportunities to do business with the government and expand their operations and work force. By addressing these problems, we can help small businesses compete in a national marketplace, we can foster job growth in our communities and we can ensure that we will stretch the taxpayer's dollar even further.

Again, I would like to thank the Chairwoman for holding this important hearing. I will look forward to hearing testimonies from our witnesses.

Chairwoman VELÁZQUEZ. Thank you.

And it is my pleasure to welcome the first witness, Ms. Linda Hillmer. She is the President and CEO of CorpComm located in Fredericksburg, Virginia.

CorpComm is a small HUBZone certified woman owned business that offers a full range of communications and media related to the Federal Government.

Welcome.

STATEMENT OF LINDA HILLMER, PRESIDENT & CEO, CORPCOMM, INC.

Ms. HILLMER. Madam Chair, Ranking Member Graves, members of the Committee, thank you for the opportunity to testify today.

My name is Linda Hillmer, and I am the founder, owner, President and CEO of CorpComm, a small professional services contractor to the Federal Government, specializing in digital media production and strategic communications.

I started the company in 2001 after having served in the Federal Government myself, including about 10 years in the procurement and acquisition arenas and marketing and communications. Let me just say that I absolutely love my job. I love supporting the United

States Government and I love creating an environment where people can come to work and be creative, have fun, grow in their career and make a difference. I would not trade it for the world, which is why I am here today. I want to make sure that the government gets the benefits of working with companies like mine, companies that have a culture that drives innovation, ownership and hard work.

My testimony today will address three issues and make five recommendations.

The three issues are: The federal acquisition workforce; contract bundling, and; subcontracting to large primes.

As the acquisition workforce is rebuilt, there needs to be a deliberate effort to put policies in place that resolve small business issues. For example, the small business contracting responsibility is usually one of many given to a contracting officer or a specialist. It is an other duties as assigned type of job with limited time and training. And to top it off, these specialists often report to managers who are not held accountable for small business achievement and enforcement.

So how do we solve this problem? First, we establish a dedicated core of small business specialists with defined responsibilities and authorities.

Second, we put accountability where it belongs: On senior executives. I applaud the recent bills put forth by the House addressing small business issues, especially the tying of goal accomplishment to senior executive pay bonuses. Please remember, though, that the SESs in charge of small business do not work in a vacuum. All senior executives in an agency, especially the senior procurement executive, need to have accountability and responsibility for meeting small business goals.

Now let us talk about bundling. By bundling or consolidating requirements in contracts, the government is trying to reduce its workload and hold large primes responsible for small business goals. The use of bundled or consolidated contracts appears to be growing and work being performed by small businesses is rolling into these vehicles in the name of contract management efficiencies. We simply should not rely on large prime contractors to manage the government's small business program.

A part of the solution is to require incentives, transparency and accountability in how large businesses subcontract with small businesses over the entire life of the government contract.

Another part of the solution is to strengthen the criteria and approval authorities necessary to even consider bundling. Small businesses such as mine do not have visibility into planning for bundled or consolidated requirements even when I'm the prime contractor performing the work that may be bundled.

Greater transparency will also help address the issues with subcontracting. Subcontracting to large primes is often the easiest way for small businesses to begin getting government experience. It is how I got my first government contract. The problem comes when large businesses use small businesses to meet goals to win the initial award and then after award, the large businesses either never allow the small businesses to work or they initially award them work but then slowly ease them out. We can solve this problem by

requiring large primes to be transparent and accountable in their small business practices over the execution of the life of the contract.

In conclusion if the government institutes these recommendations, American's small businesses such as mine will answer the call to create many meaningful jobs and provide innovative products and services to the Federal Government.

I look forward to continuing to work with members of Congress to strengthen small business participation in our government. Thank you for the opportunity to testify today.

[The statement of Ms. Hillmer is included in the appendix.]

Chairwoman VELÁZQUEZ. Thank you.

Our next witness is Mr. Justin Brown. He's the Legislative Associate of the Veterans of Foreign Wars. The VFW is the nation's oldest major veterans group with more than 1.7 million veterans who have served our nation overseas.

Mr. Brown is also a veteran of the United States Navy, serving one deployment in support of Operation Southern Watch and two deployments in support of Operation Iraqi Freedom.

Mr. Brown, welcome, and thank you for your service.

STATEMENT OF JUSTIN BROWN, LEGISLATIVE ASSOCIATE, VETERANS OF FOREIGN WARS

Mr. BROWN. Thank you, Chairwoman.

Madam Chairwoman, Ranking Member Graves and members of this Committee on behalf of the 2.1 million members of the Veterans of Foreign Wars and our auxiliaries, I would like to thank this Committee for the opportunity to testify and for your efforts to expand small business opportunities for veterans. The issues under consideration today are of great importance to our members and to the entire veteran population.

During this economic recession the number of unemployed veterans has increased to 1,124,000 as of February. The unemployment rate of our youngest veterans has reached a staggering 21 percent, and there are more unemployed OEF/OIF veterans than there are service members in Iraq and Afghanistan. During these tough economic times, that have proven tumultuous for America's newest veterans, the prospect of starting a business is particularly appealing. Veterans, if given the opportunity, will succeed in small business because they understand the concept of hard work, can adapt quickly to changing times, and are goal oriented. However, for a veteran interested in entrepreneurship, the reality is quality resources are scarce, disjointed and available to few.

In order for veterans to succeed in the federal procurement marketplace we need training: as there is a lack of geographically viable options for veterans, we need access to capital as there has been less than 153 loans distributed under the Patriot Express Loan program, we need compliance with existing laws and statutes as a host of federal agencies that after more than a decade continually, and willfully, fail to abide by their public mandates.

And we need agencies that work together and for veterans.

We must do more, and we ask that Congress continue to hold these agencies accountable with rigorous oversight.

In 2008, the Federal Government was roughly halfway to providing 3 percent of all federal contracts to small disabled veteran owned small businesses. In 2009, preliminary numbers suggest 2 percent of all federal contracts went to them.

The Department of Defense barely surpassed 1 percent of contracts for small disabled veteran owned small businesses in 2008. The fact that the largest federal agency continues to fail its former service members that were disabled in service to it is absolutely unequivocally unacceptable. It is shameful that the Department of Defense has so egregiously failed their own population for more than a decade.

The VFW calls on all federal agencies to absolutely reach their 3 percent goal in fiscal year 2010. Preliminarily, the American Recovery Reinvestment Act is proving that the 3 percent goal can be met. Our understanding is that 4 percent of Recovery dollars have gone to small disabled veteran owned small businesses. With the unshakable will of Congress, and this Administration, there should be no reason for the 3 percent mandate to be unmet for the 11th consecutive year.

As America's largest group of combat veterans, we thank you for allowing the Veterans of Foreign Wars to present its opinion on this very important matter.

We also thank you, Madam Chairwoman, this Committee and your staff for your rigor in passing legislation that will make these long overdue, much needed changes for America's veterans. Entrepreneurship if encouraged is a win/win for everyone, including the government and America's taxpayers.

Madam Chairwoman, this concludes my testimony and I will be pleased to respond to any questions you or the members of this Committee may have.

Thank you.

[The statement of Mr. Brown is included in the appendix.]

Chairwoman VELÁZQUEZ. Our next witness is Mr. Robert Sprole the Third, who is the President and Chief Executive Officer of Therm located in Ithaca, New York. Therm, Inc. has provided solutions to the needs of many customers for over six decades.

Mr. Sprole is testifying on behalf of Aerospace Industries Association.

Welcome

STATEMENT OF ROBERT SPROLE, III, PRESIDENT AND CEO THERM, INC. ON BEHALF OF AEROSPACE INDUSTRIES ASSOCIATION.

Mr. SPROLE. Madam Chairwoman Velázquez, Ranking Member Graves, members of the Committee, thank you for giving me the opportunity to meet with you today to discuss federal contracting issues and their impact on small business.

My name is Bob Sprole. I am the President and Chief Executive Officer of Therm, Incorporate, a manufacturer of jet engine turbine air foils. I am also a member of the Aerospace Industries Association which represents almost 300 aerospace and defense companies. Members of the association are large original equipment manufacturers as well as small suppliers. Many of our member firms are small businesses.

In the aerospace business small companies contribute about 70 percent of all manufactured items. One of the major customers for the aerospace sector if the Federal Government, specifically the Department of Defense. Companies such as ours have found three major challenges in doing business with the Federal Government.

The first challenge is that it is difficult to get started doing federal contracting. Getting started usually requires someone to guide a small business through the qualification process. The use of consultants or attorneys can be prohibitively expensive. More assistance in helping small businesses through this process would enable more competition for both businesses and the government.

Similarly, challenges posed by the export control system discourage many small businesses from seeking to complete globally. Modernizing the current export control system could help small business increase competitiveness and add jobs while still protecting our national security and foreign policy interests.

Even after qualifying, a business will need to make unique structural changes to satisfy government requirements. For example, many government requirements require a noncommercial cost accounting or CAS compliant accounting system even for common commercial items. Other kind of traps require earned value management systems. Unless a small business can earn several contracts, this investment will have limited return and serves as a deterrence.

If entry can be achieved, the second challenge is trying to operate in the unique government environment. Government contracting rules are designed for large businesses, not small ones. Creating an overhead structure to meet reporting and compliance requirements post-award, you know results in small businesses having noncompetitive cost structures. For most small companies people have to wear many hats. Therefore, responding to government requirements often means neglecting other duties for an extended period of time. Let me point to four examples of this problem.

Federal contracts, particularly those with the Department of Defense, are subject to audit by the Defense Contract Audit Agency or the DCAA. These audit requirements strain small businesses because we do not have the ability to create a separate compliance staff. If DCAA finds inefficiency, like the failure to provide data in a reasonable time, the contracting officer can remove the ability for automated payments and require manually billing or even payment withhold. Manual billing and payment withholds significantly impact cash flow, the life blood of any business.

DoD has recently proposed a new procurement rule that will make this problem worse. If a deficiency is found in a business system, DoD proposes to automatically withhold 10 percent of each payment on all contracts using that system. Depending on how many systems are found deficient and how serious the contracting officer believes the deficiency to be, the withhold could be as high as 100 percent.

Since our existing remedies for addressing business system deficiencies, Congress should direct the DoD not implement this new rule and if existing remedies are not effective, DoD should hold a public hearing to determine a better way forward.

Requirements that might be difficult for large businesses can be fatal for small ones. For example, the Tax Increase Prevention and Reconciliation Act of 2005 mandates that federal, state and local governments withhold 3 percent of nearly all their contract payments. It is said to become effective on January 1, 2012. While this 3 percent withhold is levied against governments that we pass on to contractors along with the cost of administration of the program, the DoD estimates this cost to be $17 billion annually for that agency alone. Congress should repeal this tax withhold requirement and support the Administration's proposals to focus on tax delinquencies.

The Federal Government tries to contract with commercial companies, but the government's version of a commercial contract describe in FAR Part 12 requires noncommercial clauses. The number of federal unique clauses that can be imposed in FAR Part 12, prime contract for example, has grown to about 50 provisions. Not all of these provisions are required to be flowed down to subcontractors, but when the provisions are imposed on subcontractors this flow down diminishes the ability of primes to access small businesses that sell commercial products and cannot afford to comply with these clauses. And given the number of these clauses, commercial small businesses have even fewer opportunities to be prime contractors. Eliminating flow down of these clauses will help small businesses compete.

Companies need a fair return on investments in order to continue to do business and grow. However, there is continuing pressure on returns for companies doing business with the government. For example, for the fiscal year 2008 National Defense Authorization Act restricts the use of commercial contracting procedures for commercial services by authorizing a contracting officer to request information regarding the basis for the price or cost. This congressional direction should be revised to mandate the use of price analysis rather than cost and pricing data for small businesses.

The third and final challenge is simply staying in business with the government. Large prime contractors establish small business contracting plans. The members of AIA who are prime contractors take the requirement of developing small businesses seriously—

Chairwoman VELÁZQUEZ. Time has expired. And you will have more time during the question and answer period.

Mr. SPROLE. All right. Thank you. I will be happy to take your questions, Madam Chairman.

[The statement of Mr. Sprole is included in the appendix.]

Chairwoman VELÁZQUEZ. Our next witness is Mr. Stephen Denlinger.

He is the President and CEO of the Latin American Management Association. LAMA has been an advocate for the Hispanic minority and small business community since 1972.

STATEMENT OF STEPHEN DENLINGER, PRESIDENT AND CEO LATIN AMERICAN MANAGEMENT ASSOCIATION

Mr. DENLINGER. Thank you, Congresswoman Velázquez. It's a pleasure to be here today. Thank you, Ranking Member Graves and other members of the Committee.

Just a quick note. I'm not going to be talking about modernization of the 8(a) program today. We have testified on that before and have provided the Committee with numerous position papers on those issues. We appreciate your work on 8(a) modernization. I will say in passing that LAMA and USHCC support parity among all the socioeconomic procurement programs. None of them should receive priority over the other. It's time to let the contracting officers do their job and make sure that they meet all the goals in the socioeconomic programs.

As I ponder where we go from here, and I think back about our almost 40 year history and our initial meetings with companies like Lockheed Martin and FMC and IBM where minority contracting was almost nonexistent. Over that 40 year period virtually all the federal agencies have established robust small and minority business programs, as have major prime contractors. I am not suggesting for a moment that they are all in perfect shape, but in the main the goals are being met. So the question is where does we go from here? If we're succeeding in general, is there any justification for continuing these programs?

In a word, the answer is yes. Disparity studies across the United States indicate that, when MBE programs are in effect, MBE contracting takes place. When MBE programs are not effect, little or no MBE contracting takes place. So we recommend the reenactment of the SDB program and that the Congress hold hearings to amass the evidence necessary to prove widespread discrimination that would serve as a foundation of evidence to prevent further court cases like Rothe from dismantling the SDB and 8(a) programs.

Moving on, I am concerned about missed goals on the part of the agencies, Congresswoman, as you have over the years. And as I think about that and think about the usefulness of PEA, price evaluation adjustment, our recommendation is that we utilize PEA not just for the SDB program, but for all socioeconomic programs and small businesses programs across the board any time a federal agency is failing to meet its small business goal. The Air Force, for example, failed to meet its goal in FY '09 by a wide margin, achieving 16 percent instead of 23 percent. Air Force, DoD, Education, USAID are examples of agencies wherein the PEA should be used to make sure that they meet their goals.

We believe it's time to substantially increase the small business goal in federal contracting. There's no reason for large business to receive three-quarters of the federal procurement dollar. There's ample evidence that this is timely. Many agencies routinely exceed their 23 percent goal by wide margins, including HUD, USDA, DOC, State Department, Homeland Security, Interior, DOT and so forth.

We also see that many large or small businesses are successfully performing contracts through the Small Business Set Aside program in the range of $50 million, $100 million, $400 million and even a billion dollar contracts. The $400 million contract is with the Air Force Western Range in California. The billion dollar contract is with NASA. Those small businesses are performing contracts of that nature quite successfully.

In addition, the socioeconomic programs eat up about 20 percent of the 23 percent goal, when you include the 8(a) portion. So we need to expand the small business goal. We recommend that the small business goal be increased from 23 to 40 percent.

In the subcontracting arena, as you well know, we continue to have problems of prime contractors not meeting their goals and engaging in bait and switch tactics, as Ms. Hillmer has referred to. The missing ingredient in those subcontracting programs is what? A contract. If there's a contract between the SDB and the prime contractor, contracting will take place. There is a self-enforcing aspect to this approach because we do not need a government bureaucracy, we do not need penalties to ensure enforcement. When the prime contractor fails to abide by the terms of the contract, the small business can simply go to court and seek redress.

Eligibility fraud is rampant in HUBZone and SDVOSB programs, as your Committee and other studies have proven and demonstrated. We need simplified and cost effective ways to reduce the cost of enforcement. And we recommend something we call the REI, Recorded Eligibility Statement. A REI is a simple procedure wherein SBA would put on record under oath any and all businesses that are self-certified for these programs. We think that that would literally overnight eliminate a lot of this fraud because it's one thing for a business owner to tell a contracting officer yes they qualify; it's quite another to go on record, under oath, stating that that individual meets all the eligibility criteria.

At the end of my written testimony you'll find a suggested REI that gives you the types of questions that could be asked of that individual, the business owner, under oath. That could take place remotely at any Kinkos in any location anywhere in the country. SBA staff would not have to travel anywhere and, nor would the company owner have to travel either.

Chairwoman VELÁZQUEZ. Mr. Denlinger?

Mr. DENLINGER. Yes.

Chairwoman VELÁZQUEZ. Time has expired.

Mr. DENLINGER. All right. Thank you so much.

[The statement of Mr. Denlinger is included in the appendix.]

Chairwoman VELÁZQUEZ. Our next witness is Ms. Bobbie Gentile. She is the President of Q-Mark, locating in Kettering, Ohio. Q-Mark, Inc. was founded in 1990 as a manufacturer's representative to companies that produce electronic components.

Ms. Gentile is testifying on behalf of the National Association of Manufacturers and Representatives which seeks to inform and educate its members on key issues effecting the federal procurement marketplace.

Welcome

STATEMENT OF BOBBIE GENTILE, PRESIDENT, Q-MARK, INC. AND ON BEHALF OF NATIONAL ASSOCIATION OF MANUFACTURERS AND REPRESENTATIVES.

Ms. GENTILE. Good afternoon, Chairwoman Velázquez and members of the Committee. On behalf of myself and the staff of Q-Mark and Innovative Supply Source I would like to thank you for granting me the opportunity to speak with you today regarding the af-

fect that contract bundling and other DoD contracting practices will have on small businesses.

I am the President of the National Association of Manufacturers and Representative, and I have been hearing from small businesses nationwide concerned about contract bundling.

For years small businesses have been valuable partners to the federal procurement system. Now we find ourselves in the position of being displaced, due to contract bundling.

Since I last testified, I opened Innovative Supply Source in order to team with the prime contractors that won the bundles.

On the Tobyhanna Initiative, we teamed with the winning contractor and ISS was asked to participate in the Mentor-Protege program, which we did. Once we teamed with this company, we found that they were under investigation by the government and facing possible debarment and were not allowed to supply parts to DLA.

My question is how could this happen that large prime contractors were awarded a bundle order while under investigation? I now need to find someone within the government to help dissolve my Mentor-Protege relationship with this contractor, as I do not wish my company's reputation to be jeopardized.

In our teaming process on the Tobyhanna Initiative, the prime contractor did not understand how to purchase the proper product. They called to inquire if parts manufactured in 1978 were acceptable for use. Only after entering into this teaming agreement did we discover that these contractors were not experienced enough to procure electronic products properly to support the war fighter.

We have also experienced unethical practices by large prime contractors involved in bundling. ISS was contacted by one of the government's largest prime contractors who stated that if I dissolve my relationship with NAMR, and make no waves or not testify against building, they would allow ISS to team with them. But if I continued to protect small business, they would not consider teaming with my company.

Recently, NAMR was involved in challenging a bundle under the time Maritime Initiative, which was eventually canceled in February of this year. Now we find the initiative is being issued in smaller segments, though they still constitute bundled actions.

The procurement center representative at Defense Supply Center Columbus forwarded an appeal package on the original Maritime Initiative to SBA. The SBA negotiated an agreement with DLA regarding this initiative. Thus, that negotiation was not made public, however the initiative went forward with a new acquisition strategy.

The ability to participate in the federal procurement processes is going to be eliminated with contract bundling. Items will be purchased behind closed doors, industry will lose the opportunity to bid on items the government is purchasing. There will be no fair and open competition. It will destroy the industrial base, create higher prices, cause longer delivery times and reduce military readiness.

Fair and open competition must be maintained. It is crucial to saving taxpayers' money and maintaining readiness as I can attest on behalf of one NAMR member. This company, which specializing

in designing and manufacturing spare parts for the military, has been able to save the Federal Government and in turn the taxpayers, millions of dollars by being able to see items the government is buying. This company saves the government money by manufacturing replacement for spare parts that the OEM or prime contractors manufacture and sell the government at inflated prices.

Under current contracting regulations all interested companies can bid on any item the government is buying. If the items are bundled, companies lose the opportunity, the government will spend millions of dollars more. And in addition, the government will spend millions more in mark-ups on these items as they pass through multiple layers of distribution.

And now there is talk about the Federal Government implementing the so called "High Road" contracting rules. The Administration is considering requiring that federal contracts go to businesses that pay high wages and provide benefits; a policy clearly meant to help labor unions and large corporations.

Contract bundling has all but eliminated fair competition for contracts. If the Administration adds their "High Road" contracting rule, the role of small business in government contracting will further be diminished and costs will increase.

Bundled contracts will drive companies out of business, put the government into sole source situations, and result in higher prices.

As President of NAMR, Q-Mark, and ISS, and a member of NFIB, I urge you to pass legislation to stop contract bundling, ensure "High Road" contracting rules not be implemented.

And thank you very much for taking the time to hear our testimony today.

[The statement of Ms. Gentile is included in the appendix.]

Chairwoman VELÁZQUEZ. Thank you.

Our next witness, Mr. John Woods. He's the co-founder of Woods Peacock Engineering Consultants based on Alexandria, Virginia.

Woods Peacock Engineering Consultants provides structural engineering and product management services. Mr. Woods is testifying on behalf of the American Council of Engineering Companies which was founded in 1909 and has more than 5,300 firms throughout the country.

Welcome

STATEMENT OF JOHN WOODS, WOODS PEACOCK ENGINEERING CONSULTANTS AND ON BEHALF OF AMERICAN COUNCIL OF ENGINEERING COMPANIES.

Mr. WOODS. Madam Chair, and Ranking Member Graves and members of the Committee, I appreciate the opportunity to testify before you today about small business participation and the federal procurement marketplace and specifically about the unique nature of architectural engineering or A/E services procurements. In addition, I will address the composition of the engineering industries, why small specialized firms like my own compose the majority of this industry, how we view federal government polices and individual recommendations to enhance the results to our firms and us, the taxpayers.

My name is John Woods, and I am a founder and principal of Woods Peacock Engineer Consultants, a ten year old consulting en-

gineering firm located in Alexandria, Virginia. We are a small service disabled veteran owned firm with 16 employees, three of whom we have hired this past year.

All of the members of our staff are committed to providing our clients structural sound designs for various sized architectural building projects as well as work in the anti-terrorism force protection at home and around the world. Additional bio information is available in my written comments.

My firm is an active member of the American Council of Engineering Companies, the voice of America's engineering industry. Of the almost 6,000 member firms employing more than a half million engineers, architects, land surveyors and other professionals and responsible for more than $500 billion of private and public works, almost 70 percent of these firms are small businesses with less than 30 employees, many with less than ten.

My 40 years of experience includes private and public sector projects, both domestic and international. I will discuss the issues of my participation of my firm in several current projects in a moment.

Architectural and engineering firms provide services in a number of technical separate or combinations of disciplines, such as architecture, mechanical, electrical, civil structural, et cetera. States require state issued professional licenses for the individuals responsible for this technical or designed related work.

In the Commonwealth of Virginia, 67 percent of the ownership of privately held professional services firms providing services must be held by individuals licenses in the Commonwealth in their respective disciplines as well as for the requirement for the firm to be licensed to provide these services.

The code of ethics for licensed professionals to retain our licenses require us to perform work only for which we are qualified based on the education and experience. This is true in all states.

Because of the state licensed majority ownership requirements in most states, privately held architectural and engineering firms are often localized, small and specialized. Since the work is performed by individuals, the quality of services offers is independent of size.

For the federal project and in many state and local projects the public user and taxpayer is the benefactor because architects, engineers are selected for work based on being the most qualified for the particular project or series of tasks and then a fee negotiated as codified by the Brooks Act, Public Law 92-582 for federal work.

To its credit, Congress created the Small Business Competitive Demonstration Program 20 years ago with the goal of enabling federal agencies to facilitate greater participation opportunities for small businesses. By unrestricting competition for A/E services the program recognizes the composition of the industry, qualification emphasis and the need for agency to carefully plan contracts that small firms can perform.

Let me share several of my firm's experiences winning and doing work. The good news is that on one of the three recently awarded GSA A/E contracts using the Brooks Act selection for the new Main Department of Homeland Security Headquarters and the supporting facility on the St. Elizabeth's campus in Southeast Wash-

ington, we are one of several small firms included on the winning design team.

The construction contract for the adaptive reuse and restoration portion of the project has been estimated at nearly $300 million. The bad news is as a disabled veteran owned firm and a desire to reach agency goals by the contracting personnel, it was asked if our firm might be the structural engineer of record with two larger structural firms with whom we are collaborating contracted to us and us to the prime contractor. This is unsatisfactory because not only are we not qualified to accept the level of responsibility or risk for the project size, we cannot obtain the professional liability insurance needed.

Furthermore, the total structural engineering fees would exceed the normal level of annual fees and push us above the small business standard of 4.5 million.

We would also pay in Virginia a gross receipts tax.

With the approval of all the concerned parties we have now negotiated an appropriate scope of work for a fair and reasonable fee for a firm of our size.

Several years ago at an industry—

Chairwoman VELÁZQUEZ. Mr. Woods, time has expired. You will have an opportunity in the question and answer period.

Mr. WOODS. Thank you, ma'am.

[The statement of Mr. Woods is included in the appendix.]

Chairwoman VELÁZQUEZ. I would like to ask all the witnesses do you believe that the 23 percent small business contracting goal should be raised? Ms. Hillmer?

Ms. HILLMER. I say go ahead and raise it, but let us look at is a goal sufficient or should it be a requirement? Because by just having a goal, they strive to reach the goal but if they do not reach the goal, nothing happens to them.

Chairwoman VELÁZQUEZ. Mr. Brown?

Mr. BROWN. Thank you for the question, Madam Chairwoman.

I would concur with Ms. HIllner in the sense that it has been ten years since Public Law 106-50 was passed for small disabled veteran owned small businesses. And we're only 2 percent there. So I think if it was raised, we could potentially look at expanding small business opportunities for veteran owned businesses. But we would like to get to 3 percent first.

Thank you.

Chairwoman VELÁZQUEZ. Mr. Sprole?

Mr. SPROLE. Thank you, Madam Chairwoman.

I do not think there should be a goal at all because too often goals become ceilings. I think it is much better that the government work to unwind the maze of laws and regulations that make it so difficult for small businesses to compete on a level playing field and open up opportunity for businesses to earn the government contracts on their own.

Chairwoman VELÁZQUEZ. Mr. Denlinger?

Mr. DENLINGER. Yes. As I explained in my testimony, we believe the goal should be substantially increased. There is no reason for the large businesses to receive three-quarters of the federal contracting dollar, especially when small businesses have demonstrated the ability to perform larger, more significant contracts.

Thank you.

Ms. GENTILE. Yes, I believe the goals should be increased. However, I believe that we need to strive for more efforts to enforce the goal as the Department of Defense continues to get away with not reaching the goal and displaying our businesses.

Chairwoman VELÁZQUEZ. Thank you.

Mr. Woods?

Mr. WOODS. In our industry we would prefer that the contracting goals be based on dollars, not percentage of what is subcontracted out. Because what often happens is the contract may be worth $10 million, but they only subcontract out a $100,000 to all of the small firms. There is really nothing there. But if we did it on the basis of dollars, much like the Metropolitan Washington Airport Authority, I think the goal might become meaningless.

Chairwoman VELÁZQUEZ. Thank you.

Based on the testimony that we heard today, it is clear that contract bundling continues to be a major obstacle for small firms. So I asked for any of the members of the panel if you could make one suggestion for addressing contract bundling, what would it be?

Ms. Gentile?

Ms. GENTILE. I believe that there needs to be something written into the Defense Authorization Bill to totally displace contract bundling. It has not worked. When you team with people it does not work. The rules are not enforced by it. And they continually get away with renaming it so that it does not become a bundle.

Chairwoman VELÁZQUEZ. Mr. Woods?

Mr. WOODS. We would prefer that rather than bundling, that we increase the number and the training of procurement professionals in the government. Because part of the reason that bundling occurs is that they don't have sufficient resources or the time to write all of the contracts that would be necessary if they did not bundle.

Chairwoman VELÁZQUEZ. Mr. Denlinger?

Mr. DENLINGER. Despite all the Committee's good efforts with respect to controlling bundling, it really has not happened yet. Bundling continues at a pace. We do not have the ability to control it. If bundling is going to continue to take place, one of the things that we can do is require agencies that are bundling large contracts to set aside for competition among small businesses, 23 percent of each bundled contract. In other words every large bundled contract would have a small business prime contractor component that would ensure small business involvement.

Chairwoman VELÁZQUEZ. Mr. Sprole?

Mr. SPROLE. If bundling is something that is likely to continue, I think the way that it has gone about should be changed so that it is viewed from a much higher level with an intent of focusing on the impact on the industrial base for any contracts that are selected for bundling. And if there's not a valid reason for doing so, is to not put random contracts together in such that it freezes small companies out of the market.

Chairwoman VELÁZQUEZ. We also heard a lot of issues with subcontracting goals. Mr. Woods, can you elaborate on why this is such a problem for firms such as yours?

Mr. WOODS. Well, as a small firm, quite frankly, we do not care in our industry whether we are prime or the subcontractor. What

we are looking for is a fair and reasonable amount of the work and an opportunity to perform.

Chairwoman VELÁZQUEZ. Okay. Some of you have raised the issue of the 3 percent withholding requirement. And I just would like to hear each one of you to just give me yes or no answer.

I would like to ask you if you think that this requirement should be repealed before it goes into effect?

Mr. Woods?

Mr. WOODS. Absolutely.

Ms. GENTILE. Yes.

Mr. DENLINGER. Yes.

Mr. SPROLE. Yes, Madam Chairwoman.

Mr. BROWN. Yes.

Ms. HILLMER. Yes. And I would like to enter for the record—

Chairwoman VELÁZQUEZ. Yes.

Ms. HILLMER. —a letter from the Government Withholding Relief Coalition about this issue.

Chairwoman VELÁZQUEZ. Okay. Without objection, so ordered.

[The attachment to Ms. Hillmer statement fellows:]

Chairwoman VELÁZQUEZ. Mr. Sprole, for a small company breaking into the GSA schedule can be a daunting experience. What sort of assistance should be available to small firms to be listed on the schedule?

Mr. SPROLE. GSA should have dedicated assistant teams available to help small businesses through the process to become familiar with the requirements to work with the Federal Government and to expedite and to facilitate the development of small business contracting.

Chairwoman VELÁZQUEZ. Okay. Mr. Brown, currently GSA schedule are sent from the small business provision of the Federal Acquisition Regulation. Should small businesses set asides be explicitly applied to GSA federal supply schedule programs?

Mr. BROWN. I think if they're capable of carrying out the work and carrying out the contract, I do not see a problem with it.

One of the things I would be hesitant about in regards to the federal supply schedule is that we also do not want to become completely reliant on the federal supply schedules to meet our goals. What happens, and I think we are starting to see some of that with the VA, is that they are concentrating on their goals through the federal supply schedule and the folks in small businesses who may not operate with goods that are on the federal supply schedule are cut out of other contracts.

Chairwoman VELÁZQUEZ. Do any of the other witnesses have any opinion on this matter? Mr. Woods?

Mr. WOODS. The federal supply schedule does not apply to the architectural engineer field at all. We are selected on a qualifications-based method.

Chairwoman VELÁZQUEZ. And with that, I recognize the Ranking Member.

Mr. GRAVES. Thank you, Madam Chairman.

To each of your extents and if you do not have any idea, you do not have to comment, but to the extent that you know in terms of bundling do you know of cases where it has cost the Federal Gov-

ernment more money or the taxpayers more money as a result of that bundled contract over time? Go ahead.

Ms. GENTILE. The best thing I can tell you is that we know for a fact when you start with the pricing schedules, it goes between five to seven layers of mark-up by the time it goes to the government. We could sell it to the Federal Government direct, I will use an example for $25. But by the time it gets purchased by, and the experience we have with Initiative Supply Source, I would buy it from somebody who would sell it for $25. I will mark it up. Then I will in turn have to sell it to a company who is the procurement agency for the bundled award. They will mark it up. Who in turn sells it to the winner of the bundle, who marks it up. Who in turn sells it to DLA, who in turn will sell it to the Army.

I cannot see how that can possibly save money for the Federal Government.

Mr. GRAVES. Right.

Mr. Woods?

Mr. WOODS. There are certain agencies typically quasi, such as the Federal Reserve that will bundle services under a facilities management contract and make that contractor responsible for hiring the architects and engineers rather than selecting us under a qualification based procedure And we feel that that happens because they do not have the necessary expertise or the time to go through all of the contracting that might be required.

Mr. GRAVES. Anyone else?

Thanks, Madam Chair.

Chairwoman VELÁZQUEZ. Ms. Clarke?

Ms. CLARKE. Thank you, Madam Chair and Ranking Member Graves for holding this really vitally important hearing.

And I would also like to thank the assembled witnesses for sharing your perspectives with us on how we can improve the procurement environment for the engines of our economy, America's small businesses.

My question is for anyone who can answer on the panel. Recently the Court of Federal Claims held the Small Business Act requires opportunities to be set aside for HUBZone firms over firms that participate in other small business development programs. I think Congress must act to address the outcome of this case, which could likely be a chilling impact on procurement opportunities for non-HUBZone firms.

I think it is important for Congress to make its intent clear that each of the specialized procurement programs at SBA must be on equal footing.

What would be appropriate to address this parity issue, number one? And two, how quickly do you think this issue needs to be addressed and in your opinion is it important to act right away or can this wait

Mr. BROWN. Well, Congresswoman, I would be happy to address your question, and thanks for it.

Obviously this decision by GAO last year is very concerning to small disabled veteran and small businesses as it would put HUBZone above small disabled veteran owned small businesses in those situations where a contracting officer may be looking at giv-

ing it to this one, or this one. So in that sense, we would hope that Congress would act immediately to address this issue.

Ms. HILLMER. We are a HUBZone firm. And I actually believe that parity ought to be across the board. By putting one program above another program, no matter what program it is, 8(a), HUBZone, service disabled, I think we are creating an atmosphere where small businesses are fighting against each other for small pieces of the pie instead of putting them altogether and growing the pie in general.

Mr. DENLINGER. Yes. LAMA and U.S. Hispanic Chamber of Commerce support that position entirely. It is time for there to be parity across all socioeconomic procurement programs, and that should be done as soon as possible.

Thank you.

Mr. WOODS. We would not want to see a preference for any small business group. In fact, one of our complaints is that contracting officers try to meet all of their goals on every single contract. And we recognize as business people that in certain geographical locations, that's really not possible. But as long as they make an honest effort and demonstrate that, we do not have any problem with division.

Ms. CLARKE. There is an ongoing challenge being faced by small business subcontractor which re-enforces barriers to freer access to the federal procurement space. Subcontractors are being listed by prime contractors to secure federal contracts, only to be cast aside once the contract has been awarded. Something has to be don to ensure that subcontractors, typically smaller firms, are treated fairly by the prime contractors, typically larger firms. And I understand that was part of the testimony heard here today.

Have you found this to be a significant issue? If so, may I draw your and my colleagues attention to H.R. 4134. The Subcontractor Fairness Act of 2009. It's a bill that I co-authored with William Lacy Clay to hold prime contractors accountable for subcontracting proposals that they submit as part of the federal contract bid in the civilian or defense contacts.

Can you give me your feedback?

Mr. DENLINGER. Yes. We salute you for that bill. We supported it right here in our testimony. It is the foundation for what we think is needed in the subcontracting arena. The key piece that has been missing for all of these decades has been a contract between the SDB and the prime. And we would simply add to your bill a provision that, along with identifying the subcontractors, the scope of work and the dollar value, the terms of the subcontract agreement be part of the legislation as well. Otherwise the primes subcontract with you for a while and then move you out.

Ms. CLARKE. Thank you, Madam Chair. I yield back the balance of my time.

Chairwoman VELÁZQUEZ. Thank you.

Mr. Luetkemeyer?

Mr. LUETKEMEYER. Thank you, Madam Chairwoman.

Mr. Sprole, I am just kind of curious in your particular area of aerospace are you competing against any foreign companies that come in and bid on these aerospace contracts for small business now?

Mr. SPROLE. Yes. You know, the companies you know that we compete against are based in various parts of the world on defense articles and we have won and lost various contracts against companies in Israel and other countries.

Mr. LUETKEMEYER. What percentage of the contracts do you believe that are small business contracts are given to companies that are foreign-based or foreign owned, or whatever?

Mr. SPROLE. I would not be able to venture a guess on that. But we could try to get—

Mr. LUETKEMEYER. Significant or just a few here or there?

Mr. SPROLE. I think it is significant if you look at the entire amount that would be eligible for small companies to bid on this.

Mr. LUETKEMEYER. Do you buy parts from any foreign entities?

Mr. SPROLE. No.

Mr. LUETKEMEYER. Ms. Gentile?

Ms. GENTILE. We do not want to cross in our contract bundling because of DoD, we do not want to cross a lot of foreign companies. Some of the NATO we do buy parts periodically from some of the NATO countries.

Mr. LUETKEMEYER. Yes.

Ms. GENTILE. I am sure that the bulk of what we do and what we run across and what we see bundled are basically American made product.

Mr. LUETKEMEYER. Ms. Hillmer? No. Do not have any experience with that?

Ms. HILLMER. No, I do not.

Mr. LUETKEMEYER. Okay. Mr. Brown?

Mr. BROWN. Congressman, all of our veterans are American made, so—

Mr. LUETKEMEYER. I am talking about competing, when you bid for something that whatever the item is that you are bidding for or the contractor bidding for, how much competition do you see from foreign entities?

Mr. BROWN. Between our veteran-owned small businesses I would not be able to venture a guess into their competition.

Mr. LUETKEMEYER. Well, thank you for your service, sir. Appreciate your efforts and all your sacrifices for our country.

Okay. I am just kind of curious as well with enforcement. I sit on another Committee, Oversight and Government Reform, and the other day we were talking in that Committee about the problem with a lot of the contractors who, for one reason or another, have violations of one kind or another and the lack of enforcement by the government on these people when we find them to be in violation of whatever. It could be they themselves have felony records, it could be the contract itself were not performed up to standards, and yet, they are given another contract.

Have you seen that in your businesses? How much activity do you see along that line, a competition of people who have those kinds of problems, where there is not enforcement action taken to take them out of the picture? And again, you have to compete against that type of company over and over again. Have you seen any of that? At all, any of you?

Ms. GENTILE. I think we see in the contract bundling arena that some of the large contractors continue to get fined by the Federal

Government, they continue to be in violation of what some of the regulations are, they continue to intimidate the small businesses in numerous cases, but they continue to win the bundles. And nothing seems to be enforced by it.

Mr. LUETKEMEYER. Who is the enforcer in your situation? Who should be the enforcement in that?

Ms. GENTILE. I believe it should be the Defense Logistics Agency because they are the ones that are mandating the bundles that are coming out of Defense Supply Center in Columbus, Ohio.

Mr. LUETKEMEYER. Have any of you lost a contract as a result of bundling by a larger contractor who sort of squeezed you out of the process?

Ms. GENTILE. Absolutely.

Mr. LUETKEMEYER. Anybody else? All of you have? What was the result of that? Did you go back and complain? Did you file a complaint with the proper authorities or did you go back to the contractor and say, hey, you are not doing things as per the rules and, therefore, make sure you contact me next time? Or what kind of action did you take? Any at all?

Ms. Hillmer?

Ms. HILLMER. Well, I would like to tell you about an experience I had with the United States Army. And they bundled some contracts together and a large prime contacted us and said "Oh, we need you on our team, HUBZone, check that box." And so we joined their team. And they won the contract along with several other large primes. And we have not seen a single task order come out because the prime collects the task orders and the prime decides who on the team gets them. So I do not even get to see any of the work that comes out. And I used to have a significant amount of business in the Army, and now that has gone way down because all of the work that I was doing is coming out on these task orders and the prime is taking them.

Mr. LUETKEMEYER. Did you get paid anything at all? In other words, just to lend your support to this, your name to this?

Ms. HILLMER. No.

Mr. LUETKEMEYER. No? You are just —

Chairwoman VELÁZQUEZ. Would the gentlemen yield?

Mr. LUETKEMEYER. Sure.

Chairwoman VELÁZQUEZ. But you incurred a lot of expenses, didn't you anytime that you want to participate in any of this subcontracting with prime?

Ms. HILLMER. We did incur expenses, yes.

Mr. LUETKEMEYER. I assume you had to go through the bid process—

Chairwoman VELÁZQUEZ. Thank you for yielding.

Mr. LUETKEMEYER. —therefore you incurred quite a bit of time and expense just to put your bid together.

Ms. HILLMER. That is correct.

Mr. LUETKEMEYER. And you were not paid for that at all? So you are out all of this really?

Ms. HILLMER. Plus the business that I used to have.

Mr. LUETKEMEYER. I see I am over my time.

Thank you, Madam Chair.

Chairwoman VELÁZQUEZ. Mr. Denlinger, I have some other questions that I would like to ask now to the witnesses. SBA has proposed a rule for the 8(a) program that would adjust how assets, gross income and retirement segments are assessed when determining whether a company is economically disadvantaged. Are these changes enough or does Congress need to raise the net worth standard?

Mr. DENLINGER. Thank you.

We have been advocating for an increase in the net worth standards for many years, as you know. This is actually a step in the right direction. We salute that.

We would have to take a look at the extent to which that provision would broadly affect all applicants. Not everyone coming into the 8(a) program has a nice retirement fund sitting there. Most come in from having scrapped in the small business arena and do not have a lot of capital along those lines. So it would be helpful, but we do not think it is the complete answer.

Chairwoman VELÁZQUEZ. And also you gave an example in your testimony where you talk about a small business that sold itself immediately after winning a long term contract. And you pointed out that the contract and others like it will distort agency goal achievements for years to come. In your mind, what is the appropriate response to that kind of situation?

Mr. DENLINGER. Well, that is a real tough one. You start from the premise that we just cannot count a small business award that transforms into a large business award within the month from the small business award having been made, and count that as a small business award for the next ten years. There has to be a cut off at some point.

I would not necessarily say cut it off immediately, but maybe because that puts the awarding agency at a great difficulty, we recognize that. So maybe a three year limit, or something like that, or a declining allocation toward small business. But to count that as a small business award for ten years is totally unacceptable.

Chairwoman VELÁZQUEZ. Mr. Brown, multiple agency awards such as government-wide acquisition contracts have grown significantly in the last decade. And while small firms have participated in some of these efforts, others have been closed out of lucrative contracts.

In order to ensure that small firms are not overlooked, should Congress consider creating multiple agency award goals for small businesses?

Mr. BROWN. Thank you for the question, Chairwoman.

I believe it could be helpful in trying to reach the 3 percent goal for small disabled veteran owned small businesses. So I think if it marches us in that direction, if it opens up these contracts for small businesses, then I don't see an issue with it.

Chairwoman VELÁZQUEZ. Do you think that we should go even further than a goal and establish a multiple agency award small business program?

Mr. BROWN. I think that that would help with the oversight of trying to reach the goals that you would be trying to reach with that. So I think that that could be helpful as well.

Chairwoman VELÁZQUEZ. Okay. Mr. Graves, any other questions? Okay.

Well, again, I want to take the opportunity to thank all of you for being here today. And we are going to continue studying the different issues as they relate to the federal contracting practices in the federal marketplace.

So I ask unanimous consent to enter stories and testimonies into the record regarding the disparities facing small and disadvantaged firms. Hearing no objection, so ordered.

In addition, I ask unanimous consent that members will have five days to submit a statement and supporting materials for the record. Without objection, so ordered.

This hearing is now adjourned. Thank you.

[Whereupon, at 2:18 p.m. the Subcommittee was adjourned.]

NYDIA M. VELAZQUEZ, New York
Chairwoman

SAM GRAVES, Missouri
Ranking Member

Congress of the United States

U.S. House of Representatives

Committee on Small Business

2361 Rayburn House Office Building
Washington, DC 20515-6315

STATEMENT
Of the Honorable Nydia M. Velázquez, Chairwoman
United States House of Representatives, Committee on Small Business
Full Committee Hearing: *"Small Business Participation in the Federal Marketplace"*
Wednesday, March 24, 2010

Whether we're taking about the credit crunch or the small business regulatory burden, there's no question that the last few years have been challenging for entrepreneurs. According to a recent survey, however, their greatest stumbling block isn't a lack of capital or an excess of red tape—it's a shortage of customers. With consumer spending sluggish and new clients in short supply, the federal marketplace has become an increasingly attractive option. In the last decade, it has more than doubled in size—outpacing virtually all other markets and reaching $528 billion in 2009.

Given its remarkable growth, you would think this sector would be an oasis of small business opportunity. In reality, it's more of a mirage. While it's true that the U.S government is the single largest buyer of goods and services, the fact of the matter is that it purchases very little from small firms. Small companies represent 99% of American businesses, and yet they account for less than a quarter of federal contracts. When you factor in overseas contracts, their market share shrinks into the teens.

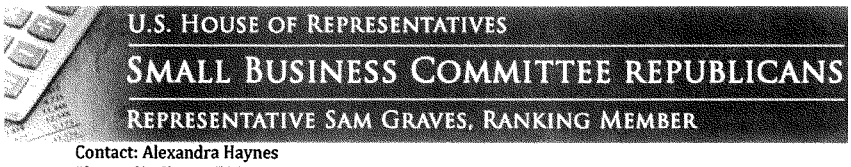
In today's hearing, we'll examine the state of small business procurement. In doing so, we'll look for ways to improve the process for entrepreneurs, and ensure they have the tools they need to win contracts and create jobs.

In 2009, federal agencies missed their small business contracting goals by 2%. Procurement officers will tell you that number is negligible, and no big deal. But while a 2% shortfall may not sound like a lot, it ultimately cost entrepreneurs $10 billion in missed opportunity. Or, to put it another way, it cost Americans $10 billion in lost job creation. Small contractors, like all other small firms, create roughly 70% of new jobs. So when their ability to win contracts is compromised, employment numbers are too.

SBA's contracting programs should be a critical tool for small firms. However, many of these initiatives are outdated, and have fallen into disrepair. In some cases, the agency has failed to implement them all together. Recent reports from the IG and GAO suggest significant room for improvement. Perhaps most notably, investigators have uncovered hundreds of billions of dollars in fraud within both the HUBZone and Service Disabled Veterans programs. As a committee, we have held several hearings on that issue, and are working to root out waste, fraud and abuse at SBA.

But the committee's concerns are not limited to SBA programs alone. Overall, procurement has become increasingly complex for small companies. Misguided efforts to streamline the process have contributed to a surge in contract bundling and a culture of cutting corners. Yes, these changes have made things simpler for agencies and easier for procurement officers—but at what cost to our economy? Every one percent increase in the small business contract share generates 100,000 new jobs. With unemployment at 9.7%, we shouldn't be looking for ways to make the process easier for bureaucrats—we should be looking for ways to make it easier for entrepreneurs to find work. After all, they are the ones out there creating jobs.

We're always talking about the need for diversification in business models. The recession has made that particularly important, especially for small firms. For these businesses, government contracts put another option on the table. By restoring integrity to the federal marketplace, we can ensure entrepreneurs have an opportunity to win new customers in a new market. This is key, because while our economy is showing promise, the recovery remains fragile. Before we can really turn a corner, we'll need to see significant job growth—the kind that can only come from small businesses.



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Opening Statement for Hearing:
"Small Business Participation in the Federal Procurement Marketplace"
Sam Graves
Ranking Member
House Committee on Small Business
United States House of Representatives
Washington, D.C.
March 24, 2010

I would like to thank the Chairwoman for holding this hearing on the role small businesses play in the government contracting process. I also would like to thank our witnesses for being with us today.

Each year, the government dedicates nearly half a trillion dollars to the purchase of goods through federal contracts. Because this is a significant amount of federal dollars, we owe it to the taxpayers to make sure that we are using them wisely and efficiently.

Government contracting offers a unique opportunity to invest in small businesses while also stimulating our economy. Small businesses play a central role in our economy and job growth, creating seven out of every ten private sector jobs in recent years. With unemployment still hovering around ten percent, it is more important than ever to invest in the small businesses that support our communities and provide opportunities for our families.

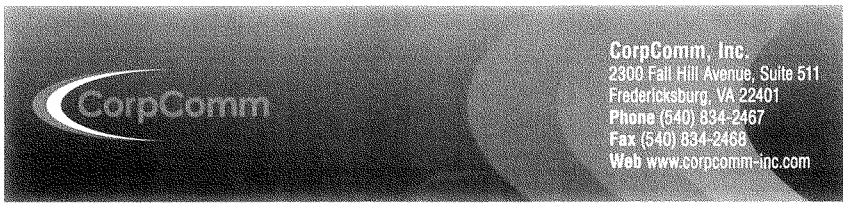
While several important provisions have been built into the federal procurement system in an effort to ensure small businesses receive a fair share of government contracting opportunities, these provisions are not being properly enforced. Programs are abused and significant portions of contracting dollars are not properly allocated. As members of the House Small Business Committee, we must make it a top priority to fix these problems, not only to make sure taxpayer dollars have maximum impact, but also for the sake of our economy.

To start, we should reduce the flawed practice of contract bundling, which occurs when the government consolidates smaller contracts into very large contracts for the sake of convenience. This process can virtually shut small businesses out of contracting opportunities because they simply lack the capacity or resources to fulfill the requirements of the bundled contract.

Additionally, we must work to strengthen the enforcement mechanisms built into the federal contracting system. Managers and senior executive service personnel should be held accountable for not reaching outlined small business goals or for failing to properly enforce subcontracting plans. All federal agencies need to make this a priority, which may require a reallocation of resources in order to ensure that no one is able to gain an unfair advantage of the contracting process.

In coordination with limiting contract bundling and strengthening enforcement mechanisms, we should increase the percentage of federal contracting funds that are set aside for small businesses. This is an easy step that would provide smaller firms with more opportunities to do business with the government and expand their operations and job force.

By addressing these problems, we can help small businesses compete in the national marketplace, foster job growth in our communities, and ensure that we are stretching the taxpayers' dollars further. I would like to thank the Chairwoman for holding this important hearing, and I look forward to hearing the witness' testimonies.



Written Testimony before the
U.S. House of Representatives Committee on Small Business
delivered by
Ms. Linda Hillmer
President, CEO
CorpComm Inc.
March 24, 2010

"Small Business Participation in the Federal Procurement Marketplace"

Madam Chair, Ranking Member Graves, members of the Committee, thank you for the opportunity to testify today.

My name is Linda Hillmer and I am the founder, owner, President and CEO of CorpComm Inc., a small professional services contractor to the federal government, specializing in digital media production and strategic communications.

Background: Small Business Owner and Federal Acquisition Professional

I started the company in 2001 after having served in the federal government as a civilian employee, including approximately 10 years in the procurement and acquisition arenas and marketing and communications. I was a member of the contracting intern program for the Naval Air Systems Command (NAVAIR) and later led the outreach and corporate communications for the Defense Contract Management Command (now DCMA).

I bring a unique perspective in that I understand federal acquisition, am a member of the acquisition community, and I am a small business owner (HUBZone, Woman-Owned) servicing federal acquisition- and technology-related clients.

I started my business shortly after leaving the federal government because I saw a need for the government to be able to translate – strategically, through words and graphics – complex ideas around acquisition and technology so that stakeholders could understand the value of the programs about which they were making decisions.

Ninety-nine percent of my company's revenue is from the federal government; we employ 25 full time employees, and have revenues of $4 million. As a certified HUBZone business, our office and more than 40 percent of our employees reside in historically underutilized business zones.

As a former government employee responsible for acquisitions and as a CEO of a small business providing services to the government, I can tell you there is a common tendency to go with the "big guys" because this is who you know and because it is frequently easier to contract with large companies

based on their existing contracts. Few people can question an award to a large, known entity, especially when the existing contractual vehicles allow work to begin quickly and easily, compared to the months sometimes required to award a new contract to a small business.

I know, to quote the Air Force Small Business Office, small businesses can bring agility, efficiency and innovation to programs that need those very attributes. I also know, as do these Air Force executives and others like them, that small businesses ensure America has a strong and diverse industrial base. And I know that small businesses will fuel the country's economic engine by creating jobs since, according to the Small Business Administration, small businesses employ half of all private sector employees in our country.

Issues Facing Small Business in Government Contracting

My testimony today will address three issues and will recommend five solutions. The three issues are:

1. How the federal acquisition workforce impacts small business contracting
2. The effect of contract bundling on business opportunities for small businesses
3. Challenges faced by small businesses as subcontractors to large primes

The five recommendations are:

1. Create a dedicated small business acquisition corps with authority that goes beyond procurement and encompasses program management
2. Strengthen the criteria and approval authorities necessary to consider bundling
3. Require significant portions of government-wide acquisition contracts (GWACS) or large Indefinite Quantity-Indefinite Delivery (IDIQ) contracts be set aside for small business prime contract teams and place greater transparency into the multiple award contracting process
4. Require incentives and transparency (and accountability) in how large businesses subcontract with small businesses over the life of a government contract
5. Hold all Senior Executives (especially those in acquisition positions) accountable for reaching small business goals

Solutions to Consider Related to the Federal Acquisition Workforce

As the acquisition workforce is rebuilt, there needs to be a deliberate effort to put policies into place that resolve small business issues. Currently, the small business contracting responsibility in the federal government is usually one of several given to a contracting officer or specialist. It's an "other duties as assigned" type of job, frequently with limited time or training that would be needed to make significant progress. My experience has been that this small business contracting role can be frustrating and demoralizing as many of these hard working individuals lack policy and management that support and defend their recommendations. They frequently report to managers who are not held accountable for small business achievement and enforcement. In fact, many small business specialists report to a

program manager who may even have an interest in assuring their program is awarded to a large business.

How to solve this problem? **Establish a dedicated corps of small business specialists with defined responsibilities and authorities.** Small business contracting done well requires a high level of skill and understanding of this niche area of federal contracting. With dedicated and empowered small business specialists, working small business issues would become something to which to aspire and would result in a tightly formed community that supports itself through ongoing training while mentoring new members in the special considerations that need to be addressed in small business contracting.

Of course creating a dedicated corps cannot happen with just training alone. It needs to be backed up by policy that implements legislation passed here in Congress.

I applaud the recent bills put forth by the House and Senate addressing small business issues – particularly the tying of goal accomplishment to Senior Executive Service pay bonuses. Please remember, however, that the SES's in charge of small business don't work in a vacuum. Alone, they cannot make change happen. **All Senior Executives – especially the Senior Procurement Executive – in an agency need to have accountability and responsibility for meeting established small business goals.**

For example, an SES in charge of small business for an agency may ask to be included in large acquisition strategy sessions but yet is not invited. Additionally, these positions often lack authority to enforce solutions that promote small business contracting. Unless the Secretary directs such inclusion or unless the executive in charge of acquisition is held accountable for reaching small business goals, the inclusion of small business in major acquisition strategies will happen on an *ad hoc* basis at best and is unlikely to promote meaningful work for small businesses.

Ensuring that the small business component of the industrial base has a voice at the table when acquisition strategy is being developed – and that the senior acquisition executive has a stake in small business goal achievement - will address the issue of contract bundling because the small business executive and the acquisition executive will both have something to lose if small business concerns are not considered for meaningful participation in the strategy. Add in a dedicated, well trained, authoritative small business contracting corps and you have the ingredients for a changed acquisition landscape within a few years.

Solutions to Consider Related to Contract Bundling

By bundling or consolidating requirements and/or contracts – essentially combining multiple opportunities into one overarching contract, the government is trying to reduce its workload and hold large primes responsible for small business goals. The government contracting officer only has to award one contract (perhaps to multiple awardees if it is an IDIQ, but still nowhere near as many if each individual contract had to be competed, awarded and administered) and the burden of meeting performance, cost, schedule and small business goals falls to the prime contractor. In theory, it's a win-win for everyone if awarding a contract quickly is the agency's primary goal.

The use of large bundled or consolidated contracts appears to be growing significantly and work previously performed by small businesses is being rolled into these vehicles in the name of contract management efficiencies. While short-term efficiencies may be possible, it is not clear what the longer

term impact of this practice will be on the health of the small business industrial base when we must rely on large prime contractors to manage the small business program.

Currently in contract bundling situations, large businesses are not required to report to the contracting officer regarding the small business portions of their contract performance. A part of the solution is to **require incentives and transparency (and accountability) in how large businesses subcontract with small businesses over the life of a government contract**. Another part of the solution is to **strengthen the criteria and approval authorities necessary to consider bundling** or consolidating requirements. A final piece of the solution is to **place greater transparency into the multiple award contracting process**. Small businesses don't have visibility into planning for bundled or consolidated requirements, even when they are the prime contractor performing the effort that may be bundled.

The government does not have visibility into how and when large primes use small businesses. Frequently, the government doesn't even know when or if a small business is performing the work because all interaction with the government must occur through the prime as dictated by contracts between the prime and the small business.

This in itself breeds the very same mentality/perspective that I mentioned earlier: Program managers – those who have the funds, write the requirements and often comprise the source selection boards – only know large primes and are not aware that a small business may, in fact, be doing an integral piece of the contract execution.

Imagine if there was a highly trained small business specialist working alongside a program manager who knew that a small business was capable of doing an integral piece of work, and then further imagine that both the specialist and the program manager reported to **senior executives whose performance bonuses hinged in part on the achievement of small business goals**. I believe the result would be that the piece of work – and perhaps more – would be set aside for a small business competition.

Solutions to Consider Related to Small Businesses Subcontracting with Large Primes

My first contract with the government was as a subcontractor. Today, my largest contracts in terms of dollars are prime vehicles, but most of my contracts are subcontracts. I have subcontracted with L3, SAIC, General Dynamics and several mid-sized defense contractors.

Subcontracting to large primes is often the easiest route for small businesses to begin getting government experience qualifications. It's a good route and a proven, successful approach. The problems come when some large businesses change their intentions. For example, there are large businesses that have a reputation for using small businesses to meet small business goals to win the initial award. Upon award, they either never allow the small businesses to work or initially award them work but slowly ease the small businesses out by taking the positions, sometimes even hiring the sub's employees. A possible solution to this practice may be to **require large primes to be transparent (and accountable) in their small business practices and execution over the life of the contract.**

I have had many positive experiences working with large and mid-sized companies. I got my start as a sub under several primes and their patience and willingness to work with a small company made all the difference in my success. Some of the best advice and unofficial mentoring I've received has been from

mid-sized company officials who truly wanted to see the government get the best service and innovative approaches possible. They've mentored me in terms of service offerings, timekeeping practices, and how to effectively handle negotiations with large primes.

The Air Force, which is a client of mine, has a strategy around small business. It's called "Beyond Goals" and the premise is that it's not only about achieving the goals or the numbers for small business. Achieving the traditional percentage small business goal is a means to the end, not the end itself. It's about showing program managers and others who control funding that small businesses can – and are – directly supporting the Air Force mission, sometimes in ways you wouldn't expect – such as in cyber security and missile defense. It's an approach that asks us to look beyond the immediate. It's not about checking boxes and walking away. It's about showing government customers what small businesses can do – and are doing – so that government customers, the next time they have a requirement or a need, don't simply jump to the big companies just because they're "easy to get to." They seek out small business because the service they get will be more efficient (because small businesses are unencumbered with bureaucracy), more agile (because small businesses can move faster, have more at stake and) and innovative (as witnessed by the fact that small businesses, according to the SBA, produce 13 times the number of patents per employee than large patent companies) AND they'll be supporting a more diverse industrial base for the country while helping to create jobs for hard-working Americans.

Conclusion

The bottom line solution has five parts:

1. Create a dedicated small business acquisition corps with authority that goes beyond procurement and encompasses program management

2. Strengthen the criteria and approval authorities necessary to consider bundling

3. Require significant portions of government-wide acquisition contracts (GWACS) or large Indefinite Delivery-Indefinite Quantity (IDIQ) contracts be set aside for small business prime contract teams and place greater transparency into the multiple award contracting process

4. Require incentives and transparency (and accountability) in how large businesses subcontract with small businesses over the life of a government contract

5. Hold all Senior Executives (especially those in acquisition positions) accountable for reaching small business goals

Compared to our larger company counterparts, small businesses are more productive, can easily adapt to fast-changing requirements, and will devote enormous energy towards developing new approaches and products. The agility, efficiency and innovation that small business brings can – and should – be tapped into and used to help bring solutions forward to our nation. This is a value-based proposition that will drive long-term benefits to the nation and our economy far exceeding the short-term efficiencies gained by some of the policies and practices occurring today in our federal acquisition system.

If the government institutes meaningful changes to the acquisition workforce, holds Senior Executives accountable for the achievement of small business goals, and requires transparency (and accountability)

from large businesses claiming small business credits in their performance goals, America's small businesses will answer the call to create jobs and provide products and services to the federal government.

I look forward to continuing to work with members of Congress to strengthen small business participation in our government. Thank you for the opportunity to submit this testimony for your consideration.

VETERANS OF FOREIGN WARS OF THE UNITED STATES

STATEMENT OF

JUSTIN BROWN, LEGISLATIVE ASSOCIATE
NATIONAL LEGISLATIVE SERVICE
VETERANS OF FOREIGN WARS OF THE UNITED STATES

BEFORE THE

COMMITTEE ON SMALL BUSINESS
UNITED STATES HOUSE OF REPRESENTATIVES

WITH RESPECT TO

Small Business Participation in the Federal Procurement Marketplace

WASHINGTON, DC MARCH 24, 2010

MADAM CHAIRWOMAN AND MEMBERS OF THIS COMMITTEE:

On behalf of the 2.1 million members of the Veterans of Foreign Wars of the United States and our Auxiliaries, I would like to thank this committee for the opportunity to testify and for your efforts to expand small business opportunities for veterans. The issues under consideration today are of great importance to our members and the entire veteran population.

During this economic recession the number of unemployed veterans has increased to 1,124,000 as of February 2010. The unemployment rate of our youngest veterans has reached a staggering 21%, and there are more unemployed OEF/OIF veterans than servicemembers serving in Iraq and Afghanistan. During these tough economic times, that have proven tumultuous for America's newest veterans, the prospect of starting a business is particularly appealing. Veterans, if given the opportunity, will succeed in small business because they understand the concept of hard work, can adapt quickly to changing times, and are goal oriented. We want to work with Congress and knock down all barriers to veterans attaining jobs today!

VFW MEMORIAL BUILDING ● 200 MARYLAND AVE. N.E. ● WASHINGTON, D.C. 20002-5799
AREA CODE (202)-543-2239 ● FAX NUMBER (202)-543-6719

Nowhere can we more quickly create American jobs for our veterans then in small business. Other programs have seen great success in mentorship and training programs. Entrepreneurship Bootcamp for Veterans is one such example. The Entrepreneurship Bootcamp for Veterans (EBV) with Disabilities is an educational program that provides entrepreneurship and small business management training, to post-9/11 veterans with a service-connected disability. The EBV program is offered by six world-class business schools across the U.S., including Texas A&M University, Florida State University, Purdue University, University of California Los Angeles, the University of Connecticut, and Syracuse University. The VFW strongly encourages expanding access to these programs. We also need to do more to encourage business leaders to take young veterans interested in business under their wing.

Currently, the strongest predictor of self-employment is military service and 14.6% of veterans are self-employed. With our economic climate providing few options for employment, the number of veterans looking to start a business will likely rise, especially if we afford them the tools they need to succeed. Veteran entrepreneurs are also more likely to hire other veterans, thereby helping to reduce the veterans' unemployment rate.

According to Intuit's small business employment index, American small businesses created nearly 40,000 new jobs in February 2010 and nearly 150,000 new jobs since June 2009. Also, according to an SBA survey, 22% of veterans were either purchasing or starting a business, or considering doing so, and 72% of these new veteran entrepreneurs planned to employ at least one person at the outset of their new venture. However, for a veteran interested in entrepreneurship, the reality is quality resources are scarce, disjointed, and available to few.

The VFW has four primary concerns that we believe need to be addressed in regards to veterans' small business assistance and therefore their ability to participate in the federal procurement marketplace.

1- Many Veterans Have Little or No Access to Capital

Most importantly, veterans' access to capital needs to be expanded. Currently, veterans have two primary loan options from SBA: the Patriot Loan Express and the microloan.

According to SBA, the Patriot Express loan is offered by SBA's network of participating lenders nationwide and features their fastest turnaround time for loan approvals. Loans are available up to $500,000 and qualify for SBA's maximum guaranty of up to 85 percent for loans of $150,000 or less and up to 75 percent for loans over $150,000 up to $500,000. For loans above $350,000, lenders are required to take all available collateral. The Patriot Express loan can be used for most business purposes, including start-up, expansion, equipment purchases, working capital, inventory or business-occupied real-estate purchases. Patriot Express loans feature SBA's lowest interest rates for business loans, generally 2.25 percent to 4.75 percent over prime depending upon the size and maturity of the loan. Your local SBA district office will have a listing of Patriot Express lenders in your area.

The Patriot Express Loan pilot is set to expire this year and is one of the few lines of credit available. The VFW urges Congress to extend and modify this program. The stimulus increased the guarantee rate and waived loan fees for the Patriot Express Loan; these changes may have been causative of the 19% increase in usage since last year. However, the program has only provided a total of 155 loans since its inception; that is little more than 3 loans on average, per state, since the inception of this program. The microloan program has not fared much better.

According to SBA, the Microloan program provides small businesses with small short-term loans for working capital or the purchase of inventory, supplies, furniture, fixtures, machinery and/or equipment. SBA makes funds available to specially designated intermediary lenders, which are nonprofit organizations with experience in lending and technical assistance. These intermediaries then make loans to eligible borrowers in amounts up to a maximum of $35,000. The average loan size is about $13,000. Applications are submitted to the local intermediary and all credit decisions are made on the local level.

The microloan program received an increase in funding with the passage of the economic stimulus. However, the VFW remains concerned too few veterans have been using, or are aware, of the program that tends to target geographic regions not populations. Since October 1, 2009, only 53 out of 997 loans have been made to veterans for a total of 5.32%. Even more alarming is the rate at which these loans have been distributed to disabled veterans, 3 disabled veterans have received microloans. The VFW recommends that SBA do more to ensure the veteran population is being reached and is aware of the products available to them and the requirements for obtaining these sources of funding.

The Patriot loan program is not an option for many veterans because they do not qualify for the loan. The VFW suggests creating three loan options for veterans to expand usage. First, expand and extend the Patriot Express loan that is a guaranteed loan. Second, create a direct loan program for the most credit-risk adverse veterans that would require additional educational steps and business planning courses. Third, create a hybrid loan program that mixes portions of the guaranteed loan and a portion that is a direct loan from SBA. This would create an array of financial tools available to veteran startups and veterans in business. Different types of loans would constitute different conditions of lending based on the situational factors of the veteran.

2- Veterans Lack Entrepreneurial Educational Assistance

The VFW is thankful of this committee, and your House colleagues, for passing the Job Creation through Entrepreneurship Act of 2009. This act that would dramatically increase the number of veteran business centers in the United States. We call on the Senate to now pass similar legislation that was introduced by Senator Gillibrand, S. 2770. We are also appreciative for this committee's efforts that resulted in a 2.5 million dollar budget for SBA veterans' programs. This budget increase will raise the number of veteran small business centers to as many as 14.

Currently, there are eight veteran business centers, which have proven successful to veterans interested in receiving education, information, and resources to assist them in starting or maintaining

a business. In FY 2009, these business centers trained or counseled 48,752 veterans and reservists. That is an average of 6,094 veterans served per a business center.

The VFW strongly believes that increasing funding for veteran small business centers will dramatically boost veterans' access to entrepreneurial resources and calls on the Senate to pass similar legislation.

3- Lack of Legal Compliance by Federal Agencies

The VFW calls on Congress to be more rigorous in their oversight of agencies that fail to comply with small business set-aside mandates. In FY 2008, the federal government was roughly half-way to providing 3% of all federal contracts to Small Disabled Veteran Owned Businesses (SDVOSBs), a requirement of P.L. 106-50. In FY 2009, preliminary numbers suggest 2% of all federal contracts went to SDVOSB's. The Department of Defense barely surpassed 1% of contracts for SDVOSB's in FY2008. The fact that the largest federal agency continues to fail its former servicemembers, that were disabled in service to it, is absolutely, unequivocally unacceptable. It is shameful that the Department of Defense has so egregiously failed their own population for more than a decade. The VFW calls on all federal agencies to absolutely reach their 3% goal in fiscal year 2010.

Preliminarily, the American Recovery Reinvestment Act (ARRA) is proving that the goal can be met. Our understanding is that 4% of ARRA dollars have gone to SDVOSBs. With the unshakeable will of Congress and this Administration there should be no reason for this mandate to be unmet for the eleventh consecutive year.

4- Increased Collaboration between Federal Agencies, and Congressional Committees, Needs to take Place to Increase the Effectiveness of Veterans' Small Business Programs.

Public Law 110-186 called for the passage of an Interagency Task Force. Two years have passed since this law was created and SBA has still not created a task force. Currently, veterans' business programs are operating, in principal, independent of one another in regards to veterans. Due to these

programs running parallel, and not in tandem, many roles seem to be duplicative. Furthermore, these parallel systems allow agencies to pass the buck and basically create rerouting systems for veterans, ping-ponging veterans seeking information from one agency to the next. The VFW has identified some key roles that we believe should be clarified.

We recommend SBA be the main point of contact for loans and small business education and therefore, all educational inquiries should be directed to SBA, and appropriate funding needs to be provided. Also, The VFW is concerned with the recent GAO report that highlighted the fact that the potential for fraud was high and was occurring in consideration of SDVOSB and veteran owned set-asides. One of the VA's Center for Veterans Enterprise's (CVE) missions is to verify veteran owned businesses are in fact owned and operated by veterans. However, currently CVE is only responsible for oversight of the VA. Businesses claiming SDVOSB status at other agencies self report their veteran status. The VFW believes 's CVE should maintain and expand their verification of veteran owned and SDVOSB owed businesses to include all veteran small businesses wanting to do business with the federal government. However, the VFW sees the benefit of SBA and VA working closely together on such a venture. Since SBA has authority to verify business ownership and size standards of HUBZone and 8(a) business development programs, an extension of this authority to SDVOSBs and veteran owned businesses seems logical; SBA has trained staff and infrastructure to carry out these requirements, whereas VA's CVE would be duplicating already existing efforts. SBA could verify ownership and size standards and report the findings to CVE, which could update the Vendor Information Pages (VIP) database. Considering CVE has a head start on a verification and database system, the VFW believes that removing the program from VA or moving it to SBA would be a waste of resources and would take multiple years to implement.

Another key partnership would be the collaboration of SBA and the Office of Federal Contract Compliance and Procurement to enforce penalties for fraud and failure to abide by the outlined statutes and public laws. Also, DOL-VETS and OPM should be ensuring that their employment efforts are collaborated with ongoing veteran business efforts. DOL-VETS and OPM are in the middle of carrying out President Obama's Executive Order on veterans' employment; having the small business program directors at the table would be very helpful in streamlining resources and eliminating

duplication. We need to reduce the scattered efforts of individual agencies, pool resources, and streamline efforts to increase the viability and effectiveness of veteran small business programs. That was the intent of the interagency task force that should be established immediately for the welfare of our unemployed veterans and our veteran business owners in this recession.

In order for veterans to succeed in the federal procurement marketplace we need: training, capital, compliance, and interagency cooperation. There are extremely limited options in regards to veterans' access to capital, few geographic options for education, and a host of federal agencies that after more than a decade continually, and willfully, fail to abide by their public mandates. We must do more, and we ask that Congress continue to hold these agencies accountable with rigorous oversight.

As America's largest group of combat veterans, we thank you for allowing the Veterans of Foreign Wars to present its opinion on these very important matters. We also thank you, and your staff, for your rigor in passing legislation that will make these long overdue, much needed, changes for America's veterans. Veteran entrepreneurship if expanded is a win-win for everyone including the government and America's taxpayers.

Madam Chairwoman, this concludes my testimony and I will be pleased to respond to any questions you or the members of this Committee may have. Thank you.

Justin M. Brown

Legislative Associate

Veterans of Foreign Wars

Justin Brown joined the VFW's National Legislative Service in October of 2007, and works out of VFW's Washington, D.C. office. His portfolio of issues includes economic opportunity, small business, education, transition, housing, homelessness, and related issues. He has testified before numerous Congressional committees and roundtables.

Justin began serving our country at the age of seventeen when he enlisted in the United States Navy in June of 2000. Mr. Brown was assigned to the USS Boxer out of San Diego, California, where he was an aviation electronics technician working primarily on Marine aircraft. He completed one deployment in support of Operation Southern Watch and two deployments in support of Operation Iraqi Freedom. He was honorably discharged in May of 2004.

Immediately following Mr Brown's military separation he became active in the veterans arena. He took a work-study position while in college with the American Legion helping veterans with their claims and advising them of available benefits. He also became active in his local VFW where he became the youngest All-American District Commander in the history of the VFW.

He earned bachelor of art degrees in both Political Science and Sociology from the University of Utah in 2007. In Justin's senior year in college he accepted an internship with the House Committee on Foreign Affairs in Washington, D.C. Following the internship, he accepted a staff position with Congressman Joe Sestak, from Pennsylvania.

Mr. Brown currently resides in Gainesville, Virginia and married his college sweetheart, Brandi Stillman, in 2007. They have one daughter, Isabella Brown.

STATEMENT

COMMITTEE ON SMALL BUSINESS
U.S. HOUSE OF REPRESENTATIVES

MARCH 24, 2010

Robert R. Sprole, III
President and CEO, THERM, Inc.

On behalf of

Aerospace Industries Association

Madam Chairwoman Velázquez, Ranking Member Graves, Members of the Committee.

Thank you for giving me the opportunity to meet with you today to discuss federal contracting issues. My name is Bob Sprole. I am the President and Chief Executive Officer of Therm Incorporated, a manufacturer of jet engine turbine air foils. I am also a member of the Aerospace Industries Association which represents almost three hundred aerospace and defense companies embodying every high-technology manufacturing segment of the U.S. aerospace and defense industry from commercial aviation and avionics, to manned and unmanned defense systems, to space technologies and satellite communications. Members of the Association are both large original equipment manufacturers as well as small suppliers. Many of our member firms are small businesses. In the aerospace business, small companies represent about 70 percent of manufactured items.

One of the major customers for the aerospace sector is the federal government, specifically the Department of Defense. Companies such as ours have found three major challenges in doing business with the federal government.

The first challenge is overcoming the barriers to entry for federal contracting. In order to get government contracts, a business must be qualified. Understanding the process of entry, for example, getting on a General Services Administration schedule, requires the help of someone to guide a small business through the process. Again, this takes time and effort away from creating products and jobs. Small companies often shy away from direct contracting with the government because of these kinds of concerns. More assistance in helping small businesses through this process would enable more competition for both small businesses and the government.

Even after qualifying, a business will likely need to make unique structural changes to satisfy government requirements. For example, many government contracts require a cost accounting standard (CAS) compliant accounting system –something not found in commercial companies – even for common, commercial items. Other contracts require earned value management systems. Large businesses may be able to devote resources and people to the installation of these systems, while a small business does not have that luxury. Further, unless a small business can earn several contracts, the investment will have limited return. This acts as an additional barrier to entry for small commercial companies.

If entry can be achieved, the second challenge is operating in the unique government environment. Government contracting rules are designed for large businesses. For small companies, creating an overhead structure to meet reporting and compliance requirements post-award leads to non-competitive cost structures. For most small companies, people have to wear many hats. So, responding to government requirements often means neglecting other duties for a period of time. Let me point to four examples.

First, federal contracts, particularly those with the Department of Defense, are subject to audit by the Defense Contract Audit Agency (DCAA). DCAA audits business systems for deficiencies in order to prevent fraud, waste and abuse. These audit requirements are a burden because a small business does not have the ability to create a separate compliance staff, something a large company is better able to do. If DCAA finds a deficiency, like failure to

provide data in a "reasonable" time, the contracting officer can remove the authority for automated payments and require manual billing. The contracting officer can even require that a payment be withheld. Manual billing and payment withholds significantly impact cash flow, the lifeblood of any business.

DOD has recently proposed a new procurement rule that will worsen this problem. If a deficiency is found in a business system, DOD proposes to automatically withhold 10 percent of each payment on all contracts using that system (e.g., an accounting system). Depending on how many systems are found deficient and how serious the contracting officer believes the deficiency to be, the withhold could be as high as 100 percent of payments. Now, all Americans agree that finding and eliminating fraud, waste and abuse is good government. But mandatory withholds, unrelated to materiality of the deficiency or proportional to the harm done by the deficiency, could easily lead to problems for small businesses. Since there are existing remedies for addressing business system deficiencies, Congress should direct that DOD not implement this new rule and, if existing remedies are not effective, DOD should hold a public hearing to determine a better solution.

Second, requirements that might be difficult for large businesses could be fatal for small businesses. For example, Section 511 of the *Tax Increase Prevention and Reconciliation Act of 2005* (P.L. 109-222), mandates that federal, state and local governments withhold three percent of nearly all of their contract payments, Medicare payments, farm payments and certain grants. This provision becomes effective on January 1, 2012. While this three percent withhold is levied against governments, it will be passed on to contractors, along with the cost of administration, estimated by DOD to be $17 billion a year. Again, withholds affect cash flow as described above. Congress should repeal this tax withhold requirement and support the Administration's proposals to focus on tax delinquents.

Third, the federal government contracts with commercial companies, but the government's version of a commercial contract (described in Federal Acquisition Regulation (FAR) Part 12) requires non-commercial clauses. The number of "federal-unique" clauses that can be imposed in a FAR Part 12 prime contract, for example, has grown to about 50 provisions (FAR 52.212-5). Not all of these provisions are required to be applied to sub-contractors, but when provisions are imposed on sub-contractors, this pass along diminishes the ability of primes to access small businesses that sell commercial products. And, given the number of clauses, commercial small businesses have even fewer opportunities to be prime contractors. Eliminating pass along, or "flow down," of requirements will help small businesses compete.

Fourth, companies need a fair return on investments in order to continue to do business and grow. However, there is continuing pressure on returns for companies doing business with the government. For example, Sections 805 and 815 of the fiscal 2008 NDAA (P.L. 110-181) restrict the use of commercial contracting procedures for commercial services as well as for major weapon system subsystems, components and spare parts, by authorizing a contracting officer to request that a contractor submit information regarding the basis for the price or cost. This request may include information on labor costs, material costs and overhead rates, if the information on prices paid for the same or similar items under comparable terms and conditions

by both commercial and government customers is deemed insufficient to determine price reasonableness.

For the first time, a contractor supplying a commercial item can be required to submit not only information about its pricing, but about its costs. While this change is applicable only to a limited set of purchases, it represents a fundamental change in the way DOD interacts with companies supplying commercial items. This congressional direction should be revised to mandate the use of price analysis, rather than cost and pricing data, for small businesses.

The third and final challenge is staying in business with the government. Large prime contractors establish small business contracting plans. The members of AIA who are prime contractors take the requirement of developing small businesses seriously. But, as a small business succeeds, it grows and soon revenues exceed the limits of what is defined as a small business. At the point that the small business exceeds these limits, the prime loses its credit for contracting with small businesses.

The federal contracting process is complex and, for small businesses, the process can be too difficult to manage. On behalf of our members, large and small, AIA would urge Congress to order a study of how this complex maze of laws and regulations can be simplified. By opening the contracting process to new businesses, new jobs will be created, contracting requirements will be more easily understood and businesses, particularly small firms, will be encouraged to grow and prosper.

Thank you. I will be happy to take your questions.

Testimony

Small Business Participation in the Federal Procurement Marketplace

U.S. House of Representatives

Committee on Small Business

Congresswoman Nydia Velazquez, Chair

March 25, 2010

1:00 p.m.

Rayburn House Office Building

Washington DC 20005

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Madam Chair:

It is an honor to testify before the House Small Business Committee today on the issues of Small Business Participation in the Federal Procurement Marketplace. My name is Stephen Denlinger. I'm the President of LAMA, the Latin American Management Association, an organization that has been an advocate for the Hispanic, minority and small business communities for the past 38 years. (As a footnote, LAMA is presently undergoing a transition and will function more like a Think Tank for Small Business Policy Issues in the future.) I also serve as Federal Procurement Policy Advisor to the U.S. Hispanic Chamber of Commerce.

I will not be testifying on 8(a) reforms today as those are issues that LAMA and USHCC have covered extensively in other testimony and in numerous position papers. I will say for the record here today that we are fully in support of the efforts of the Committee in recent years to modernize the 8(a) program, particularly in reference to such issues as increasing the ceilings on net worth for program entry, the need to increase sole-source set-aside ceilings, and numerous other 8(a) reforms that we have formally endorsed in various communications to this Committee. In general, we are also pleased with the direction and leadership coming from SBA in its current round of hearings on improving the SBA 8(a) Regulations.

I. Historical Perspective

As I pondered what thoughts to share with the Committee today, I couldn't help but think back to the days when LAMA was created 38 years ago in small office on East 14th Street in San Leandro, California. Hispanic firms in the San Francisco Bay Area were having great difficulty being considered for subcontracts by major DOD and NASA prime contractors such as Lockheed Missiles and Space, FMC, IBM and others.

Maximum Practicable Participation - In 1972, we began the long and arduous process of procurement advocacy in behalf of Hispanic, minority and small businesses in the Federal marketplace. At that time, the only words of support we had in the Federal Acquisition Regulations stated that MBEs were to participate in Federal contracting to the "maximum practicable extent." Since that time, this Committee has spearheaded legislation that greatly

expanded the laws and regulations that underpin the participation of MBEs and Small Businesses in Federal procurement, and for that, we are enormously grateful.

No Mariachi Bands or Tortilla Factories - Despite the fact that, in 1972, LAMA represented Hispanic firms that manufactured sophisticated precision metal fabrications and electronic circuitry for defense and aerospace applications, the procurement personnel at the primes were often dismissive of our companies. A small business director for Lockheed told LAMA's representatives in a meeting with the Procurement Director and the VP for Acquisition that Lockheed was involved in high technology and had no need for Mariachi bands or tortilla factories. That attitude set the tone for our struggle over the next three decades with respect to MBE participation in defense and aerospace contracting.

Programs Evolved and Improved - At that time, the bad news was that, in many cases, MBE participation in subcontracting was so limited it couldn't even be counted. When we started doing battle with Rockwell International for MBE participation in the Space Shuttle Program, for example, MBE participation was less than 1/2 of 1%. Through a program involving Rockwell, NASA, LAMA, and a coalition of MBE organizations, we were able to increase that percentage to over 3% in a few years.

The big picture today, almost four decades later, is that the MBE programs have grown and expanded over the years to the point where every Federal agency and every Federal prime contractor has reasonably well developed MBE programs. In the main, the Federal small business goal of 23% is being met by the Federal agencies and, in the main, the major prime contractors are doing a fairly decent job of subcontracting with MBEs (some better than others). In a sense, shouldn't we declare victory and let the MBE procurement preference programs expire?

II. Where From Here?

The question before us today is, where do these program go from here? If the MBE/SDB goal of 5% is being met (for the most part), what is the rationale for the Congress to reenact the SDB Program?

As we know, the SDB Program expired in the Civilian Federal agencies several years ago. Furthermore, the U.S. District Court (Western District of Texas) knocked down the DOD SDB Program recently in the Rothe Case. The Rothe case informs us much about the state of minority enterprise at present. The Rothe Court held that the SDB program was unconstitutional, not because race-conscious procurement preference programs are unconstitutional, but because the Congress, when it most recently reenacted the SBD Program, failed to take into consideration substantial evidence to prove "widespread discrimination."

In terms of where we go from here, one very key question is: Should Congress reenact the SBD Program? In order to do that, the Congress would have to assemble "substantial evidence of widespread discrimination" to prevent further court rulings along the lines of Rothe. I believe that needs to be done. Here are my reasons.

First, it is clear from many disparity studies from all over the country that, when there is an MBE contracting program in place, contracting with MBEs does take place. In the cases wherein there is no MBE program in place, MBE contracting does not take place (or is extremely limited). The existence of the MBE programs is what is producing the results. Without the SBD program being in effect, there is no doubt that SDB participation in contracting in the Federal marketplace would shrink dramatically. The rationale for reenacting the SDB program echoes Justice Sandra Day O'Conner's thinking when she said words to the effect that "these programs need to continue for a period of time to ensure that the effects of racial discrimination are eliminated."

Second, we all know that there are major defects in the data with respect to the small business numbers being reported by the Federal agencies. We are becoming increasingly aware, for example, of widespread eligibility fraud taking place in the HUB Zone and SDVOSB Programs. Therefore, the achievement numbers reported by Federal agencies for those programs are suspect.

And then there is the problem of the increasing dominance of the 8(a) program by Alaskan Native Corporations. In our view, gargantuan sole-source 8(a) awards to billion-dollar ANCs should not be counted toward the Federal small business goals.

And, as we all know, there are a significant number of contract awards to large businesses that are being reported by the agencies as small business awards. I have an example right here of a

10-year contract recently awarded to a small business wherein, the month following the award, the small business was bought out by large business. That contract will be counted as a small business award for the next 10 years. That will seriously distort the figures reported by that Federal agency with respect to its small business achievements. My purpose is not to embarrass this particular company at this hearing. I will provide that documentation to your staff privately.

The unfortunate reality is that there are serious flaws in the data on small and SDB contracting achievements being reported by the Federal agencies. These flaws are serious enough to cast doubt on the veracity of the achievement numbers reported by the agencies, and they cast doubt on the extent to which small businesses and MBEs are truly participating in Federal contracting. For these reasons, we need to keep the programs in place until we are certain that the achievement levels being reported by the Federal agencies are genuine.

That brings me back to the argument for the need for reenactment of the SDB Program. We need to keep the SDB Program in effect to ensure that the gains that have been achieved in MBE contracting over the past three decades are not lost. If the Congress agrees with this position, Congress is going to have to amass a hearing record of substantial evidence of discrimination against minority businesses so that the SDB program can be reenacted in a manner wherein it can withstand further court challenges like that of the Rothe case. The same arguments, by the way, apply to the 8(a) program. There are cases being decided in the courts at the present time that raise the same issues for the 8(a) Program as the Rothe case did for the SDB Program.

Recommendations - SDB Reenactment

1. **LAMA recommends that the Congress reenact the SDB Program at the civilian and defense agencies;**
2. **LAMA recommends that Congress hold hearings designed to amass substantial evidence of discrimination against minority businesses so that the SDB program can withstand further court challenges like that of the Rothe case.**

III. Missed Goals and PEA

This Committee has struggled mightily over the past decade with Federal agencies that fail to meet their small business goals. In almost all of the Reports issued by this Committee about the achievements of the Federal agencies, the Committee has pointed out huge gaps in the extent to which the Agencies have met their goals. Some agencies have done well, some not so well. Some do well some years, and not so well other years. In the aggregate, there are still big gaps in the achievement of the small business prime contracting goals.

As a glaring example of one Federal agency backsliding, the Air Force achieved a small business participation level of 16% in FY 2009, missing the 23% goal by 7 points. That gap represents several billions of dollars in contracts lost to the small business community.

PEA stands for Price Evaluation Adjustment. It is a procedure that contracting officers can use in evaluating bids by SDBs wherein an SBD can be awarded a contract if its bid is no more than 10% higher than a non-SBD bidder. As I've pondered the use of the PEA over the years, I often thot that it should be applied to an agency any time that agency misses its 23% small business goal.

If PEA were applied in this manner, the Air Force, for example, would be required to use PEA until such time as it came back into compliance with the 23% small business goal. If PEA were applied in this manner to all Federal agencies, all Federal agencies would be making the utmost efforts to meet their small business goals so that the PEA would not apply to them. The reason is that a potential 10% increase in the cost of doing business (awarding contracts to SDBs through the use of PEA) could have a decided negative impact on agency budgets.

Heads would roll if an agency failed to meet its small business goals. And that is as it should be. Our objective is for the agencies to meet their small business goals. Our wish would be for them to be able to discontinue using PEA as quickly as possible. I also believe that PEA should apply to all small business programs, not just to the SDB program.

Recommendations - Price Evaluation Adjustment

1. **LAMA recommends that PEA be instituted so that it applies to all small business programs (i.e., small business, 8(a), HUB Zone, SDVOSB and WOB), and not just to the SDB program;**
2. **LAMA recommends that the use of PEA be mandatory by Federal agencies that fail to meet their small business goals until such time as they are back in compliance;**
3. **LAMA recommends that individual buying activities that fail to meet their small business goals be required to use PEA even when the agency as a whole meets its small business goal. The reason is that there are many buying activities that chronically fail to meet the 23% small business goal. They need to be incentivized to make greater efforts to contract with small businesses. This focused use of PEA would quickly bring those delinquent buying activities into compliance.**

IV. Increased Small Business Goal

The annual Federal procurement spend is now about $525 billion. That is a stupefying number. Unfortunately, all too often, large businesses are favored over small businesses in Federal contracting decisions, and large businesses dominate the Federal contracting market.

Large Business Get 77% - As we know, the small business goal is 23% of Federal prime contracts. A the present time, that presently equates to something on the order of $120 billion annually for small business. Aside from the fact that any number of agencies fail to meet there annual small business goal, what this goal is really saying is that large businesses are entitled to 77% (or three-quarters) of all Federal contracting dollars. Stated another way, large businesses are entitled to $400 billion (over three-quarters) of the $525 billion in Federal contract awards. LAMA does not believe that Federal contracting should be the special province of large business.

Ten Large Businesses Get 50% of Federal IT Dollars - Here is a specific example of the way large businesses dominate the federal marketplace. According to data from the FPDS, ten large businesses receive over 50% of all Federal IT contract dollars each year. Ten businesses!! That

dominance in the IT arena is astonishing. The IT sector is not like aircraft manufacturing for the Air Force, Navy ship building, or Army tank manufacturing wherein there are no small businesses building any of those products. In the IT sector, thousands of small IT businesses are available to do business with the Federal government. The massive dominance by large businesses of the TI sector is totally unwarranted. LAMA does not believe that Federal IT contracting is the special province of large business.

The mindset that the Federal marketplace is the special province of large business ***must*** change. We believe that the Federal small business contracting goal must be increased ***substantially***. If the nation's 25,000,000 small businesses are the engines of job creation and technical innovation in our economic system, then a much larger participation in federal contracting is appropriate.

Something on the order of 40% is fair and realistic. Consider that a number of Federal agencies not only meet the 23% goal, but routinely exceed it by a ***wide margin***. Some Federal agencies achieve over 50% small business participation in their contracting.

Where Did the Small Business Goal Go? - The socio-economic composition of the 23% Federal small business goal is as follows:

1.	SDB	5%
2.	WOB	5%
3.	HUB Zone	3%
4.	SDVOSB	3%
		16%

When you add in the percentage of contracts under the 8(a) Program, the portion of the 23% small business goal that is allotted to all the socio-economic programs is slightly over 20% (FY2007 data from the FPDS)

1.	SDB & 8(a)	9%
2.	WOB	5%
3.	HUB Zone	3%
4.	SDVOSB	3%
		20%

If I were the owner of a small federal contracting company not belonging to any one of the socio-economic program, I would be asking: "What the heck happened to the Small Business Program? It has been completely taken over by the socio-economic programs. That's unfair. We demand a fair portion for non-socio-economic small businesses." It's a wonder that organizations representing the small business community are not all over Congress clamoring to increase their share. The primary reason that is not happening is that associations which represent small businesses, like NFIB, NSBA, Small Business United and others, for some unknown reason, are not focused on Federal procurement.

Small Business Goal - 40% - There are 25+ million small businesses in the United States. They are the engines of job creation and technological innovation in our economic system. A much larger participation in federal contracting is appropriate. Let us be bold and find that the goal for small business participation in Federal contracting should be 40%.

That goal is achievable. The extent to which a number of Federal agencies routinely exceed the 23% goal by a wide margin demonstrates that a 40% small business goal is achievable. The fact that small businesses are performing Small Business Set Aside contracts ranging from $100 million to $1 billion demonstrates that a 40% small business goal is achievable. Even at that, this bold increase in the small business goal still leaves 60% of the Federal market contracting dollars to large businesses.

Recommendation - Small Business Goal

LAMA recommends that the Federal Small Business Goal be increased from 23% to 40%

V. Subcontracting Program

Improvements in the Subcontracting Program are needed. At the present time, when a prime contractor puts together its bid, it gets bids, technical data, and/or pricing information from a number of subcontractors (including small disadvantaged businesses) that it needs in order to complete the prime contract bid proposal.

In good faith, SDBs provide their information to the prime contractor to support the prime's bid. Unfortunately, there is no mechanism in place that requires the prime contractor to actually use these SDBs in the event the prime wins the award. That is what enables prime contractors to engage in "bait-&-switch tactics" and other unfair practices that result in many SDBs getting dropped by the primes.

A contract between the prime and the SDB is the missing ingredient that can transform subcontracting into a very effective program. Without a contract in place, the SDB is at the whim of the prime, with no recourse if the prime decides to give the subcontract work to another company.

To remedy this situation, the prime contractor needs to be required, as part of its P.L. 95-507 subcontracting plan, to enter into a contract with the SDBs it is using in the formulation of its bid for a prime contract. A contract between the prime contractor and the SDB will ensure that the prime will do business with the SDB upon being awarded the prime contract.

Subcontractor Fairness Act - With respect to the need for a contract agreement between the prime contractor and the proposed SDBs, LAMA and USHCC support **H.R. 4134 - Subcontractor Fairness Act of 2009** sponsored by Representatives William Lacy Clay (MO 1st District) and Yvette D. Clark (NY 11th District). The bill would require that the prime contractors' bids:

- Be accompanied by agreements with the SDBs
- Stipulate that the agreements between the prime and SDB subcontractors will become valid upon award of the prime contract
- Identity the SDB subcontractors
- Identify the scope of work to per performed by the SDBs under the agreements
- Identify the dollar value of the subcontracts

We recommend that term of the agreement also be included in the information submitted by the prime contractor so that the prime does not dump the subcontractors shortly after receiving the prime contract award.

We recommend the inclusion of a provision in P.L. 95-507 that requires prime contractors to enter into contract with the SDBs that they intend to use in the performance of prime contracts during the time when the prime contractor is formulating its bid for the prime contract. So as not to place an unwarranted administrative burden on prime contractors with respect to small prime contracts, the SDB contract requirement would only apply in cases of primes bidding on requirements of $10 million or more.

Recommendations - Subcontract Program

LAMA recommends that prime contractors be required to enter into contract with SDBs that they are using in the formulation of their prime contract bids so that they are required to use those SDBs upon winning the prime contract. This would be required in Defense and Civilian prime contracts for goods or services of $10 million or more. Under this approach, prime contractors would be required to:

1. **Submit their SDB subcontractor agreements with their prime contract bids**
2. **Stipulate that the agreements between the prime and SDB subcontractors will become valid upon award of the prime contract**
3. **Include identity of the SDB subcontractors**
4. **Include the scope of work to be performed by the SDBs under the agreements**
5. **Include the dollar value of the SDB subcontracts**
6. **Include the term of the subcontracts**

One of the very useful aspects of this approach is that it would be self-enforcing. The SDB that had the contract with the prime could go to court to enforce its rights in the event the prime

contractor failed to live up to the contract agreement. Enforcement of the subcontract would not need any costly intervention by any Federal officials.

VI. Widespread Eligibility Fraud

The extensive eligibility fraud and abuse in the self-certification procedures of the HUB Zone and Service Disabled Vets procurement preference programs are deeply troubling. Nothing undermines a program more than abuse of its of the underlying eligibility criteria. These chronic abuses cry out for systematic overhaul of the self-certification process.

The fraud in the HUB Zone and SDVOSB Program is compounded by the arrival of another deserving self-certification procurement preference program, the WOB Program. Given the fact that WOBs constitute almost 1/3 of all small businesses nationwide, this program will overwhelm SBA's ability to monitor self-certification like a giant Tsunami. Once there are 100,000 or 200,000 self-certified firms in these three procurement preference programs, there will be no way to rehabilitate the self-certification process.

The primary problem with self-certification is that there is virtually no oversight by, especially in the SDVOSB Program (and soon, the WOB Program). In the SDVOSB self-certification procedure, you declare to the contracting officer that you are edible and, presto, you are eligible. There is none of the extensive screening and review of eligibility documentation that takes place in the 8(a) certification process. There are no site visits by SBA personnel to verify that the information in the self-certification process is correct. There are no procedures for follow up, and no means to check eligibility for fraud during the course of the firm's participation in the procurement preference program.

There are two barriers to implementation of effective screening procedures. One barrier is the lack of SBA personnel and resources to do the screening. The tremendous reductions in SBA personnel and budgets over the past decade mean that there is simply insufficient personnel to provide oversight of the self certification process. SBA cannot afford to put in place a thorough screening process for the HUB Zone and SDVOSB Programs such as it does for the 8(a) program. In particular, with respect to the HUB Zone Program, SBA lacks the resources to conduct on-site eligibility reviews. Simply put, site visits are too expensive. All of the points

discussed in the foregoing paragraphs will apply to the WOB Program as well, when it becomes operational.

The second barrier to implementation of an effective screening procedure is the ease with which candidates can game the self-certification process without fear of adverse legal consequences. The likelihood of any legal consequences for fraudulent misrepresentation is next to zero. The worst case appears to be that the few violators that get caught simply lose their certification.

Simple & Inexpensive Solution - The widespread fraud found in these programs indicates that surgically effective measures need to be undertaken immediately to remedy the situation. But, from the point of view of cost and personnel to manage such measures, the measures have to be inexpensive. One method that would help alleviate much of the fraud we are seeing in these program is what I call a **Recorded Eligibility Interview - REI**. Simply stated, at the end of the self-certification process, once the firm had completed the self-certification procedures, the owner of the business would undergo, under oath, a Recorded Eligibility Interview - REI - with SBA personnel.

The REI would be recorded remotely (audio and video). The candidate would go to his/her local Kinko's office and be interviewed remotely by SBA personnel from SBA's HQ office in Washington DC. The candidate would answer, live and in person, under oath, all of the underlying eligibility requirements with the understanding that the REI could be used against the owner in criminal proceedings if it became apparent that the owner fraudulently misrepresented eligibility for the procurement preference program. See a sample REI for the SDVOSB Program in **Attachment A**.

Much as it does now with the 8(a) application process, SBA could forge an eligibility review team that would specialize in conducting the recorded eligibility interviews. Each REI would be stored in an REI archive by SBA for future challenges to the firm's program eligibility. All of the REI questions would be known to the applicants beforehand. The candidate would have all the time needed to understand the eligibility requirements prior to the REI. The candidate could go over the eligibility requirements with SBA personnel prior to the REI as often as needed to fully understand the requirements.

The recorded interviews would not be for purposes of reviewing eligibility requirements (that takes too much SBA staff time). The purpose is simply to secure a recorded statement, under oath, from the owner of the business indicating that the owner affirms that he/she meets the eligibility requirements needed to be entitled to receive the benefits of the procurement preference program. The recorded interview would take no more than 10 minutes to conduct. The interviews could be recorded and archived for a few dollars each. A specialized unit at SBA (or at a contractor's office, if the RIE were contracted out by SBA) could schedule and conduct dozens, even hundreds, of REIs per day.

The main objective of the REIs is deterrence. It is one thing to complete a self-certification application that SBA never looks at and declare yourself eligible for the program, especially if there are no adverse legal consequences. It's quite another to be recorded in person, under oath, attesting to the fact that you meet all of the eligibility criteria, knowing that the specific purpose of the recorded interview is to establish a foundation for criminal prosecution if fraud is committed.

In addition, because of the widespread eligibility fraud which is already documented in the HUB Zone and SDVOSB Programs, it would be prudent to subject all existing program participants to the RIE. In addition, it would be prudent to conduct pre-award REIs before the award of any contract over a certain threshold (all contracts over $1 million, for example).

The idea here is to deter anyone from fraudulently misrepresenting their eligibility for any of SBA's procurement preference programs. The REI process would be an inexpensive, simple procedure that could enable SBA to substantially reduce fraudulent misrepresentation of eligibility for the HUB Zone, SDVOSB and WOB procurement preference programs.

Would Pay for Itself - The REI Initiative could pay for itself. A fee of $250 could be charged to each applicant for each REI. Between conducting REIs on companies that are already in the program (in the thousands), and REIs for all of the companies that will be self-certifying in the future (probably in the hundreds of thousands), the REI Initiative could pay for itself many times over. Legitimate companies that meet the program eligibility criteria will have no problem paying $250 for an REI. Any company that is in line for a million dollar contract would not hesitate a second in paying $250 for pre-award REI.

The REI Initiative has all of the attributes needed for effective deterrence. It is simple and inexpensive to implement. Virtually overnight, SBA can eliminate 90% or more of the rampant eligibility fraud that is taking place in the self-certification programs. The program would pay for itself and can be implemented by SBA at a very low start-up cost.

Recommendation - Eligibility Fraud

LAMA recommends that Recorded Eligibility Interviews - REIs - be required as part of the self-certification and certification procedures for the HUB Zone, SDVOSB and WOB procurement preference programs.

VII. DOE Small Business Prime Contract Goal

In FY 2007, the Department of Energy awarded 6.2% of its prime contract dollars to small businesses. The 6.2% figure represents $1.4 billion out of a total of $22.8 billion in DOE contract dollars. Obviously, DOE missed the 23% small business prime contracting goal by a wide margin.

The underlying reason for this is that approximately 85% of DOE's budget goes directly to its 26 Labs and FMCs (Facility Management Contractors, including M&Os and M&Is). Of the 15% that DOE spends directly, there simply isn't enough to enable DOE to meet the 23% small business prime contract goal. Given the fact that 85% of DOE's budget goes directly to its Labs and FMCs, and given the fact that contracts awarded by DOE Labs and FMCs do not count as prime contracts, it is structurally impossible for DOE to meet the 23% small business prime contract goal.

In recent years, various strategies have been discussed for the DOE Labs and FMCs to break out portions of their work to be contracted out to small businesses. The problem with that approach is that, if the work that is broken out is to count as prime contract awards, the work has to be transferred to DOE so that DOE can make the prime contract awards. That is a tortured procedure that has not gained much traction. In addition, DOE would have to significantly increase its program staff and contracting staff in order to accommodate the transfer of the work,

the oversight of the work, and the contract management for the work. That is cumbersome, expensive and defies logic.

What is needed is a legal strategy wherein those contract opportunities that could be broken out for small businesses by DOE's Labs and FMCs get counted as prime contracts for purposes of DOE's 23% small business prime contract goal. If such an approach were permissible, DOE could make significant progress toward meeting the 23% goal. This approach would incentivize DOE, and its Labs and FMCs, to break out significant pieces of work for award to small businesses as prime contracts..

In that regard, DOE's OSDBU has done extensive research to identify pieces that can be broken out for small businesses at each DOE Lab and FMC. DOE's OSDBU could give guidance to each Lab and FMC as to which requirements to consider breaking out for contracting to small businesses. Ideally, these breakout requirements could be awarded to small businesses under any of the socio-economic procurement programs (HUB Zone, SDVOSB, 8a, WOB), or to small businesses through SBA's Small Business Set-Aside Program.

To make a distinction between the subcontracting that the Labs and FMCs are presently doing (and that they are required to do under their subcontracting plans), and the breakout work that would be counted as prime contract awards to small businesses, only contracts broken out over $10 million in value (or some reasonable threshold) would be eligible to be considered as prime contracts.

To implement this strategy, statutory language is needed to allow DOE to count contracts awarded by DOE Labs and FMCs as small businesses prime contracts. Ideally, such contracts could be awarded through any of the socio-economic procurement programs (HUB Zone, SDVOSB, 8a, WOB), or through small business set asides under SBA' Small Business Set-Aside Program.

Recommendation - DOE Small Business Goal

LAMA recommends that statutory language be enacted by Congress that would allow DOE to count as prime contracts, certain large contract awards to small businesses by its Labs and FMCs. The contract awards that could receive this treatment would be those that are broken out by the Labs and FMCs based on the research previously conducted by DOE's OSDBU (the research was conducted by a contractor during the previous Administration under the direction of the then OSDBU Director). The proposed statutory language would authorize DOE's Labs and FMCs to award such contracts under any of the Federal socio-economic programs (HUB Zone, SDVOSB, 8a and WOB), or through small business set asides under SBA' Small Business Set-Aside Program.

VIII. SBA Size Standards Reform

Since the inception of the SBA, one of the Agency's fundamental responsibilities has been to establish a numerical definition of small business, industry-by-industry, to establish eligibility for Federal small business programs. These numerical definitions are called "size standards." SBA's Office of Size Standards has established size standards for all NAICS Codes in all industries. Size standards are stated in either number of employees or annual receipts.

Size standards represent the largest size that a business may be, yet remain classified as a small business so as to be eligible to participate in Federal small business programs. Size standards apply to SBA's financial assistance and procurement assistance programs, as well as, to Federal agency programs that benefit small business concerns (e.g., the SBIR Program).

At the outset of the procurement process, contracting officers determine the size standard applicable to the procurement by selecting the NAICS Code that best describes the goods or services being procured. If the contracting officer decides that the requirement is to be a small business set-aside, all small businesses bidding on the requirement must meet the size standard established by SBA for the NAICs Code assigned to the requirement by the contracting officer. In bidding on a requirement, a small business self-certifies that it is a small business under the applicable NAICs Code in the solicitation.

When firms exceed these size standards, they are no longer eligible for small business set-aside contracts (or any other Federal small business programs) and are forced to compete against large businesses in their industries. There are widespread complaints in the small business community that many of the size standards established by SBA do not reflect the realities of their industries. The complaint most frequently heard is that certain size standards are too small. When the size standard is too small, the affected small businesses are forced into full and open competition with large businesses before there are competitively ready to do so.

Many SBA size standards are totally unrealistic and inadequate in the present contracting environment of large bundled contracts, especially in industries such as systems integration, environmental remediation, base management, etc. A size standard, for example, of $23 million in annual revenues for a small business in the IT systems integration business is totally inadequate in an industry wherein contracts are routinely in the hundreds of millions to billions of dollars, and wherein the large businesses competing for such requirements have billions of dollars in annual revenues and hundreds of thousands of employees.

When SBA pushes a small business with annual sales of $23 million out of SBA's small business classification into the world of full and open competition to compete head-to-head against companies with billions in annual revenues, it is a dereliction of SBA's duty to protect and nurture the development of small businesses so that they are competitive in the marketplace.

Recommendation - Size Standards

LAMA recommends that Congress direct SBA to adjust size standards in a manner that is in keeping with the size of businesses (and the size of contracts) in their respective industries. We recommend that the small business size standard for all industries be established at 25% (or some reasonable percentage) of the size of the dominant companies in each industry. In this manner, when small businesses exceed their size standard, and are thrust out into full and open competition, they will be far better able to compete against large companies in their respective industries. In this manner, SBA will live up

to its obligations as stated in the Small Business Act to establish size standards that: 1) account for differences among industries, and 2) assist small businesses as a means of strengthening their competitiveness in the economic system.

IX. SBA Size Standards Methodology

LAMA believes that SBA's methodology for establishing size standards is fundamentally flawed. According to the SBA Office of Size Standards, in establishing size standards, the Small Business Act requires that SBA's size standards should "account for differences among industries." Our contention is that, in the IT industry in particular, SBA has not abided by that guiding principle. Instead, SBA has established a convoluted system for establishing size standards that is incomprehensible to ordinary business owners, and does not even come close to accounting for the extraordinary diversity in the IT industry.

The following section is taken verbatim from SBA's Size Standards Methodology:

As a starting point, SBA presumes:

1. ***$7.0 million as an appropriate size standard for the services, retail trade, construction, and other industries with receipts based size standards***
2. ***500 employees [as an appropriate size standard] for the manufacturing, mining, and other industries with employee based size standards***
3. ***100 employees [as an appropriate size standard] for the wholesale trade industries.***

The three levels referred to above are called "anchor size standards... benchmarks or starting points." There is no discussion, however, of how these anchor benchmarks or starting points were determined. The "anchor size standards... benchmarks or starting points" appear to have be plucked out of thin air, arbitrary figments of someone's imagination in the Office of Size

Standards. There is no rationale presented as to why these "anchor size standards" are appropriate. SBA simply "presumes" that they are an appropriate starting point.

Later in SBA Size Standards Methodology document, in the section on detailed analytical steps for establishing size standards, were are informed that (underscoring added):

> Receipts based standards will have eight fixed size levels as follows:
>
> a. $5.0 million
> b. $7 million (anchor standard)
> c. $10 million
> d. $14 million
> e. $19 million,
> f. $25.5 million
> g. $30 million
> h. $35.5 million
>
> Employee based standards for the manufacturing and mining industries will have four fixed size levels as follows:
>
> a. 250 employees
> b. 500 employees (anchor standard)
> c. 750 employees
> d. 1,000 employees
>
> Employee based standards for the wholesale trade industries will have five fixed size levels as follows:
>
> a. 50 employees
> b. 100 employees (anchor standard)
> c. 150 employees
> d. 200 employees
> e. 250 employees

There is no discussion of how these fixed levels were determined, or why there were 8 levels in receipts-based size standards, 4 levels in employee-based manufacturing and mining size standards, or 5 levels in employee-based wholesale trade size standards. They appear to have be plucked out of thin air, arbitrary figments of someone's imagination in the Office of Size Standards. There is no rationale presented as to why these various fixed levels are appropriate. Again, it appears that SBA "presumes" that they are appropriate.

In reality, no foundation is established for the "presumed anchor size standards." No foundation established for the various fixed levels of size standards. As if that weren't bad enough, SBA's Size Standards Methodology presents the reader with an incomprehensible blizzard of statistical procedures through which size standards are somehow established. SBA's Size Standards Methodology is ***totally incomprehensible*** to any normal business owner. See attached pages setting forth SBA's Detailed Analytical Steps for Establishing Size Standards.

What is lacking is an understandable formula, a logical guideline, or a common sense construct that would enable an intelligent business owner understand for his/her size standard was established. For example, here are a couple common sense guidelines or principles that would enable a business owner to understand, in principle, how SBA established its size standard:

a) A

s a general rule, SBA considers companies small if they are no larger than 25% of the size of the dominant firms in their respective fields;

b) I

n establishing size standards for small companies participating in the SBA Small Business Set Aside Contracting Program, SBA considers companies small if they are no larger than 25% of the size of the dominant prime contractors in their respective fields.

The percentage is not the important point. What is important is that SBA would be applying a common sense principle in establishing size standards that small business owners can understand. Such common sense principles are completely lacking in SBA's approach to size standards.

SBA needs to be directed by Congress to develop a methodology for establishing size standards that contain principles that ordinary business owners can understand. That methodology should result in size standards that "account for differences among industries" as required by the Small Business Act. That methodology should result in size standards that "assist small businesses as a

means of strengthening their competitiveness in the economic system," as required by the Small Business Act.

Recommendation - SBA Size Standards Methodology

Congress needs to direct SBA to develop a methodology for establishing size standards that contain principles that can be understood by ordinary business owners. That methodology should result in size standards that: "account for differences among industries" as required by the Small Business Act. That methodology should result in size standards that: "assist small businesses as a means of strengthening their competitiveness in the economic system" as required by the Small Business Act.

X. IT NAICS Code Reform

The present NAICS Code system is inadequate with respect to the Information Technology (IT) industry. IT is a central component of the nation's computer and telecommunications industry. Computer and telecommunications comprise a $1 trillion dollar industry that, in sheer magnitude, exceeds the construction, agriculture and automotive sectors.

Information technology (IT) can be defined as the design, development, implementation and management of computer-based information systems. The IT industry consists of dozens of major disciplines and hundreds of subcategories. Below is a list of some of the main categories of IT services. There are dozens of other categories.

Software development
Hardware engineering and development
Operating systems development
Systems analysis
Data entry
Data systems management
Network design, development and management
Systems integration

Information assurance
Computer programming
Systems verification
Satellite-based communication systems
Web development and management
Man-Machine interface
Quality management
Computer graphics
Cyber security
Digital forensics
Artificial intelligence
Machine translation
Wireless communication
Program Management
Risk Management & Contingency Planning
Business Process management& Process Improvement
Requirements Definition & Analysis
Acquisition Planning & Implementation
Earned Value Reporting & Financial Management
Computer facilities managements services
Systems engineering and technical assistance (SERTA)
Business operations support
Help desk systems and services
Logistics support services
Network infrastructure services
Test and evaluation services
Training and knowledge transfer systems

Undernourished NACIS Codes - Despite the magnitude of the IT industry and the large number of fields and disciplines in that industry, there are only a handful of NAICS Codes covering the IT industry. They are as follows:

1. NAICS 611420 Computer training
2. NAICS 611430 Professional and Management Development Training
3. NAICS611710 Educational Support Services
4. NAICS 541330 Engineering Services
5. NAICS 511210 Software Publishers
6. NAICS 518210 Data processing, hosting & related services
7. NAICS 541511 Custom Computer Programming Services
8. NAICS 541512 Computer System Design Services
9. NAICS 5411513 Computer Facilities Management Services
10. NAICS 561210 Facilities Support Services
11. NAICS 541712 R&D in Engineering
12. NAICS 517110 Wired Telecom

The IT NAICS Codes are in serious need of a complete overhaul and expansion by OMB and DOC to more adequately reflect the extraordinary diversity in this field. Congress should direct these agencies to immediately begin revamping the IT sector of the NAICS Codes to more adequately reflect the incredible range of disciplines and categories of businesses that comprise the IT sector. [The reader should bear in mind that SBA does not establish the definitions of the NAICS Codes - it only establishes size standards related to the NAICS Codes that are defined by OMB/DOC.]

OMB is open to a review and reconsideration of NAICS Codes once every 5 years. The next review comes up in 2012. Unfortunately, in order for OMB to take industry suggestions into consideration for changes in 2012, comments from industry had to be submitted by April of 2009. Therefore, we have missed the 2012 review cycle, and will not be able to cause OMB and DOC to review the IT NAICS Code classifications until 2017.

For that reason, we are asking the Committee to interceded for us with OMB and DOC to engage associations like LAMA, USHCC and many others in considering our views with respect to the dire need for revamping NAICS Code for the IT sector during the 2012 review cycle.

Inadequate SBA Size Standards - As if the deficiencies of the industry categories in the NAICS Code system were not enough, SBA adds to the problem through its totally inadequate size standards for the IT industry.

The NAICS Codes applicable to the IT industry, along with their corresponding Size Standards, are as follows:

1.	NAICS 611420	Computer training	$7 million
	25 empls (est)		
2.	NAICS 611430	Professional and Mgmt Dev Trg	
	$7 million	25 empls (est)	
3.	NAICS611710	Educational Support Services	
	$7 million	25 empls (est)	
4.	NAICS 541330	Engineering Services	$7 million
	25 empls (est)		
5.	NAICS 511210	Software Publishers	$25 million
	75 empls (est)		
6.	NAICS 518210	Data processing hosting/related	
	$25 million	75 empls (est)	
7.	NAICS 541511	Custom Computer Prog Services	
	$25 million	75 empls (est)	
8.	NAICS 541512	Computer System Design	
	Services	$25 million	75 empls (est)
9.	NAICS 5411513	Computer Facilities Mgmt	
	Services	$25 million	75 empls (est)
10.	NAICS 561210	Facilities Support Services	
	$35 million	90 empls (est)	
---- Gargantuan Gap - No Size Standards between 100 employees and 1,500 employees ----			
11.	NAICS 541712	R&D in Engineering	500 empls
12.	NAICS 517110	Wired Telecom	1,500 empls

Gargantuan Gap - Discounting the Engineering R&D NAICS Code (it is rarely used), there are no size standards covering small IT businesses from 100 employees up to Wired Telecom at 1,500 employees. SBA has no size standards in the IT arena that support small businesses over the $25/$35 million dollar revenue level. The NAICS Codes at the $25/$35 million dollar level are equivalent to companies with between 75 and 100 employees. There is nothing at all for small businesses in that huge void between 100 employees and 1,500 employees in the vast IT industry which is the core technology of a trillion dollar industry, the largest industry in the United States.

Currently, the Federal IT services market consists of a very large number of small companies (under $25 million in annual revenues), and a very small number of very large companies (over $1 billion in annual revenues - SAIC, Lockheed Martin, etc.). There are very few "mid-tier" companies with revenues ranging from $25 million and up to $250 million (the latter roughly equates to 1,500 employees).

Based on information from the Federal Procurement Data System:

- Total IT awards in FY 2008 were $128 billion
- Total IT awards in FY 2008 to the top 10 IT companies was $68 billion (well over 50% of total IT awards that year)
- There are only 28 companies in the Federal IT marketplace that have annual revenues between $150 million and $250 million

The underlying reason for the lack of a small business mid-tier sector in the IT arena is the lack of any size standards established by SBA for IT companies having between 100 and 1,500 employees. It is incomprehensible that, in an industry characterized by large contracts (hundreds of millions to billions of dollars), and super large companies winning those contracts (companies with over 100,000 employees and over $1 billion in annual revenues), there are no small business size standards for small IT businesses over 100 employees. Given the sheer magnitude, depth, diversity and breadth of the IT industry, that makes no sense.

The foregoing result is a total dereliction by SBA of its duty to establish size standards that: "account for differences among industries" (as required by the Small Business Act), and "assist small businesses as a means of strengthening their competitiveness in the economic system" (as required by the Small Business Act).

Nothing speaks more clearly to SBA's flawed size standard methodology than the foregoing result for the IT Industry. SBA needs to be instructed by Congress to go back to the drawing board and revamp its Size Standards for the IT Industry. It needs to do so ***now*** even while we seek to have OMB and DOC revamp the NAICS Codes for the IT Industry.

Recommendation - NAICS Code Expansion and Reform

OMB/DOC - We are asking the Committee to direct OMB and DOC to reform NAICS Codes for the IT Industry because these NAICS Codes are in dire need of an overhaul and expansion to better reflect the enormity and diversity of the IT industry.

OMB/DOC - We are asking the Committee to interceded with OMB and DOC so that they are willing to engage associations like LAMA, USHCC and many others in considering our views with respect to the dire need for revamping the NAICS Codes for the IT sector during the 2012 review cycle.

Recommendation - SBA Size Standards Reform

SBA Office of Size Standards - We are asking the Committee to instruct SBA to go back to the drawing board and revamp its Size Standards for the IT Industry. The guiding principle should be that small businesses be defined as being 25% (or some reasonable percentage) of the size of the dominant 10 companies in each IT industry segment.

XI. Wired Telecom Revision - NAICS 517110

As we all know, when a contracting officer initiates a solicitation for a requirement, he or she is required to assign a NAICS code to that requirement. We also know that each NAICS Code has a corresponding Size Standard. Over the years, Federal agencies have struggled in assigning NAICS Codes to their requirements because, often times, the NAICS Codes are unclear. Contracting officers often use NAICS Codes that are not quit right, but are the best they can find in the Catalogue of NAICS Codes.

One of the NAICS Codes that has given contracting officers great difficulties, especially in this era of computer-based communications, is NAICS Code 517110 - Wired Telecommunications. Procurement offices are often reluctant to use NAICS Code 517110 because the definition of Wired Telecommunications is too narrow to be applied to modern, computer-based information systems. This NAICS Code was written decades ago when telephony was literally about hard-wired telephone sets sitting on the desks of government officials. That definition is no longer suitable in this day and age wherein much of telecommunications is now computer-based and often wireless.

The current definition for NAICS 517110 Wired Telecommunications is:

> **NAICS Code 517110 - Wired Telecommunications Carriers (1500 employees)**
>
> This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services; wired (cable) audio and video programming distribution; and wired broadband Internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.

Requirements under this NAICS Code typically begin at about $40 million and go up from there. The use of this NAICS Code (517110 - Wired Telecom) has enabled contracting officers to set

aside rather large requirements for competition limited to small businesses under the SBA small business set aside program. It is interesting to note that, if it weren't for the use of this NAICS Code, most Federal agencies would have had great difficulty meeting their small business goals. That's how important this NAICS Code is.

The definition of NAICS code 517110 (Wired Telecommunications) needs to be broadened so as to include larger and more technically complex categories of IT services, such as: systems integration, software development, network services, computer programming and security systems. This would allow Federal contracting officers to comfortably use the 1,500 employee size standard for certain complex IT requirements that only larger businesses (including larger small businesses) can compete for at present.

We need Congress to direct the OMB (Economic Classification Policy Committee) and DOC (Census Bureau) to modify the language of NAICS Code 517110 at the present time to incorporate several categories of IT, such as: systems integration, software engineering, network services, computer programming and security systems. These are the larger and more technically complex categories of IT services in the Federal marketplace.

Recommendations - Expand NAICS Code 517110

LAMA recommends that Congress direct OMB and DOC to Amend 13 CFR 121.402(b) by adding the following language to NAICS Code 517110:

"For purposes Federal contracting, NAICs Code 517110 will include establishments engaged in information technology services such as: systems integration, software development, network services, computer programming and security systems."

[**NOTE**: NAICS Codes and Size Standards are two parts of the same end product - a NAICS Code with an associated Size Standard. The definitions of the NAICS Codes are the responsibility of OMB (Economic Classification Policy Committee) and DOC (Census Bureau). SBA, on the other hand, is responsible for establishing the small business size

standards for each of the NAICS Codes. SBA would not be involved in adding the referenced language to NAICS Code 517110 because no change in the size standard is involved (it would remain at 1,500 employees). The request is simply to broaden and clarify the definition of NAICS Code 517110, which is the responsibility of OMB and DOC.]

END

Attachment A

REI

Recorded Eligibility Interview

Sample REI Interview Questions

SDVOSB Program

ATTACHMENT A

Sample REI Questions
Recorded Eligibility Interview

SDVOSB Program

Name of SDVOSB owner: _____
Name of the SDVOSB firm: _____
SDVOSB owner's interview location: _____
Date of the REI: _____
Name of SBA Official: _____

1. Are you aware that the explicit purpose for this Recorded Eligibility Interview is to prevent business owners from fraudulently misrepresenting their eligibility for the SDVOSB procurement preference program?
   a. Yes [ ]
   b. No [ ]

2. Are you aware that the purpose of this REI is to have evidence that could be used in a criminal proceeding if you fraudulently misrepresent you eligibility for participation in the SDVOSB procurement preference program?
   a. Yes [ ]
   b. No [ ]

3. Are you aware that, if you fraudulently misrepresent your eligibility for participation in the SDVOSB procurement preference program, you are denying a truly eligible service disabled veteran from receiving the benefits intended under this program?
   a. Yes [ ]
   b. No [ ]

4. Have you ever served in the US Military?
   a. Yes [ ]
   b. No [ ]

5. In the course of your service in the US Military, did you become disabled?
   a. Yes [ ]
   b. No [ ]

6. Do you have in your possession an Adjudication Letter from the Veterans' Administration confirming that the you are eligible for the SDVOSB program and that you have a disability?
   a. Yes [ ]
   b. No [ ]

7. Or, do you have a Department of Defense Form 214 Certificate of Release or Discharge from Active Duty documenting that you were honorably discharged?
   a. Yes [ ]
   b. No [ ]

8. Does your Department of Defense Form 214 document your type of service disability?
   a. Yes [ ]
   b. No [ ]

9. Has your status as a disabled veteran been established by the Veterans Administration?
   a. Yes [ ]
   b. No [ ]

10. Have you provided the SBA with your VA Adjudication Letter?
   a. Yes [ ]
   b. No [ ]

11. Have you provided the SBA with your Department of Defense For 214?
   a. Yes [ ]
   b. No [ ]

12. Are you the owner of the SDVOSB?
   a. Yes [ ]
   b. No [ ]

13. Do you own at least 51 percent of the SDVOSB (in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more Service-Disabled Veterans)?
   a. Yes [ ]
   b. No [ ]

14. Do you manage and control the daily business operations of the SDVOSB (or in the case of a veteran with a permanent and severe disability, the spouse or permanent caregiver of such a veteran)?
   a. Yes [ ]
   b. No [ ]

Attachment B

SBA's

Size Standards Methodology

Detailed Analytical Steps

for

Establishing Size Standards

SBA SIZE STANDARDS METHODOLOGY

Prepared by:
Size Standards Division
Office of Government Contracting
& Business Development

April 2009

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INTRODUCTION

This document describes the SBA methodology for establishing and adjusting its small business size standards pursuant to the Small Business Act (Act) and related legislative guidelines. Under the Act (Public Law 85-236, as amended), the SBA Administrator (Administrator) has authority to establish small business size standards for Federal government programs. Congress left to administrative discretion precisely how the Administrator should establish small business size standards or what they should be. This document provides a brief review of legal authority, early legislative history and a regulatory history of small business size standards, a detailed description of the size standards methodology, and concludes with a discussion of numerous policy issues regarding the objectives and direction of size standards. An appendix at the end of the document summarizes the detailed analytical steps involved in the evaluation of size standard for an industry.

In establishing size standards, the Act and its legislative history highlight two considerations. First, size standards should vary to account for differences among industries. Second, the policies of the Agency should assist small businesses as a means of encouraging and strengthening their competitiveness in the economy. These two considerations are the basis for the SBA current methodology for establishing small business size standards.

SBA size standards methodology examines the structural characteristics of an industry as a way to assess industry differences and the overall degree of competitiveness of an industry and of firms within the industry. As described more fully later in this document, industry structure is examined by analyzing five primary factors – average firm size, degree of competition within an industry, start up costs and entry barriers, distribution of firms by size, and small business share in Federal contracts. SBA also considers other secondary factors as they are relevant to the industries and the interests of small businesses, including technological change, competition among industries, industry growth trends, and impacts on SBA programs.

SBA conducts a statistical analysis of data on the primary factors, and secondary factors as appropriate, to establish a size standard for a specific industry. As a starting point, SBA presumes $7.0 million as an appropriate size standard for the services, retail trade, construction, and other industries with receipts based size standards; 500 employees for the manufacturing, mining and other industries with employee based size standards; and 100 employees for the wholesale trade industries. These three levels, referred to as "anchor size standards," are not minimum size standards, but rather benchmarks or starting points. To the extent an industry displays "differing industry characteristics," a size standard higher, or in some cases lower, than an anchor size standard is supportable. This document includes an extensive discussion of the statistical analyses involved in size standards determination.

SBA periodically increases receipts and other monetary based standards for inflation. Under current SBA regulations, an adjustment to size standards for inflation will be made at least once every 5 years. Given the level of the size standards and the rate of inflation, recent inflation adjustments have been made on more frequent intervals.

The concluding section of this document raises a number of policy questions that SBA has to address in developing a robust methodology for establishing, evaluating and revising its small business size standards. Examples include how high of a size standard is too high? Should there be a single basis for all size standards (*i.e.*, employees or annual receipts)? Should there be a fixed number of "bands" of size standards or separate standard for each industry? This document includes several other issues, including some that tend to be on-going questions.

STATUTORY AUTHORITY

Authority for the Administrator to establish small business size standards for Federal Government programs is the Small Business Act (Act) (Public Law 85-236, as amended). Congress has periodically modified the Act but has not provided specific size standards for Federal government purposes, other than for agricultural enterprises. The Act states the following:

§ 3 (a) (1) For the purposes of this Act, a small-business concern, including but not limited to enterprises that are engaged in the business of production of food and fiber, ranching and raising of livestock, aquaculture, and all other farming and agricultural related industries, shall be deemed to be one which is independently owned and operated and which is not dominant in its field of operation: Provided, that notwithstanding any other provision of law, an agricultural enterprise shall be deemed to be a small business concern if it (including its affiliates) has annual receipts not in excess of $750,000.

(2) ESTABLISHMENT OF SIZE STANDARDS. –

(A) IN GENERAL. – In addition to the criteria specified in paragraph (1), the Administrator may specify detailed definitions or standards by which a business concern may be determined to be a small business concern for the purposes of this Act or any other Act.

(B) ADDITIONAL CRITERIA. – The standards described in paragraph (1) may utilize number of employees, dollar volume of business, net worth, net income, a combination thereof, or other appropriate factors.

(C) REQUIREMENTS. – Unless specifically authorized by statute, no Federal department or agency may prescribe a size standard for categorizing a business concern as a small business concern, unless such proposed size standard --

(i) is proposed after an opportunity for public notice and comment;

(ii) provides for determining --

(I) the size of a manufacturing concern as measured by the manufacturing concern's average employment based upon employment during each of the manufacturing concern's pay periods for the preceding 12 months;

(II) the size of a business concern providing services on the basis of the annual average gross receipts of the business concern over a period of not less than 3 years;

(III) the size of other business concerns on the basis of data over a period of not less than 3 years; or

(IV) other appropriate factors; and

(iii) is approved by the Administrator.

(3) When establishing or approving any size standard pursuant to paragraph (2), the Administrator shall ensure that the size standard varies from industry to industry to the extent necessary to reflect the differing characteristics of the various industries and consider other factors deemed to be relevant by the Administrator.

Paragraph 3(a)(2)(C) refers to the establishment of size standards by other Federal agencies. SBA generally applies these same provisions when it establishes its size standards, but the Agency is not legally bound by them. On the other hand, Paragraphs 3(a)(2)(A) and 3(a)(2)(B) give the Administrator the flexibility to evaluate and establish size standards using a broader range of criteria, depending on what the Administrator determines will serve small businesses the best.

Along with the above broad statutory requirements, the Act also charges the Agency to encourage competition and to insure that a fair proportion of total Federal purchases, contracts, and property sales be placed with small business enterprises (Section 2(a)). Congress went on to state that "the preservation and expansion of such competition is basic not only to the economic well-being but to the security of this Nation." 15 U.S.C.§ 631(a).

LEGISLATIVE HISTORY

The above statutory language defining a small business concern provides the Administrator with broad discretion in establishing size standards. Reading the legislative history of the Act provides a better understanding of Congress' intent in the Act. The phrase "independently owned and operated" requires that SBA include the size of a firm together with its affiliates when calculating its size.[1] Therefore, SBA must use data about firms together with their affiliates when it establishes size standards and determining a business' small business eligibility. In addition, Congress did not intend the phrase "is not dominant in its field of operations" to exclude firms that might dominate a geographic area. Rather, Congress intended to exclude firms that dominate an entire industry, nationally.[2] Congress also recognized that an extremely high percentage of business firms could properly be classified as small.[3]

The Banking and Currency Committee recognized the "impossibility of attempting to write into law a rigid definition of small business.[4] Therefore, Section 3 of the bill defines a small business concern in a flexible and realistic manner. The Committee did this because it has become universally recognized that it is utterly impossible to define small business rigidly in terms of number of employees, amount of capitalization, or dollar volume of business."

Again in 1957, the House Committee on Banking and Currency addressed how to characterize a small business and stated that "no single definition may be expected to meet all requirements. Recognition of varying situations motivated this committee in drafting the present Small Business Act to depart from rigid standards and leave the definition of small business to

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[1] See Hearings on H.R. 4090 and H.R. 5141 before the Committee on Banking and Currency of the U.S. House of Representatives, 83rd Congress, 1st Session (1953), page 17.

[2] See Hearings on S. 982. *et al.* before the Committee on Banking and Currency of the U.S. Senate, 83rd Congress, 1st Session (1953), page 56.

[3] See comments of Representative Seely-Brown, Congressional Record-House, June 5. 1953, page 6141. Representative Seely-Brown observed that more than 95 percent of business establishments could be classified as small and Representative Springer at page 6155 of the same Congressional Record observed that 95.2 percent of the businesses employed less than 20 people, so that on the basis of employment small business would be truly small in size.

[4] See House Report No. 494, 83rd Congress, 1st Session (1953).

administrative determination.[5] That same report explains that the origins of the present statutory requirement that the Agency vary the size standards from industry to industry where number of employees is used as the criteria was the result of the Agency's then existing flat 500-employee rule for all government contracts.

REGULATORY HISTORY

Current small business size standards evolved from a limited number of general size standards for broad industry groups to a larger number of specific size standards based on individual industries. This transition was recognition that different industries had different characteristics, and thus warranted appropriate industry specific size standards. Many of today's size standards continue at levels established at historic levels.

Over the years, SBA has adopted a broad range of size standards – manufacturing industry standards ranged from 250 employees to 1,500 employees; other industry size standards have ranged from $0.10 million to $35.5 million in average annual receipts. SBA establishes its size standards for industries based on industry classifications developed by the Office of Management and Budget of the Executive Office of the President. The North American Industry Classification System (NAICS) contains the current listing of U.S. industries as of January 1, 2007. NAICS replaced the Standard Industrial Classification (SIC) system on January 1, 1997. SBA adopted NAICS as the basis for its table of size standards effective October 1, 2000. Census modifies parts of NAICS every five years and SBA adopts the revisions for its table of size standards effective October 1 of the same year. SBA has opted to use October 1 because that is the beginning of the Federal government's fiscal year.

The 500-employee size standard for Federal contracting predates SBA; it was used by the Reconstruction Finance Corporation and the earlier Small War Plants Corporation, which was a World War II Government contracting agency channeling Federal contracts to small manufacturers. The House Committee on Banking and Currency in 1957 observed that "the standard of 500 or less employees originated in World War II with several variations. For the want of a better definition, the 500 rule generally gained acceptance in the Government, although in many instances there was considerable reluctance by many Government officials and members of Congress to accept such a rigid formula." (*See* Senate Report No. 555, 85th Congress, 1st Session, page 6.)

SBA adopted 500 employees as the standard for manufacturing industries at its 1953 inception; it has remained a standard for many industries until today, and is one of three "anchor" size standards (discussed later in this paper). By 1959, size standards regulations distinguished between manufacturing and financial industries. The Agency set 250-employee, 500-employee, and 1,000-employee size standard for its financial assistance programs, but retained the 500-employee standard for Federal contracting programs. As stated earlier, an anchor size standard is not a minimum standard, but rather a benchmark or starting point.

Generally, the Agency has used annual receipts as the standard for nonmanufacturing industries. Soon after its inception, the SBA created size standards for nonmanufacturing which relied on annual receipts rather than employees. They were between $0.30 million and $1 million for retail and services industries, between $2 million and $5 million for wholesale industries, and

[5] See Senate Report No. 555, 85th Congress, 1st Session, page 6.

$5 million for construction industries. (As indicated above, this led to the 1958 amendments that required a breakout on an industry basis where number of employees was used as the standard.)

By 1963, SBA size standards were as follows: $1 million for retail trade industries; $1 million for services industries; $5 million for wholesale industries; and $7.5 million for construction industries. There continued to be two sets of size standards for manufacturing industries – 250 employees to 1,000 employees for SBA financial programs, but basically 500 employees for Federal contracting programs.

From 1963 to 1975 many manufacturing size standards were increased to 750 or 1,000 employees and some of the services industries, such as engineering and janitorial services, with size standards of $5 million and $3 million, respectively, were broken to separate industries.

In 1975, SBA implemented a general increase to its monetary based size standards to account for the effects of inflation. The adjusted standards were $2 million for retail trade and services industries, $12 million for general construction, and $5 million for special trade construction. Employee based standards remained unchanged.

After a series of public notices in the *Federal Register* from 1980 to 1983, the Agency adopted a detailed list of size standards by Standard Industrial Classification (SIC) code. Generally speaking, the size standards framework the Agency currently follows was put in place in 1984. Currently, most prevalent size standards are $7.0 million in annual receipts for Retail Trade and Services, $33.5 million for General Construction, $14.0 million for Special Trade Construction, 100 employees for Wholesale Trade for all Federal programs except for Federal procurement where it is 500 employees under the non-manufacturer rule, and 500 employees for Manufacturing industries. Monetary based size standards range from $0.75 million in annual receipts for most Agricultural enterprises to $35.5 million in annual receipts for Facility Support Services. Similarly, employee based standards range from 50 employees for Heating Oil Dealers to 1,500 employees for some Manufacturing and Telecommunications industries. With a very few exceptions, uniform size standards are now in place for all SBA programs.

In 1992, SBA proposed, along with an inflation adjustment, a reduction in the number of size standard levels from more than forty different levels to nine receipts based size standards and five employee based size standards. Although public comments overwhelmingly accepted the fixed size standards approach, the proposed levels seemed arbitrary and produced large variations in changes to standards. SBA believed it could not justify such large variations, and therefore, limited the final rule to adjusting the then existing receipts based size standards for inflation.

In March 2004, SBA proposed to simplify and restructure size standards by establishing all size standards based on number of employees. For a number of industries, however, an employee based size standard could result in large businesses with very high receipts but few employees to qualify as small. There were other skewed outcomes as well, and SBA, therefore, also proposed a maximum receipts size standard along with an employee size standard for certain industries. Public comments showed that for some industries the proposed employee based standards were either too low or did not serve as a suitable measure of business size. Rather than issuing a revised proposed rule with adjusted size standards, SBA decided to seek additional input from the public.

The Agency issued an Advance Notice of Proposed Rulemaking (ANPRM) in December 2004. It sought comments on 10 specific issues that the public had raised in response to the March 2004 proposed rule. SBA did not make further proposals, but only sought public

comment on whether and how it should consider the following: 1) Approaches to simplification of size standards; 2) Calculation of number of employees; 3) Use of receipts based size standards; 4) Designation of size standards for Federal procurements; 5) Establishment of size standards solely for Federal procurement; 6) Establishment of tiered size standards; 7) Simplification of small business status and affiliation with other businesses; 8) Joint ventures and small business eligibility; 9) Grandfathering of currently eligible small businesses; and 10) Impact of SBA size standards on the regulations of other Federal agencies. SBA received several thousand comments on these issues, but no consensus. However, these questions affect small businesses and their ability to participate in opportunities reserved for them.

Besides the December 2004 ANPRM, in the summer of 2005 SBA also held a series of 11 public hearings throughout the country on the above issues. They were well attended, but as of yet, between the ANPRM and the hearings, there is no resolution to many of these issues.

SBA is currently conducting a comprehensive review of all size standards. Aside from the broader size standards changes and proposals discussed above, SBA, in the past, generally conducted ad-hoc reviews of size standards depending on the seriousness of a size standard issue or the overall level of public interest. As discussed above, the last overall review of size standards took place during the early 1980s. While adjustments to a large number of specific size standards have occurred since that time, subsequent economic trends and the implementation of a new industry classification system call for an overall review of size standards. Throughout this document this effort will be referred to as the "comprehensive size standards review".

In developing size rules, SBA pays special attention to the judicial standards for review of Federal rulemaking procedures. In 1983, the U.S. Supreme Court discussed the standards that a Court would employ in examining whether an agency's informal rulemaking procedures would pass a judicial scrutiny. In looking into whether a particular rule should be found to be arbitrary or capricious or not, the Court suggested that an agency "must examine the relevant data and articulate a satisfactory explanation for its actions."[6] The Court further expanded on what it meant by an agency's articulation of a satisfactory explanation by stating that it should not rely on factors Congress did not intend for it to consider, and that a decision should not run counter to evidence available to the Agency not explainable by a difference in view or the product of agency expertise.

The U.S. Supreme Court affirmed that it would uphold an agency's decision of "less than ideal clarity" so long as the agency's path could be reasonably discerned. This Supreme Court case and more recent Federal court decisions following its guidance identify the following principles to avoid a judicial finding that particular size standards are arbitrary or capricious:

a) Relevant factual or objective evidence must be identified and discussed.

b) Other relevant factors bearing on the decision, such as agency policies, presumptions and assumptions not clear from the factual evidence, should be identified and discussed.

c) The logic leading from the factual evidence and the other factors to the Agency's decision should be explained.

d) Significant contrary evidence and argument which the Agency does not adopt or follow should be identified and its rejection explained.

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[6] Motor Veh. Mfrs Assn v. State Farm Mut., 463 US 29, 77 L,. Ed. 2d 443 (1983).

OVERVIEW OF SBA SIZE STANDARD METHODOLOGY

In keeping with the Act's statutory language and legislative history, SBA size standard methodology includes examining industry characteristics and the differences among various industries. The remainder of this paper describes SBA approach to analyzing industry structure and a detailed methodology for evaluating and establishing size standards. SBA has always followed the industry structure approach. However, the specifics of its methodology have evolved over the years with the availability of new and richer industry data and staff research leading to improved analyses of industry structure.

For the ongoing comprehensive size standards review, SBA has established three "base" or "anchor" size standards: (1) 500 employees for manufacturing, mining and other industries with employee based size standards (except for Wholesale Trade); (2) $7.0 million in average annual receipts for most nonmanufacturing industries with receipts based size standards; and (3) 100 employees for all Wholesale Trade industries.[7] For a limited number of industries, SBA uses different measures, such as financial assets for the banking industries and barrels per calendar day (as part of a two-component standard) for the petroleum refining industry.

Since its adoption, 500-employee size standard has remained the prevailing standard for 72 percent of manufacturing industries. A 500-employee size standard was adopted for Federal procurements programs that had been established by the Small Defense Plants Administration, whose functions were incorporated into SBA. After considerable review and public comments in the 1940s and 1950s, the 500-employee level was selected to achieve the Federal government's objective of increasing the number of sources providing goods and services in support of the Nation's national security needs. This consideration also supported the Small Business Act's economic objective of fostering competition within the economy by enabling businesses beyond the start-up phase, but still small relative to the leading producers in the industry, to utilize small business programs. Over time, the 500-employee size standard was primarily applied to the manufacturing sector and other capital intensive industries. As SBA established different size standard levels within the manufacturing industries, the 500-employee level remained as the lowest and most common size standard, and became designated as the starting level for analyzing size standards for industries that have an employee based size measure.

In 1954, SBA established a $1 million in average annual receipts as the size standard for nonmanufacturing industries for its loan programs. Size standards of $2 million to $5 million were established subsequently for the construction, wholesale trade, and trucking and warehousing industries. These levels were viewed as sufficient in addressing the problems of access to credit by small businesses. The minimum (excluding statutorily set size standard of $0.75 million for agricultural enterprises) and most common size standard of $1 million has been adjusted periodically by SBA to account for the level of general inflation in the economy and it has increased to $7 million today. The $7 million anchor level is the prevailing standard for more than two-thirds (68%) of nonmanufacturing industries that have receipts based size standards. In reviewing SBA

[7] SBA analyses of industry characteristics using the 1997 and 2002 Economic Censuses show significantly different economic structure for the Wholesale Trade industry as compared to the structure of industries in both 500-employee and $7 million anchor size standard industry groups, thereby requiring a separate 100-employee anchor group for wholesale industries. Much of these observed differences may be attributed to the definitional changes to the Wholesale Trade Sector between the Standard Industrial Classification System and the 1997 and 2002 North American Industry Classification Systems.

loan data, the $7 million continues to capture the size of businesses that typically find SBA's financial assistance program a source of credit.

For the ongoing comprehensive size standards review, SBA has also established 100 employees as the anchor size standard for industries in Wholesale Trade. In 1984, to simplify procurement procedures, SBA adopted a single size standard of 500 employees for all Wholesale Trade industries for both procurement and SBA programs (49 FR 5023). Before that, the wholesale industries had a 500-employee size standard for Federal procurement and three levels of receipts based standards ($9.5 million, $14.5 million and $22 million) for SBA programs. In 1986, SBA analyzed the Wholesale Trade industries using 1977 and 1982 Economic Census data. The Agency then amended its standards for the Wholesale Trade industries from 500 employees to 100 employees for all SBA programs (51 FR 25189), while it retained 500-employee size standard for Federal procurement. As with the other two anchor groups, SBA took into consideration the size of business that would seek and utilize SBA financial assistance along with its evaluation of industry data. The 100-employee size standard continues to be the current size standard for all industries in the Wholesale Trade Sector for all SBA programs.

Selection of Size Measure

SBA has primarily used two measures of business size – receipts and number of employees. SBA generally prefers receipts as a size measure because it measures the value of output of a business and can be easily verified by business tax returns and financial records. Historically, the number of employee has been primarily used for the manufacturing industries. The 500-employee manufacturing size standard had been utilized by the Small War Plants Corporation, the Small Defense Plants Administration, and the Reconstruction Finance Agency prior to SBA's inception. Other size measures are applied to some specific industries.

The choice of a size measure for an industry depends on which measure best represents the magnitude of operations of a business. That is, the measure should indicate the level of real business activity generated by firms in an industry. Table 1 below summarizes a list of several industry factors SBA considers in selecting the number of employees or receipts as an appropriate size measure.

For a limited number of industries, SBA has established size measures based on other business characteristics. These mainly fall into two general categories – output or production capacity and financial measures, as summarized in Table 2.

SBA's decision to apply one of these nontraditional size measures (other than employees and receipts) continues to rest upon the principle of what measure best represents the magnitude of operations of a business within an industry. For the measures that apply to specific industries, the businesses classified under them are engaged in similar and discrete activities. Also, industry analysts typically monitor businesses based on those measures.

SBA decided to apply the net worth and net income measures to its Small Business Investment Companies (SBIC) program because investment companies evaluate businesses using these measures to decide whether or not to make an investment on them. The net worth and net income size standards were extended to the Community Development Corporations (CDC) program under the same statute as the SBIC program.

Table 1
Industry Factors Supporting Employee vs. Receipts Based Size Measure

Industry factor	No. of employee	Receipts	Comment
Highly capital intensive	X		Employment levels vary with level of production while value of output substantially derived from fixed assets.
Low operational costs relative to receipts	X		Large receipts amounts generated with low labor inputs.
Variation of firms within industry by stage of production or degree of vertical integration	X		Firm's value added contribution to final value varies depending on structure of firm. Employment is more strongly correlated to value added than receipts.
Horizontally structured firms	X		Varying receipts to employee relationships among firms.
Highly labor intensive		X	Value of output varies with employment level and more easily verified.
Ease of factor substitution		X	Same value of output can be achieved by varying levels of labor and capital inputs.
Presence of subcontracting		X	Same value of output is achieved with differing levels of outsourcing.
High proportion of part-time or seasonal employment		X	Same level of output is achieved with differing employment practices.
Operation in multiple industries		X	Receipts is a more homogenous measure than employment.

Table 2
Production Capacity and Financial Size Measures

Category	Measure	Comment
Output	Megawatts hours of electric output	Applied to producers of electric power.
Production capacity	Barrels/day of petroleum refining	Applied to petroleum refiners.
Financial measure	Total assets	Applied to most banking and other depository industries.
	New worth New income	Applied to the SBIC and CDC programs as alternate size standards to the industry size standards.

Assumptions

Several assumptions underlie the structure of SBA small business size standards as follows:

First, SBA establishes size standard by industry category. As stated in the Small Business Act, size standards shall differ to reflect industry differences. Through the analysis of industry data, SBA has determined that a single, one-size-fits-all size standard is inappropriate to define the small business segment of each and every industry. For purposes of size standards, SBA utilizes the North American Industry Classification System (NAICS) of the United States as a basis for industry definition. Except for a few exceptions where a size standard may be established for an activity within in an industry, size standards are defined at the 6-digit NAICS level.

Second, an industry size standard is established at the national level. Similarly, the determination of "not dominant in its field of operation" is also done at the national level. Data limitations preclude an extensive analysis of businesses on a geographical basis. In addition, geographically based size standards may inappropriately influence decisions on business location.

Third, a single set of size standards applies to most SBA major programs. For smaller programs, a "program-based" or an alternate size standard may be established. However, in most of these cases, the size standard is related to the size standard for the industry of most program participants, such as the SBIR size standard.

Fourth, an industry size standard will be selected from a predetermined range of fixed size standard levels. The applicable anchor size standard will be the starting point for the analysis. A size standard above or below the anchor size standard will be selected within a predetermined range depending on the results of the analysis of industry and program data. Size standards will reflect sizes higher than the firm size at the entry level in order to include businesses that are competitively disadvantaged due to their size or represent the smaller group of businesses within an industry relative to the characteristics of all businesses within the industry. Size standard will also reflect business capabilities to compete for Federal contracts within an industry. The anchor size standard will apply to most industries, while different size standards will be established for industries possessing significantly different characteristics compared to the typical anchor industry group.

Fifth, an industry size standard shall have only one measure of size. Almost all industries have either a number of employees or receipts based size standard, not both. In limited cases an additional measure of size related to production or capacity may be included with an employee or receipts measure. For example, size standard for the petroleum industry includes a combination of the refining capacity and the number of employees.

Sixth, a business is defined on an enterprise basis rather than at the establishment level or as a legally incorporated entity. The size of a business includes all establishments, subsidiaries and affiliates under its control (whether controlled through ownership or other relationships). The size of a business owned or controlled by another business includes the size of its parent company and all of its subsidiaries and affiliates.

Using Comparison Groups

SBA size standard analysis begins with a presumption that the 500-employee anchor standard is appropriate for manufacturing and other industries with employee based size standards (except for Wholesale Trade). Similarly, SBA presumes that the $7.0 million anchor standard is appropriate for industries with receipts based size standards and that the 100-employee anchor standard is appropriate for the Wholesale Trade sector.

If the characteristics of a specific industry under review are similar to the average characteristics of industries in one of the anchor groups, SBA will consider adopting the anchor size standard as an appropriate size standard for that industry. SBA calculates the average characteristic of an anchor group by grouping data from all industries at the applicable anchor. If the specific industry's characteristics are significantly different from those of the anchor group, however, SBA would adopt a standard higher or lower than the anchor standard. The larger the differences between the characteristics of an industry under review and those in the anchor group, the larger the difference between the appropriate industry size standard and the anchor size standard. When an industry displays significantly different economic characteristics compared to industries in the anchor group, SBA will consider revising its existing size standard up or down depending on its characteristics.

The goal of SBA comprehensive size standards review is to assess whether its existing small business size standards reflect the current industry structure and revise the standards if necessary. The economic characteristics of industries in the anchor groups provide a good starting point for the analysis. In addition, the anchor groups include a sufficient number of firms to provide a meaningful assessment and comparison of industry characteristics. These anchor size standards have gained legitimacy through practice and general acceptance by the public.

To determine the level of a size standard above the anchor size standard, SBA evaluates characteristics of a second comparison group. For industries with receipts based standards, SBA has developed a second comparison group consisting of industries with the highest receipts based size standards. Size standards for this group of industries range from $23.0 million to $35.5 million in average receipts, with the weighted average size standard by total industry sales for the group equaling $29.0 million. SBA refers to this comparison group as the "higher level receipts based size standard group" and serves as an upper bound in establishing size standards. For manufacturing industries and other industries with employee based size standards (except for Wholesale Trade), SBA has formed a second comparison group comprising industries that have a size standard of 1,000 employees. Since all industries in the Wholesale Trade sector have the same 100-employee size standard, a higher level size standard comparison group cannot be established for this sector in the above fashion. To develop a size standard for the Wholesale Trade sector, SBA will compare the characteristics of an industry under review with the average characteristics of the largest 25 percent of industries in that sector in terms of average firm size in number of employees. Depending on the result of that comparison, SBA will either retain the current 100-employee size standard or change it. These comparison groups consist of a sufficiently large number of industries to represent the typical industry at the respective anchor size level.

Primary Industry Factors

The primary industry factors that SBA evaluates in analyzing the economic characteristics defining the structure of an industry include average firm size, start up costs and entry barriers, industry competition, and distribution of firms by size (13 CFR § 121.102(a)). Besides industry structure, SBA also examines the impact of an existing size standard as well as the potential impact of a size standard revision on SBA's Federal contract assistance to small businesses as an additional primary evaluation factor. SBA generally considers these five factors – average firm size, start up costs, industry competition, size distribution of firms, and Federal contracting – to be the most important elements in determining an industry's size standard.

Secondary Industry Factors

Besides the primary factors listed above, SBA also considers a range of secondary factors that are relevant to deciding a size standard for a particular industry. These factors include, but are not limited to, technological changes, industry growth trends, SBA financial assistance and program factors, the presence of substitutable or competing relationships among industries, and historical activity within an industry.

Public Comments

Public comments on proposed size standard rules provide additional important information. These comments supplement SBA analysis of industry structure by enabling it to consider other relevant information, where appropriate, in the final decision on a size standard. SBA thoroughly reviews public comments before making a final decision on the proposed size standard rule.

Subsequent sections provide a detailed description of the analysis of these factors. Figure 1 depicts an overview of SBA size standard methodology.

PRIMARY FACTORS DESCRIBING INDUSTRY STRUCTURE

Average Firm Size

SBA computes two measures of average firm size: simple average firm size and weighted average firm size. For industries with receipts based size standards, SBA calculates the simple average firm size in terms of receipts as follows:[8]

$$\textit{Simple Average firm size (receipts)} = \frac{\textit{Total receipts in an industry}}{\textit{Total number of firms in that industry}}$$

Similarly, for industries with employee based size standards, the simple average firm size is expressed in terms of the number of employees as follows:[9]

$$\textit{Simple Average firm size (employees)} = \frac{\textit{Total number of employees in an industry}}{\textit{Total number of firms in that industry}}$$

[8] For details on SBA's calculations of annual receipts, *see* 13 CFR Part 121.104.

[9] For details on SBA's calculations of number of employees, *see* 13 CFR Part 121.106.

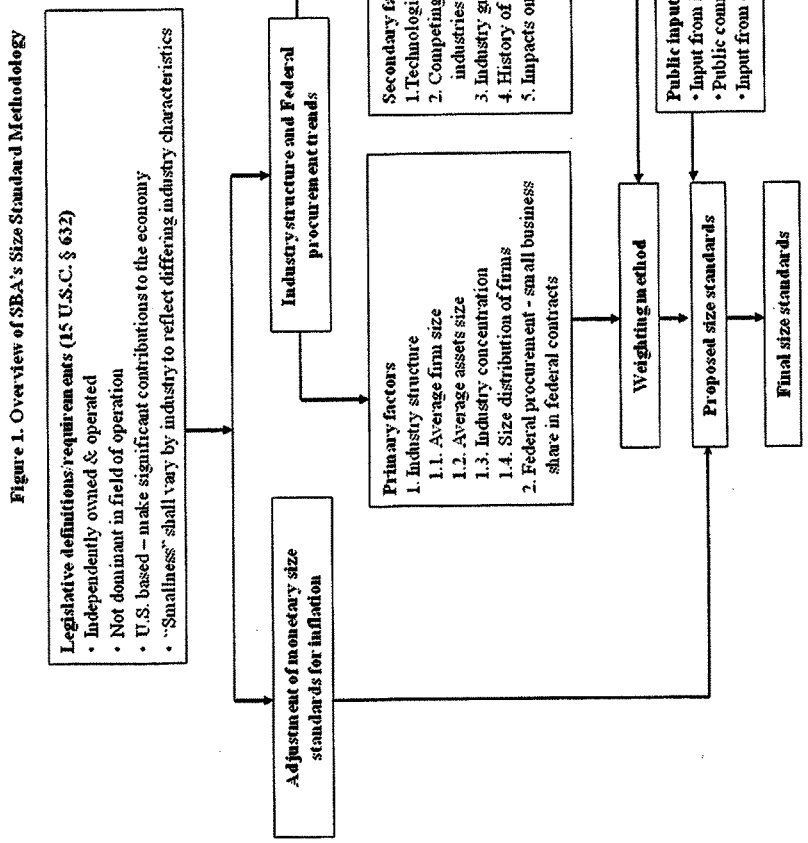

Figure 1. Overview of SBA's Size Standard Methodology

One limitation of simple average firm size is that it weighs all firms within an industry equally regardless of their size.[10] To overcome this SBA also calculates the weighted average firm size, which gives more weights to larger firms. For industries with receipts based size standards, SBA calculates the weighted average firm size in terms of receipts as follows:

$$\text{Weighted average firm size (receipts)}$$

$$= \sum_{k=1}^{m} \left(\frac{\text{Total receipts in size class } k}{\text{Number of firms in size class } k} \right) x \left(\frac{\text{Total receipts in size class } k}{\text{Total receipts in the industry}} \right)$$

$$= \sum_{k=1}^{m} (\text{Avg. receipts size for size class } k) x (\text{Receipts share of size class } k)$$

Similarly, for industries with employee based size standards, the weighted average firm size is expressed in terms of the number of employees as follows:

$$\text{Weighted average firm size (employees)}$$

$$= \sum_{k=1}^{m} \left(\frac{\text{Total employees in size class } k}{\text{Number of firms in size class } k} \right) x \left(\frac{\text{Total employees in size class } k}{\text{Total employees in the industry}} \right)$$

$$= \sum_{k=1}^{m} (\text{Avg. employee size for size class } k) x (\text{Employee share of size class } k)$$

Average firm size is likely to be positively related to minimal efficient (optimal) firm size. The minimal efficient firm size refers to the level of output where firms in an industry are able to minimize their average cost of production and become competitive. Thus, conceptually, an industry's size standard should be set such that firms that have not achieved a minimal efficient firm size to remain competitive will be considered small and thus be eligible for SBA assistance, while firms that are fully competitive would exceed the size standard and thus be considered ineligible. *Ceteris paribus*, the higher the minimal efficient firm size for an industry, the higher should be its size standard. In general, industries with high minimal efficient size tend to be dominated by larger firms and, thus, their average firm size (especially weighted average) tends to be large.[11] Given the lack of data on minimal efficient firm size by industry, SBA uses the average firm size as the proxy of minimal efficient firm size.

For most industries, the simple average firm size would generally be smaller than the anchor size standards, while the weighted average firm size can be lower or higher than the anchor depending upon the industry. Because firms often compete with each other across industry lines, it is reasonable to compare the average firm size of an industry relative to the

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[10] In fact, as shown below, the simple average firm size is also the weighted average firm size where weights are shares of firms in different size classes in total number of firms within an industry.

$$\text{Simple average firm size}$$

$$= \sum_{k=1}^{m} \left(\frac{\text{Total receipts/employees in size class } k}{\text{Total number of firms in size class } k} \right) x \left(\frac{\text{Total number of firms in size class } k}{\text{Total number of firms in industry}} \right)$$

$$= \sum_{k=1}^{m} (\text{Simple Avg size for size } k) \times (\text{Shares of firms in size class } k)$$

[11] For discussion on the minimal firm size, *see* Sherer and Ross (1990).

average firm size of industries with the anchor size standard, and then to adjust the size standard upward or downward depending upon that comparison.

If the average firm size of an industry is significantly higher than the average firm size of industries in the anchor group, this would support a size standard higher than the anchor standard. Conversely, if the industry's average firm size is similar to or significantly lower than that of the anchor industry group, it would provide a basis to establish a size standard at or below the anchor size standard.

For example, if the average firm size for all industries with the $7 million size standard is $1.5 million in annual receipts, and the average firm size for a particular industry under review is $2.0 million in annual receipts, the size standard for that industry should be somewhat higher than $7 million, all other factors being equal.

Start Up Costs and Entry Barriers

Start up costs reflect the amount of capital requirements for physical plant and production equipment new firms must have to enter an industry and become competitive with existing firms. If firms entering an industry under review have greater capital requirements than firms do in industries in the anchor comparison group, all factors remaining the same, this would be a basis for supporting a size standard higher than the anchor standard. Conversely, if the industry has similar or smaller capital needs compared to the anchor comparison group, the anchor size standard, or in rare cases, a lower size standard, would be considered appropriate.

Given the lack of data on actual start up costs and other measures of entry barriers (such as degree of product differentiation, advertising expenses, economies of scale, *etc.*), SBA uses average assets size as a proxy for the levels of capital needs for new businesses entering an industry.[12] An industry with a significantly higher average assets size than the anchor comparison industry group is likely to have higher start up costs, which in turn would support a size standard higher than the anchor size standard.

SBA is continuing to research other approaches and various data sources (including sales to assets from Risk Management Association and assets data from the Internal Revenue Service) in assessing start up costs which may lead to a more robust assessment of this factor in deriving a size standard in the future. As with any change to the methodology, SBA will explicitly explain why and how a new approach has been incorporated into the methodology.

Industry Competition

A fundamental purpose of small business size standards is to support SBA mission and programs in promoting economic competition. A prevailing method of analyzing industry competition is the measurement of concentration or market power to determine the extent to which a particular industry is dominated by a few large firms.

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[12] Several studies have also used average assets size as a proxy for levels of capital requirements in analyzing industry structure, especially entry barriers (*e.g., see* Bain, 1956; Comanor and Wilson, 1967; and Guth, 1971). Comanor and Wilson (1967) recognize that this measure is likely to understate capital requirements. The book value of total assets will normally be less than their replacement cost, as a result of inflation in preceding years. This measure also fails to account for intangible assets such as information and knowledge advantage of incumbent firms. In the past, SBA used average non-payroll costs as a proxy for capital needs.

To determine the degree of concentration in an industry, SBA will evaluate various standard measures of industry concentration, including the four-firm concentration ratio, Gini coefficient, and the Herfindahl-Hirshman index (HHI).[13]

The oldest and most commonly used measure of industry concentration is the *Kth*-firm concentration ratio, defined as the cumulative share of total industry receipts (or other dimension of size) obtained by the *K*th leading (largest) firms within an industry. More formally, the *Kth*-firm concentration ratio (CRK) is defined as (Curry and George, 1983):

$$CRK = \sum_{i=1}^{K} s_i$$

where s_i *(market share)* $= \dfrac{\textit{Total receipts of firm i in an industry}}{\textit{Industry's total receipts}}$

i = 1, 2,...,K largest firms in the industry such that $s_1 > s_2 > \ldots > s_K$.

SBA uses the four-firm concentration ratio or the cumulative share of total industry receipts of the four biggest firms ranked by order of market share. The four-firm concentration ratio is the most commonly used concentration measure for judging the degree of industry competition (Lipczynski, Wilson and Goddard, 2005).[14] Although methodologically different, the four-firm concentration ratio and the Herfindahl-Hirshman Index tend to produce similar conclusions regarding industry concentration in an industry. Using the notations for the above formula, the four-firm concentration ratio (CR4) is defined as:[15]

$$CR4 = \sum_{i=1}^{4} s_i \text{, where } s_1 > s_2 > s_3 > s_4.$$

Using the four-firm concentration ratio SBA compares the degree of concentration within an industry to the degree of concentration of the industries in the anchor comparison group. If a significantly higher share of economic activity within the industry is concentrated among the four largest firms compared to the industries in the anchor comparison group, all else being

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[13] The Herfindahl-Hirshman index (HHI) is computed as follows (Curry and George, 1983):

$$HHI = \sum_{i=1}^{n} s_i^2$$

where s_i *(market share %)* $= \dfrac{\textit{Total receipts of firm i in an industry}}{\textit{Industry's total receipts}} \times 100$

and i = 1, 2, 3, ..., n denotes the total number of firms in an industry. SBA's analysis of industry factors is based on special tabulations of 2002 Economic Census from the Census Bureau. The 2002 data lacks information to compute the HHI. For 2007 Economic Census special tabulations, SBA plans to request this information.

[14] The number four is chosen because the Census may not disclose the data for any smaller number of firms.

[15] Special tabulations of the 2002 Economic Census do not have information on shares of individual firms. However, the data contain the amount of combined receipts generated by the four largest firms in each industry to compute the four-firm concentration ratio (CR4) as follows:

$$CR4 = \frac{\textit{Total receipts of the biggest four firms in an industry}}{\textit{Total receipts in that industry}}$$

equal, SBA would set a size standard relatively higher than the anchor. SBA would not consider this as an important factor in assessing a size standard for industries for which the four-firm concentration ratio is below 40 percent.[16] For industries where the four largest firms account for 40 percent or more of industry's total receipts, SBA would consider the average size of the four largest firms as a primary factor in determining a size standard for the industry.[17]

Size Distribution of Firms and Gini Coefficient

SBA examines the shares of industry total receipts accounted for by firms of different receipts and employment sizes in an industry. This is an additional factor SBA considers in assessing competition within an industry.[18] If the preponderance of an industry's economic activity is attributable to smaller firms, this generally indicates that small businesses are competitive in that industry and supports adopting the anchor size standard. A size standard higher than the anchor size standard would be supported for an industry in which the distribution of firms indicates that most of the economic activity is concentrated among the larger firms.

Concentration among firms, like concentration of income among households, is a measure of inequality of distribution. The usual practice in measuring inequality of distribution is to arrange the firms (or groups of firms) in order of increasing size and express inequality in terms of percentages: for example "X" percentage of firms hold "Y" percentage of total receipts (or other dimensions of size such as employees or assets) in an industry. This comparison is often made in terms of the Lorenz curve, where cumulative percentages of units (firms) are shown in horizontal axis and percentages of receipts (or other measures of size) are in the vertical axis (*see* Figure 2). In the figure, 80 percent of firms hold 50 percent of total receipts in an industry. A diagonal line from (0,0) to (1.0,1.0) represents perfect equality, since every point on the line the "X" and "Y" percentages are equal. The ratio of the area between the diagonal and the Lorenz curve (area A) to the whole area below the diagonal (area A plus area B) serves as a coefficient of inequality, known as Gini coefficient. If receipts are distributed perfectly equally among all the firms in the industry, then the Lorenz curve and the line of perfect equality are merged (i.e., area A equals zero), and hence the Gini coefficient becomes zero. If all the receipts are attributed to one firm, the Lorenz curve would pass through the points (0,0), (1.0,0) and (1.0,1.0), and areas A and B would be identical, producing the value of Gini coefficient equal to one. Accordingly, the Gini coefficient values vary between zero and one, with zero implying perfect equality and one indicating perfect inequality.

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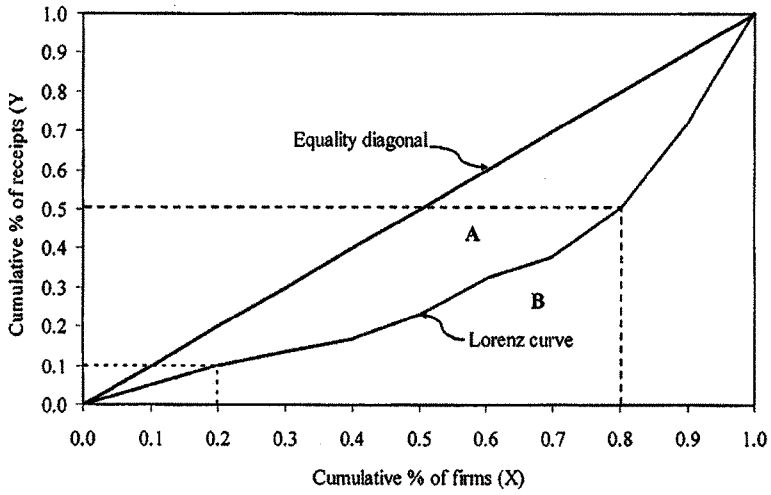
[16] According to Martin (2002), the CR4 value of 40 percent is used as the cut-off point, meaning that a 40 percent or higher value would imply a concentrated (oligopolistic) industry and less than 40 percent would imply a competitive industry. Shepherd (1991) also notes that a market share over 40 percent indicates market dominance.

[17] Average size of four largest firms ($AVG4$) is computed as follows:

$$AVG4 = \frac{Total\ receipts\ (employees)\ of\ the\ biggest\ four\ firms\ in\ an\ industry}{4}$$

[18] The four-firm concentration ratio suffers from a limitation that it only focuses on the cumulative share of the four largest firms in the industry and it does not account for differences in concentration among the four largest firms and remaining firms. The size distribution of all firms addresses that limitation. One alternative would be to use the Herfindahl-Hirshman Index (HHI). Given the lack of data to compute the HHI, SBA calculates the Gini coefficient based on distributions of firms and receipts by receipts and employee size classes from the special tabulations of the 2002 Economic Census. Because the Gini coefficient is a relative measure of industry concentration it is better suited to measure the degree of inequality of firm sizes than absolute measures of concentration such as the HHI.

Figure 2. Lorenz Curve of Distribution of Firms by Size



There are several statistical formulas for calculating the Gini coefficient. The following basic definition, in terms of Figure 2, provides a starting point for these formulas. [19]

$$Gini\ coefficient\ (G) = \frac{Area\ A}{(Area\ A + Area\ B)} = \frac{Area\ A}{0.5} = 2 \cdot Area\ A = 1 - 2 \cdot Area\ B$$

SBA compares the degree of inequality of distribution for an industry under review with that for industries in one of the anchor groups. If an industry shows a higher degree of inequality of distribution (hence a higher Gini coefficient) compared to industries in the anchor comparison industry group this would, all else being equal, warrant a higher size standard than the anchor. Conversely, for industries with similar or more equal distribution (*i.e.*, similar or lower Gini

[19] Note that since total area of the box is 1.0, area below the diagonal (A+B) is half of that or 0.5. One common approach to estimating G is to estimate the value for "2 Area B" in the formula and subtract it from 1. Because the entire Lorenz curve is not known and only cumulative percentages at certain intervals (size classes) are available, following (Brown, 1994), SBA approximates the Gini coefficient (G) using the following formula.

$$G = 1 - 2 \cdot \sum_{k=1}^{n} (X_k - X_{k-1}) \cdot \frac{(Y_k + Y_{k-1})}{2} = 1 - \sum_{k=1}^{n} (X_k - X_{k-1}) \cdot (Y_k + Y_{k-1})$$

where X_k is the cumulative proportion of firms for, $k = 0, 1, \ldots, s$, with $X_0 = 0$ and $X_s = 1$
Y_k is the cumulative proportion of receipts for, $k = 0, 1, \ldots, s$, with $Y_0 = 0$ and $Y_s = 1$

For receipts based standards cumulative percentages are calculated at 8 size classes as (i.e., $k = 0,1,2,\ldots, 8$): Receipts sizes (in millions of dollars): < 2.5, < 6.5, <13.0, <23.0, <35.0, <50, <100, and < maximum.

For employee based standards, data are available at 9 size classes as (i.e., k = 0, 1, 2, , 9): Employee-sizes (no. of employees): <50, <100, <250, <500, <750, <1,000, <1,500, <2,500, and < maximum.

coefficient values) than the anchor group, the anchor standard, or in some cases a standard lower than the anchor, would be adopted.[20]

Federal Contracting

SBA also considers the share of Federal contracts received by small business within an industry as one of the primary factors in reaching a size standard decision. The Act includes the objective of ensuring that small businesses receive a "fair share" of Federal contracting. The legislative history also discusses the importance of size standards in Federal contracting.

The Federal Procurement Data System – Next Generation (FPDS-NG) contains data on Federal purchases of goods and services by six-digit NAICS industry. SBA uses this information to support an increase to an industry's size standard where the small business share of Federal contracts is very low, other factors being equal. In cases where that share is already extremely high, it becomes a neutral factor in the size standards decision. Based on the FPDS-NG data for FY 2006-2007, small business share of Federal contract dollars shows a wide variation by industry, ranging from a low of 0 percent to a high of 100 percent.

SBA compares small business' share of Federal contracting to its share of total industry receipts based on Economic Census. In general, if the share of Federal contracting dollars awarded to small businesses in an industry is significantly smaller than the small business share of total industry's receipts, *ceteris paribus*, a justification would exist for considering a size standard higher than the current size standard.

The disparity between the small business Federal market share and industry-wide share may be attributed to a variety of reasons, such as extensive administrative and compliance requirements associated with Federal contracts, the different skill sets required by Federal contracts as compared to typical commercial contracting work, and the size of specific contracting requirements of Federal customers. These as well as other factors are likely to influence the type of firms that are able to compete for and succeed in getting Federal contracts within an industry. Firms receiving Federal contracts are likely to possess different characteristics than the average characteristics for all firms in that industry. By comparing small business Federal market share with industry-wide small business share, SBA includes in its size standards analysis the latest Federal contracting trends. This analysis may indicate a size standard larger than the current standard.

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[20] It should be noted that industries with similar receipts and Gini coefficients can have very different distributions as the Lorenz curves can have different shapes and yet still yield the same Gini coefficient. Despite this limitation, several studies have used the Lorenz curve and Gini coefficient in analyzing industry concentration (*e.g.*, *see* Guth, 1971; White, 1982; Reichardt, 1975; Yeats, 1973).

DATA SOURCES AND ESTIMATION

Industry Data

The primary source of data SBA uses in its industry analysis for ongoing comprehensive size standards review is a special tabulation of the 2002 Economic Census obtained from the U.S. Census Bureau.[21] The special tabulation is similar to the Enterprise Statistics, formerly published by the Census Bureau, except that the Economic Census data is limited to a business operation in its primary industry while the Enterprise Statistics also contained information on operations outside of the primary industry. The 2002 special tabulation contains information by NAICS industry on average firm size in terms of both receipts and employment, total receipts generated by the four largest firms, and size distributions of firms by various receipts and employment size classes.

One limitation of the special tabulation is that the employees and receipts figures are not fully displayed for some size classes due to disclosure prohibitions, mostly at the 6-digit NAICS level. SBA estimates such missing values using the displayed data at the 6-digit level and data at a higher level of industry aggregation, such as at the 2- or 3-digit NAICS level for which size distribution data are fully displayed.[22] For industries where SBA is not able to estimate missing values for some industry factors, SBA bases its analysis only on those industry factors for which information is complete.

Besides the Economic Census, SBA may also evaluate relevant industry data from other sources, including the County Business Patterns published by U.S. Census Bureau, Quarterly Census of Employment and Wages (QCEW, also known as ES-202 data) and Business Employment Dynamics (BED) from the U.S. Bureau of Labor Statistics, Census of Agriculture from the U.S. Department of Agriculture and data from industry associations, especially for those industries for which Economic Census data are either incomplete or missing and industries not covered by the Economic Census, such as Agriculture.

Assets Data

As stated above under "Start up costs," because of the lack of data on actual start up costs by industry, SBA uses average assets as a proxy for business start up costs. For this, SBA combines the sales to total assets ratios by industry, obtained from the Risk Management Association's (RMA) Annual Statement Studies with the average firm size (in terms of receipts)

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[21] The latest industry data SBA is using for its ongoing comprehensive size review are based on the 2002 Economic Census. The complete industry data based on the latest 2007 Economic Census are not expected to be available until late 2010.

[22] For example, because of disclosure restrictions, employee figures in certain cells of size distribution by employment size groups are given in ranges, such as <20, 20-99, 100-249, and so on. Employees values for these cells are estimated using the mid-values of these ranges (such as 10 for <20, 60 for 20-99, 175 for 100-249 and so on) and adjusting these values such that final values are consistent with each industry's total and total for each size class at a higher level of industry aggregation.. Missing values for receipts in distribution of firms by receipts size are estimated using the employment shares and adjusting the estimated values for internal consistency.

by industry from the 2002 Economic Census data to estimate the average assets size for each industry as follows: [23]

$$Average\ assets\ size = \frac{1}{(Sales / Total\ assets)_{RMA}} \times Average\ firm\ size\ (receipts)$$

$$= \left(\frac{Total\ assets}{Sales}\right)_{RMA} \times Average\ firm\ size\ (receipts)$$

The latest sales to total assets ratios that SBA uses to calculate average assets size are from the Risk Management Association's Annual Statement Studies, 2006-2008.[24]

Federal Contracting Data

To determine small business share of total Federal contracting dollars, SBA evaluates FPDS-NG data obtained from the U.S. General Service Administration's Federal Procurement Data Center (FPDC). The data contain a range of information on each Federal contract awarded, including name of the company receiving the contract and its small business status, dollar value of the contract, and an industry's NAICS code for the good and service being procured. For the comprehensive size standard review, SBA's evaluation of Federal contracting is based on the FPDS-NG data for fiscal years 2006-2008.

A big limitation of FPDS-NG data is that there is no information on specific employment or receipt size for individual contractors to conduct a more detailed analysis of the Federal contracting data. However, for certain sectors for which Federal contracting is a source of significant public concern, SBA matches FPDS-NG data with Central Contractor Registration (CCR) data to obtain information on specific size of individual firms receiving Federal contracts.

SBA Loan and Other Program Data

To determine the impact of size standards on SBA loan and other assistance, SBA analyzes its internal data on guaranteed loans. The current comprehensive size review uses the loan data for fiscal years 2007-2008.

SELECTION OF SIZE STANDARDS

Selection of Receipts Based Standards

To simplify size standards in this comprehensive size standards review SBA is proposing to select a size standard for an industry from a limited number of fixed size standard levels. For many years, SBA has been concerned about the complexity of determining small business status caused by a large number of varying receipts based size standards (see 69 FR 13130, March 4, 2004 and 57 FR 62515, December 31, 1992). For example, current receipts based size standards have more than 30 different levels, ranging from $0.75 million to $35.5 million, with many of those levels applying to one or a few industries only. SBA believes that such a large

[23] Please refer to www.rmahq.org for further information on the RMA data. Annual Statement Studies(R) is a registered trademark of The Risk Management Association. One limitation of the RMA data is that sales to assets ratio are missing for a considerable number of industries at the 6-digit NAICS level.

[24] SBA will update these data once the new data become available from RMA.

number of standards with small variations are both unnecessary and difficult to justify analytically. Simplifying the administration of SBA's size standards with a fewer size standard levels will produce more common size standards for businesses operating in multiple and related industries and greater consistency in size standards among industries that are similar in their economic characteristics.

Under the current comprehensive size standards review, SBA is proposing to establish eight "fixed-level" receipts based size standards: $5.0 million, $7.0 million, $10.0 million, $14.0 million, $19.0 million, $25.5 million, $30.0 million, and $35.5 million. These levels are established by taking into consideration the minimum, maximum and the most commonly used current receipts based size standards. Currently, excluding NAICS Sector 11 (Agriculture, Forestry, Fishing and Hunting [25]), the most commonly used receipts based size standards cluster around the following six levels: $2.0 million to $4.5 million[26], $7.0 million, $9.0 million to $10.0 million, $12.5 million to $14.0 million, $25.0 million to $25.5 million, and $33.5 million to $35.5 million. SBA has selected $7.0 million as one of the eight fixed receipts based size levels because it is the anchor size standard for receipts based standards, as described earlier. A lower or minimum size level is established at $5.0 million.[27] Among the higher size clusters, $10.0 million, $14.0 million, $25.5 million, and $35.5 million are selected as other four levels of fixed size standards. Because of a large gap between two of the size standard intervals, an intermediate level of $19.0 million is established between the $14.0 million and $25.5 million levels. For the same reason, another intermediate level of $30.0 million is established between $25.5 million and $35.5 million. These two intermediate levels reflect roughly similar proportional differences between the two successive size standard levels.

Establishing a fixed size level at $5.0 million would enable SBA to establish a receipt based size standard for certain industries below the $7.0 million anchor. Most of the size standards for the crop production and animal production industries (NAICS codes 111110 through 112990) are statutorily set at $0.75 million. In addition, unique industry characteristics or unique methods used in calculating an industry's receipts may also justify a size standard below $7.0 million. For example, for industries such as travel agencies and real estate brokers where receipts are measured based on commissions received, as opposed to total transaction values, SBA may establish size standard below $7.0 million.

In a further effort to simplify size standards, SBA may also propose a common size standard for certain closely related industries. Although the size standard analysis may support a specific size standard level for each industry, SBA believes that establishing different size standard levels for closely related industries may be inappropriate. For example, in cases where

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[25] The size standard for most of Crop and Animal Production industries is statutorily set at $0.75 million, while the standards for Forestry, Fishing, Hunting and Support Activities for Agriculture and Forestry are established by SBA based on the Census of Agriculture and related data. The Economic Census includes no industry from NAICS Sector 11.

[26] These mostly include industries relating to real estate brokers and travel agencies that have a $2.0 million size standard (where receipts are defined in terms of commissions received instead of total dollar value of business) and certain architectural and engineering (A&E) industries (including surveying and mapping) that have a standard of $4.5 million.

[27] The $5 million size level is about 40 percent below the $7 million anchor, the same as average difference between other two consecutive size levels. Excluding monetary standards for agriculture and those based on commissions, $5 million is in the close neighborhood of the current lowest $4.5 million receipts based standard.

many of the same businesses operate in the same two or more industries, establishing a common size standard would better reflect the industry marketplace than establishing separate size standards for each industry. This situation led SBA to establish a common size standard for the Computer Systems Design and Related Services industries (NAICS 541511-541519), even though the industry data may support a unique size standard for each industry. Businesses engaged in Information Technology related services typically perform activities in two or more other related industries. Consequently, SBA has continued to use a common size standard for Computer and Office Machine Repair Maintenance industry in the Other Services Sector (NAICS 811211) and Computer Systems Design and Related Services Sector (NAICS 541511-541519). Whenever SBA proposes a common size standard for closely related industries it will include its justification in the proposed rule.

Selection of Employee Based Size Standards

Currently, most prevalent levels of size standards for Mining and Manufacturing industries are 500 employees, 750 employees, and 1,000 employees. Only three Manufacturing industries have a 1,500-employee size standard. For the current comprehensive size standards review, for Mining and Manufacturing industries (to be referred to as "Manufacturing" hereafter) SBA is proposing to establish a new minimum size level at 250 employees or half of the 500-employee anchor. Similarly, SBA has adopted 1,000 employees as the maximum size standard for Manufacturing industries. This will allow SBA to revise downward the current size standards for some industries in which employees, due to technological progress and increased automation, are significantly more productive today than they were when the 500-employee size standard was adopted.

Currently, all industries in the Wholesale Trade sector have a single size standard of 100 employees. As part of current comprehensive size review, SBA establishes five employee-based size levels for this sector – 50 employees, 100 employees (anchor), 150 employees, 200 employees, and 250 employees. The smallest size level for the wholesale industries is half of the anchor level as was the case for Mining and Manufacturing industries. Similarly, the highest size level for wholesale industries is half of the current 500-employee size standard for Federal procurement under the "non-manufacture rule". Use of multiple size levels will better enable SBA to account for differences among the industries within the sector.

Thus, with all Manufacturing and Wholesale Trade industries combined, there will be eight fixed levels of employee based size standards under the current comprehensive size review – 50 employees, 100 employees, 150 employees, 200 employees, 250 employees, 500 employees, 750 employees, and 1,000 employees. Of these, 200 employees and 250 employees are newly established size levels, while the rest are already in use. SBA is proposing to eliminate the current 1,500-employee size level for manufacturing industries. Currently, only three manufacturing industries have a 1,500-emplyee size standard.

EVALUATION OF INDUSTRY FACTORS[28]

As mentioned earlier, to assess the appropriateness of the current size standards SBA evaluates the structure of each industry in terms of four economic characteristics, namely

[28] *See* an appendix at the end of this document for detailed analytical procedures involved in evaluation of industry factor and Federal procurement trends.

average firm size, average assets size, four-firm concentration ratio, and size distribution of firms using Gini coefficient. SBA compares these economic characteristics for an industry to the average characteristics of industries in an appropriate anchor comparison group.

If, in terms of the four industry factors analyzed, the structure of an industry under review is similar to the average structure of industries in the anchor comparison group, SBA will consider adopting the anchor size standard as an appropriate size standard for that industry. If the individual industry's structure suggests a higher size standard, a size standard higher than the anchor size standard would be selected. The level of the new size standard is determined by the proportional difference between the characteristics of the anchor comparison group and a second comparison group comprising industries with higher level size standards.

Differences in industry structure between an individual industry and the industries in the two comparison groups are determined by comparing data on the four industry factors, including average firm size, average assets size, four-firm concentration ratio, and Gini coefficient of distribution of firms by size. For each of these factors, a separate size standard is established based on the amount of differences between the values for an industry under review and those for the two comparison groups. Table 3 shows two measures of the average firm size (simple and weighted), average assets size, four-firm concentration ratio, average receipts of the four largest firms, and Gini coefficient for anchor level and higher level comparison groups for receipts based size standards.[29] Similar results for employee based size standards are presented in Table 4.

Table 3
Average Characteristics of Receipts Based Comparison Groups

Receipts Based Comparison Group	Avg. Firm Size ($ million)		Avg. Assets Size ($ million)	Avg. Four-firm Concentration Ratio (%)	Avg. Receipts of Four Largest Firms ($ million) [a]	Gini Coefficient
	Simple Average	Weighted Average				
Anchor Level	1.19	17.64	0.71	18.7	189.9	0.599
Higher Level	4.77	52.27	2.05	22.3	639.4	0.725

[a]. To be used for industries with a four-firm concentration ratio of 40% or greater.

[29] It should be noted the figures shown in these and subsequent tables are subject to change when SBA updates its analysis with new data or adopts a new analytical procedure. Those changes will be reflected in proposed or final rules.

Table 4
Average Characteristics of Employee Based Comparison Groups

Employee Based Comparison Group	Avg. Firm Size (number of employees)		Avg. Assets Size ($ million)	Avg. Four-firm Concentration Ratio (%) [a]	Avg. Receipts of Four Largest Firms ($ million) [b,c]	Gini Coefficient[a]
	Simple Average	Weighted Average				
Manufacturing						
Anchor Level	52.1	294.0	4.38	36.7	260.2	0.714
Higher Level	155.8	844.5	17.04	68.7	655.6	0.759
Wholesale						
Anchor Level	16.3	117.0	3.44	22.3	2,161.0	0.699
Higher Level	28.1	421.8	5.60	26.8	3,329.8	0.812

[a]. Four-firm concentration ratio for industries with employee based standards is defined in terms of receipts instead of employees of the largest four firms because the receipts is a better measure of market power. For the same reason, the Gini coefficient is also computed in terms of percentages of receipts.

[b]. The average number of employees of the four largest firms would have been a better measure for the calculation of employee based size standards. However, since the special tabulation of the 2002 Economic Census did not have this information, average receipts size of the four largest firms is used.

[c]. To be used for industries with a four-firm concentration ratio of 40% or greater.

ESTIMATION OF RECEIPTS BASED SIZE STANDARDS FOR INDUSTRY FACTORS[30]

An estimated size standard supported by each industry factor is derived by comparing its value for a specific industry under review to the corresponding values for the two comparison groups, as presented in Table 3. If the industry value for a particular factor is near that for the anchor comparison group, the $7.0 million anchor size standard would be considered appropriate for that factor.

If an industry's value for a factor is significantly above or below that of the anchor comparison group, a size standard higher or lower than $7.0 million would be warranted. The level of the size standard in these cases is derived based on the proportional difference between the industry value and the values for the two comparison groups.

Let X = Industry value for a given industry factor

AV = Average value for anchor size standard industry group

HLV = Average value for the higher-level size standard industry group

[30] Appendix at the end of this document shows specific formulas involved in deriving size standard for each of the five primary factors.

ASTD = Anchor size standard ($7 million)

HLSTD = Higher level group average size standard ($29 million)

Using these notations, a size standard for each industry factor is computed as follows:

$$\left[\frac{(X-AV)}{(HLV-AV)}\right]\times(HLSTD-ASTD)+ASTD$$

Substituting the values for ASTD and HLSTD yields,

$$\left[\frac{(X-AV)}{(HLV-AV)}\right]\times(29-7)+7=\left[\frac{(X-AV)}{(HLV-AV)}\right]\times 22+7$$

In this expression, the first term within bracket is the difference between the industry value and the anchor value as a proportion of the difference between higher level industry value and anchor level industry value. Applying this proportion to the difference between the higher level $29 million size standard and the anchor level $7 million size standard yields an estimated increase above the anchor size standard. Adding this increase to the $7 million anchor size standard yields a specific size standard supported by the data. This procedure is illustrated below for each factor using a specific value for each factor for a hypothetical industry. This procedure is based on a linear interpolation technique as graphically depicted in Figure 3 below. Size standards for other industry factors can be derived in a similar manner using this framework.

Size Standard Based on Average Firm Size

Simple Average Firm Size

A simple average firm size of $1.9 million in receipts would support a size standard of $10 million. As can be seen from Table 3, the simple average firm size of industries with the $7 million anchor size standard is $1.19 million and the average firm size of industries with the higher level receipts based standard is $4.77 million.

Thus, in this example, X equals $1.9 million, AV equals $1.19 million, and HLV equals $4.77 million. Substituting these values in the formula we get,

$$\left[\frac{(X-AV)}{(HLV-AV)}\right]\times 22+7$$

$$\left[\frac{(1.9-1.19)}{(4.77-1.19)}\right]\times(29-7)+7=\left[\frac{0.71}{3.58}\right]\times 22+7=0.20\times 22+7=4.36+7=\$11.36 \text{ mil.}$$

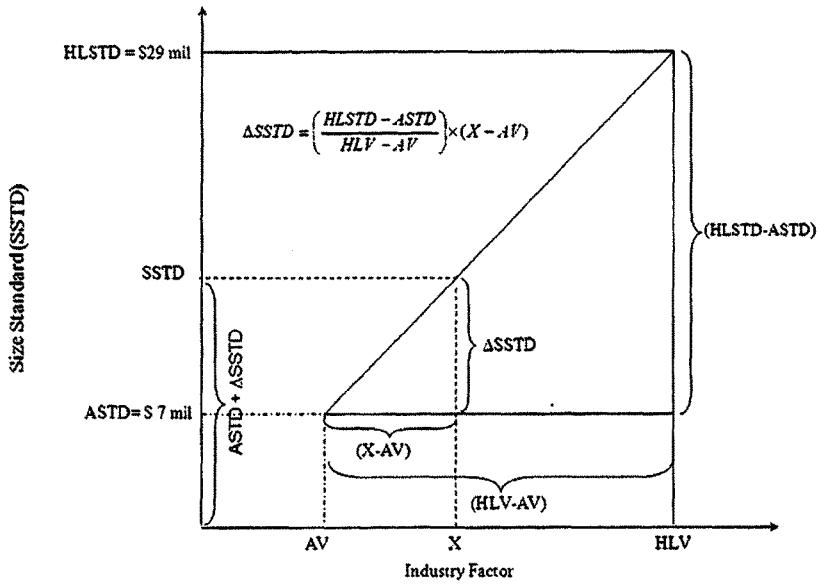
Rounded to the nearest fixed level, the above result gives a size standard of $10 million.

Weighted Average Firm Size

For an industry with a weighted average firm size of $35.0 million, all else being equal, $19 million would be a supportable size standard. As shown in Table 3, the weighted average size for the anchor industry group is $17.64 million and that for the higher level comparison group is $52.27 million.

Thus, here, X equals $35.0 million, AV equals $17.64 million, and HLV equals $52.27 million. Substituting these values in the formula we get,

Figure 3. Receipts Based Size Standard Using Linear Interpolation Technique



$$SSTD = \left(\frac{(X - AV)}{(HLV - AV)}\right) \times (HLSTD - ASTD) + ASTD$$

$$= \left(\frac{(HLSTD - ASTD)}{(HLV - AV)}\right) \times (X - AV) + ASTD = ASTD + \Delta SSTD$$

$$\left[\frac{(X - AV)}{(HLV - AV)}\right] \times 22 + 7 = \left[\frac{(35.0 - 17.64)}{(52.27 - 17.64)}\right] \times 22 + 7 = \left[\frac{17.36}{34.63}\right] \times 22 + 7$$

$= 0.50 \times 22 + 7 = 11.03 + 7 = \$18.3$ million.

Rounded to the nearest fixed level it becomes $19 million.

Size Standard Based on Average Assets Size

If the average assets size of an industry under consideration is $1.17 million, the appropriate size standard for this factor would be $14 million. As shown in Table 3, the average assets size of the industries with the anchor size standard is $0.71 million and the average assets size of the industries in the higher size standard group is $2.05 million.

Here, X = $1.17 million, AV = $0.71 million, and HLV = $2.05 million. Plugging these values in the formula we get,

$$\left[\frac{(X-AV)}{(HLV-AV)}\right]\times 22+7=\left[\frac{(1.17-0.71)}{(2.05-0.71)}\right]\times(29-7)+7=\left[\frac{0.46}{1.34}\right]\times 22+7$$

$$=0.34\times 22+7=7.55+7=\$14.55 \text{ million.}$$

Rounded to the nearest fixed level, this gives a size standard of $14 million.

Size Standard Based on Four-firm Concentration Ratio

If the biggest four firms account for 40 percent or more of total industry receipts, a size standard for that factor is derived based on the average receipts size of the four biggest firms in an industry and that for the four biggest firms in the two comparison groups.

If the four largest firms in an industry account for 53.3 percent of total industry receipts and the average firm size of the four biggest firms in that industry is $241.2 million, the appropriate size standard for this factor will be $10 million.

Since the four-firm concentration ratio is above the cut-off point of 40 percent, a separate size standard is computed for this factor. As shown in Table 3 above, the average firm size of the four biggest firms for industries in the anchor size standard group is $189.9 million and average firm size of the four biggest firms in industries in the higher level size standard group is $639.4 million.

Here, X = $241.2 million, AV = $189.9 million, and HLV = $639.4 million. Substituting these values in the formula we get,

$$\left[\frac{(X-AV)}{(HLV-AV)}\right]\times 22+7$$

$$=\left[\frac{(241.2-189.9)}{(639.4-189.9)}\right]\times 22+7$$

$$=\left[\frac{51.3}{449.5}\right]\times 22+7=0.114\times 22+7=2.51+7=\$9.51 \text{ million.}$$

Rounded to the nearest fixed level, this gives a size standard of $10.0 million.

Size Standard Based on Size Distribution of Firms

If an industry's size distribution produces a Gini coefficient value of 0.64, its size standard for this factor would be $14.0 million. The average Gini coefficient value for the anchor industry group is 0.599 and that for higher level size group is 0.725 (Table 3).

Thus, for this example, X = 0.64, AV = 0.599, and HLV = 0.725. Substituting these values in the formula we get,

$$\left[\frac{(X-AV)}{(HLV-AV)}\right]\times 22+7$$

$$=\left[\frac{(0.640-0.599}{(0.725-0.599)}\right]\times 22+7=\left[\frac{0.041}{0.126}\right]\times 22+7=0.33\times 22+7=7.16+7=\$14.16 \text{ mil.}$$

Rounded to the nearest fixed size level, this gives a size standard of $14 million.

Table 5 shows ranges of values for each industry factor and the size standards supported by those values.

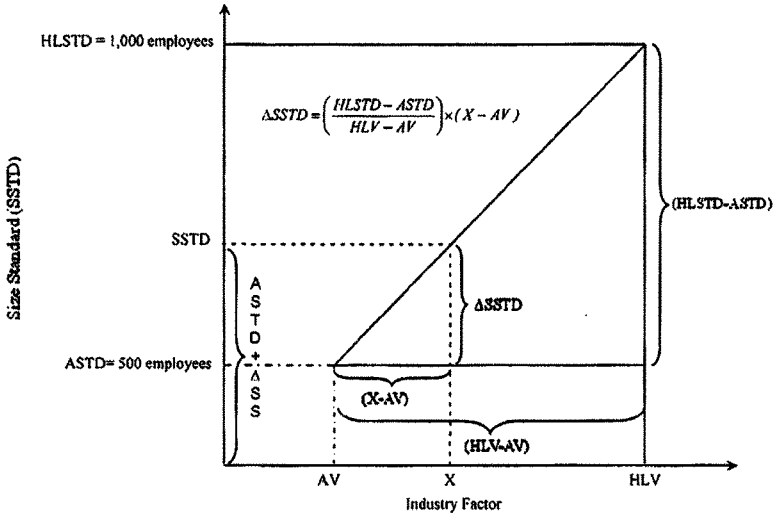
Table 5
Value of Industry Factors and Supported Receipts Based Size Standards

If Simple Avg. Receipts Size ($ million)	Or if Weighted Avg. Receipts Size ($ million)	Or if Avg. Assets Size ($ million)	Or if Avg. Receipts of Largest Four Firms ($ million)	Or if Gini Coefficient	Then Size Standard is ($ million)
< 1.03	< 16.07	< 0.65	< 169.4	< 0.593	5.0
1.03 to1.43	16.07 to 20.00	0.65 to 0.80	169.4 to 220.5	0.593 to 0.608	7.0
1.44 to 2.00	20.01 to 25.51	0.81 to 1.02	220.6 to 292.0	0.609 to 0.628	10.0
2.01 to 2.74	25.52 to 32.59	1.03 to 1.29	292.1 to 384.0	0.629 to 0.653	14.0
2.75 to 3.67	32.60 to 41.65	1.30 to 1.64	384.1 to 501.5	0.654 to 0.686	19.0
3.68 to 4.57	41.66 to 50.30	1.65 to 1.97	501.6 to 613.8	0.687 to 0.718	25.5
4.58 to 5.38	50.31 to 58.17	1.98 to 2.28	613.9 to 716.1	0.719 to 0.746	30.0
> 5.38	>58.17	> 2.28	> 716.1	> 0.746	35.5

ESTIMATION OF EMPLOYEE BASED SIZE STANDARDS FOR INDUSTRY FACTORS

Employee based size standards for the manufacturing and wholesale industries are established in the same manner as receipts based standards as described above. That is, a separate employee based standard is established for each industry factor for every industry. This involves comparing an industry under review with anchor size and higher level size comparison groups with respect to each industry factor. If the factor value for the industry is similar to that of the anchor group, the anchor standard would be appropriate. Conversely, if the industry value for a factor is significantly above or below that of the anchor group, a size standard above or below the anchor would be adopted. The level of the size standard in these cases is derived based on the proportional difference between the industry value and the values for the two comparison groups. This procedure for deriving size standards for the manufacturing industries is depicted in Figure 4, which can easily be extended to wholesale standards.

Figure 4. Employee Based Size Standard Using Linear Interpolation Technique



$$SSTD = \left(\frac{(X - AV)}{(HLV - AV)}\right) \times (HLSTD - ASTD) + ASTD$$

$$= \left(\frac{(HLSTD - ASTD)}{(HLV - AV)}\right) \times (X - AV) + ASTD = ASTD + \Delta SSTD$$

Because of different anchor and higher level size comparison groups, the manufacturing and wholesale size standards are estimated using different formulas, as described below.

Estimation of Manufacturing Size Standards for Industry Factors

Let X = Industry value for a given industry factor

AV = Average value for anchor size standard industry group

HLV = Average value for the higher-level size standard industry group

ASTD = Anchor size standard (500 employees)

HLSTD = Higher level group average size standard (1,000 employees)

Using these notations, a size standard for each industry factor is computed as follows:

$$\left[\frac{(X - AV)}{(HLV - AV)}\right] \times (HLSTD - ASTD) + ASTD$$

Substituting the values for ASTD and HLSTD yields,

$$\left[\frac{(X-AV)}{(HLV-AV)}\right]\times(1000-500)+500=\left[\frac{(X-AV)}{(HLV-AV)}\right]\times 500+500$$

The above formula yields an estimated size standard for each factor, which is then rounded to the nearest fixed size level. Table 6 shows ranges of values for each industry factor and the manufacturing size standards supported by those values.

Table 6
Values of Industry Factors and Supported Manufacturing Size Standards

If Simple Avg. Firm Size (employees)	Or if Weighted Avg. Firm Size (employees)	Or if Avg. Assets Size ($ million)	Or if Avg. Receipts of Largest Four Firms ($ million)	Or if Gini Coefficient	Then Size Standard is (employees)
< 26.1	< 156.4	< 1.21	<161.3	< 0.647	250
26.2 to 78.1	156.4 to 431.7	1.21 to 7.54	161.3 to 359.0	0.647 to 0.677	500
78.2 to 129.9	431.8 to 706.9	7.55 to 13.88	359.1 to 556.7	0.678 to 0.707	750
> 129.9	> 706.9	> 13.88	> 556.7	> 0.707	1,000

Estimation of Wholesale Trade Size Standards for Industry Factors

Let X = Industry value for a given industry factor
AV = Average value for anchor size standard industry group
HLV = Average value for the higher-level size standard industry group
ASTD = Anchor size standard (100 employees)
HLSTD = Higher level group average size standard (250 employees)

Using these notations, a size standard for each industry factor is computed as follows:

$$\left[\frac{(X-AV)}{(HLV-AV)}\right]\times(HLSTD-ASTD)+ASTD$$

Substituting the values for ASTD and HLSTD yields,

$$\left[\frac{(X-AV)}{(HLV-AV)}\right]\times(250-100)+100=\left[\frac{(X-AV)}{(HLV-AV)}\right]\times 150+100$$

The above formula gives an estimated size standard for each factor, which is then rounded to the nearest fixed size level. Table 7 shows ranges of values for each industry factor and the wholesale trade size standards supported by those values.

Table 7
Values of Industry Factors and Supported Wholesale Trade Size Standards

If Simple Avg. Firm Size (employees)	Or if Weighted Avg. Firm Size (employees)	Or if Avg. Assets Size ($ million)	Or if Avg. Receipts of Largest Four Firms ($ million)	Or if Gini Coefficient	Then Size Standard is (employees)
< 14.4	< 66.2	< 3.08	< 1.97	< 0.680	50
14.4 to 18.3	66.2 to 167.8	3.08 to 3.80	1.97 to 2.36	0.680 to 0.718	100
18.4 to 22.2	167.9 to 269.4	3.81 to 4.52	2.37 to 2.75	0.719 to 0.755	150
22.3 to 26.1	269.5 to 371.0	4.53 to 5.24	2.76 to 3.13	0.756 to 0.793	200
> 26.1	> 371.0	> 5.24	> 3.13	> 0.793	250

EVALUTAION OF FEDERAL CONTRACTS

SBA considers Federal contracts as one of the primary factors in its size standard analysis for industries in which the annual amount of total Federal contracting dollars is $100 million or more. SBA believes this threshold reflects a level of contracting in which an adjustment to a size standard may have a significant impact on small business opportunities and assumes that impact of size adjustment on small business would be insignificant below this level. .

To determine if small businesses in an industry are receiving a fair share of federal contracts, SBA computes the small business shares of Federal contracting dollars and industry total receipts as follows:

Small business share in Federal contracts

$$= \frac{\textit{Total federal contracting dollars going to small business in an industry}}{\textit{Total Federal contracting dollars going to that industry}}$$

Small business share in industry total receipts

$$= \frac{\textit{Total dollars going to small business in an industry}}{\textit{Total dollars going to that industry}}$$

All other factors being equal, if the share of Federal contracting dollars awarded to small businesses in an industry is significantly less than the small business share of total industry's receipts, a justification would exist for considering a size standard higher than the current size standard. Conversely, if the small business share of Federal contracting activity is near or above the small business share in total industry receipts, this will support the current size standard. Besides the small business share, SBA may also examine the distribution of contracts by contract size and by business status.

SIZE STANDARD BASED ON FEDERAL CONTRACTING FACTOR

As mentioned earlier, the existing FPDS-NG data on Federal contracts are limited to identifying businesses as small or other than small with no information on exact size of businesses receiving Federal contracts to conduct a more precise analysis. Given limited data, SBA will designate a size standard at one level higher than their current size standard for industries where the small business share in Federal Government contracts is between 10 and 30 percentage points lower than their shares in total industry receipts and at two levels higher than the current size standard if the difference is higher than 30 percentage points.

Generally, SBA will not designate a size standard for the Federal contracting factor that is higher than two levels above the current size standard because this would result, in most cases, in designating a size standard more than twice the current size standard. SBA believes that given the limitations of the FPDS-NG data, and the complex relationships among a number of variables affecting small business participation in Federal contracting, a larger adjustment should usually be considered after further analysis of the impact of any subsequent revision to the current size standard. In limited situations, however, SBA may conduct a more extensive examination of Federal contracting experience to support a different size standard than indicated by this general rule to take into consideration significant and unique aspects of small business competitiveness in the Federal contract market. Engineering services for military weapons and aerospace equipment is an example where SBA took this approach because of the significant differences between firms engaged in this type of defense-oriented activities and those engaged in other types of engineering services.

For example, let's assume that an industry with current size standard of $7 million had an average of $150 million in Federal contracting dollars during FY 2006-2008, of which 15 percent went to small businesses. Let's further assume that small businesses accounted for 40 percent of total receipts of that industry. Thus, in this case, the small business share in Federal government contracts is 25 percentage points lower than their shares in total industry receipts. According to the above rule, the new size standard for that industry based on Federal contracting factor should be set one level higher than the current $7 million size standard at $10 million. SBA also employs this approach to account for Federal contracting factor in deriving employee based size standards.

DERIVATION OF COMPOSITE SIZE STANDARD

SBA methodology presented above results in five separate size standards based on evaluation of the five primary factors. The hypothetical value for each of the five factors and corresponding size standard corresponding to each factor are summarized in Table 8.

Also shown in Table 8 is the derivation of the composite size standard for the five primary factors. The simple average of five size standards based on each of the five factors is $12.4 million. Rounded to the nearest fixed size level, this becomes $14.0 million. The simple average method weighs all factors equally. The composite size standard for employee based standards can also be derived in a similar fashion. SBA can assign different weights to these factors in response to its policy decisions and other considerations, as discussed below under weighting method.

Table 8
Derivation of Composite Size Standard

Primary Factor	Factor Value	Size Standard ($ million)	
1. Average firm size [a]			14.0
1.1. Simple average firm size ($ mil.)	1.9	10.0	} 14.0
1.2. Weighted average firm size ($ mil.)	35.0	19.0	
2. Average assets size ($ million)	1.17		14.0
3. Four-firm concentration ratio (%)	53.3		} 10.0
(Average firm size of 4 biggest firms ($ mil.))	(241.2)		
4. Size distribution of firms (Gini coefficient)	0.64		14.0
5. Federal procurement	-25%		10.0
Average (composite)			14.4

[a]. Note that size standard for average firm size is computed as average of size standards supported by simple average firm size and weighted average firm size, rounded to the nearest fixed size level.

SECONDARY FACTORS

In addition to the primary factors discussed above, there are factors of lesser importance and not easily quantifiable, which SBA also considers in deciding a size standard. As in the case of primary factors, not all of the secondary factors would be applicable in every case, but each will be examined to see to what extent they are relevant. These factors will not by themselves impart the same direction to a size standard in all cases and thus are of secondary importance. These factors will be considered separately and explicitly discussed in the course of size standards reviews to determine the direction of influence on a size standard. Five such factors are discussed next.

Technological Change

This factor affects the production process of an industry. It can result in fundamental shifts in an industry's operations and ultimately can revolutionize entire segments of the economy and the labor force. If a change is toward automation, for example, so that fewer employees produce the same product, the size standard in that industry could be nudged downward.

Competing Products from Other Industries

This factor has to do with the way industries are defined according to the North American Industry Classification System (NAICS). With a few exceptions, size standards are set on the basis of industries according to the NAICS. This new system, first introduced in 1997 replacing the Standard Industry Classification System (1987), is used both inside and outside the government as a uniform framework for categorizing economic activity for the purpose of collecting statistics on the nation's economy.

The NAICS system classifies economic units that have similar production processes in the same industry. A market on the other hand, is a group of substitutable or competing products.[31] While there are millions of products and services, there are less than 1,200 six-digit NAICS categories to cover them all. Thus in adopting the NAICS System for size standards, SBA has implicitly decided that the standards should be defined according to production processes, not products or services. While this method may have some drawbacks, the NAICS is undoubtedly more manageable both because it limits the number of size standards to levels which are administratively practical and because most industry statistics are collected on the NAICS basis. When SBA is aware of competing products from other industries impacting the Federal procurement process, this can be used as a factor in setting size standards.

Industry Growth Trends

This factor would take into consideration the overall trends in a particular industry, such as changes in firm size, concentration, and size distributions of firms. Like the other secondary factors, growth trends would have a lesser influence on an industry's size standard analysis. There is no unambiguous upward or downward influence it would have on setting size standards. Also because of changes in the industry classification systems and resultant inconsistencies in industry data over time, inclusion of this factor in the size standard is quite limited. However, with the release of 2007 Economic Census data, there will be 10 years of data covering three Economic Censuses under the NAICS basis. This will allow SBA to conduct a more detailed analysis of changes in industry structure for revising size standards in the future.

History of Activity in the Industry

Prior correspondence or public comment, changes in Federal procurement policies, financial indicators or other relevant information is retained by the Size Standards Office for each industry. This would be examined in the course of establishing a size standard. SBA also thoroughly evaluates all public feedback on its proposed rule before issuing the final rule.

Impacts on SBA Programs

SBA also evaluates the impact of a size standard revision on its programs, including the volume of SBA guaranteed loans within an industry and the number and size of firms obtaining those loans. This is to assess whether the existing or proposed size standard for a particular industry may be restricting the level of Federal small business assistance to firms in that industry. If the analysis shows that the proposed size standard based on the five primary factors (*i.e.*, average firm size, average assets size, four-firm concentration ratio, distribution of firms by size, and small business share of Federal contracting) results in a significant reduction in the small business assistance compared to the existing standard, a size standard higher than proposed level or the existing standard would be adopted. If small businesses have already been receiving a significant share of assistance through SBA loan programs, or if the financial assistance has been provided mainly to small businesses much smaller in size than the proposed size standard, consideration of this factor for determining the size standard may not be necessary.

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[31] Thus, while paper clips and bird cages are not competing products, they are produced in the same industry (NAICS 332618 "Fabricated Wire Products Manufacturing") due to the similarity of production process, *i.e.* bending metal wire. In contrast containers for liquid food, such as fruit juices, come in a variety of types such as glass, plastic, paperboard and cans. Each of the four types of containers is produced in a different industry, but competes with each other for the juice container market because they are sufficiently substitutable so as to constitute a market.

WEIGHTING METHOD

As discussed above, the factors SBA evaluates in establishing size standards have been divided into two groups – primary and secondary. Although within each group there are no specific weights, the *Federal Register* discussion proposing any size standard change would describe how the various factors are weighted in devising a size standard. While each factor is examined for every industry, the importance of each factor within a group may vary according to the characteristics of each industry. This method ensures consistency of approach while maintaining sufficient flexibility in establishing a size standard for each industry.

Finally, SBA would attempt, whenever possible, to carry out in-depth industry studies to support its size standards reviews. When other relevant factors are introduced beyond those listed in this report, they will be made explicit and their effect described in the proposed regulation.

ASSESSING DOMINANCE IN FIELD OF OPERATION

Section 3(a) of the Act defines a small business concern as one that is (1) independently owned and operated, (2) not dominant in its field of operation, and (3) within a specific small business definition or size standard established by the SBA Administrator. SBA considers as part of its evaluation of a size standard whether a business concern at a proposed size standard would be considered dominant in its field of operation. Consistent with legislative history, this assessment generally considers the industry's market share of firms at the proposed size standard, or other factors that may show whether an individual firm can exercise a major controlling influence on significant numbers of business concerns at a national level. If SBA analysis indicates a proposed size standard would include a dominant firm, a lower size standard would be considered to exclude the dominant firm.

OTHER MEASURES OF SIZE STANDARDS

In limited situations, SBA establishes a size standard measure unique to an industry. This occurs when the receipts and employee based measures do not adequately reflect the level of activity of firms within an industry. An alternative size standard measure may be established where the NAICS industry comprises a single and discrete activity. The selected size measure is a widely used measure of industry activity by industry analysts. In addition, the availability of reliable industry data on the alternative size measure is also important. Below is a brief discussion of four specific alternative measures of size standards that SBA is using today.

Barrels Per Calendar Day Refining Capacity

Since 1955, for purposes of Government procurement, SBA has always used 1,500 employees in conjunction with barrels per calendar day of refining capacity as the size standard for the petroleum refining industry. Currently, refining capacity is 125,000 barrels per calendar day. Refining capacity is considered to be a better indicator for measuring and comparing the operations of petroleum refiners than both the number of employees and receipts. In 1992, SBA proposed eliminating the refining capacity component of the size standard for refiners and using the 1,500-employee size standard only. However, industry comments overwhelmingly favored the continued use of refining capacity as part of size standard for the petroleum refining industry.

Moreover, several other Federal agencies, such as the U.S. Department of Energy and Environmental Protection Agency, also use the refining capacity as a measure to differentiate one refiner from another. The employee component in refining size standard is necessary to account for affiliation involving entities not engaged in refining activity.

For establishing a size standard based on refining capacity, SBA generally follows its standard approach to analyzing industry structure. For example, average firm size, distribution of firms by size, and concentration ratios, and Federal contracting participation are analyzed in terms of refining capacity. Depending on the availability relevant data, starts up costs are also evaluated. In lieu of an established anchor size comparison group as for the receipts and employee based standards, SBA focuses its analysis on changes in the industry structure since the previous adjustment to the size standard and the historic size of small business segment in the industry.

Megawatts Hours of Electric Output

In 1974, SBA established four million megawatts hours in terms of the preceding-year total electric output as a size standard for Electric Utilities. Previously, SBA had used the receipts based anchor size standard of $1 million. SBA examined two factors in arriving at this level – the level and distribution of receipts and trend of industry concentration among the top electricity producers. To encourage mergers among smaller producers and increase the level of competition within the industry, SBA adopted four million megawatts hours of annual output as the size standard for Electric Utilities.

Total Assets

In 1984, SBA established a size standard of $100 million in total assets for most of the industries in the banking sector. For this, SBA analysis focused in the average assets size of banks and the distribution of banks by assets size. It also considered the number of bank branches at a particular size as well as whether the bank had the capability for electronic fund transfers. The Agency also took into consideration the expert opinions of industry economists on what constitutes a small bank. The consensus view supported the SBA estimate of $100 million standard in total assets. Due to periodic adjustments for inflation, that value has increased to $175 million today.

Net Worth and Net Income

The Small Business Investment Company (SBIC) program and the Certified Development Company (CDC) program (504 program) utilize either SBA industry based size standard or an alternate size standard based on net worth and net income. SBA decisions on the levels of size standards in terms of net worth and net income are based on the objectives of the program. The last change to the SBIC net worth and net income size standards occurred in 1994. Because of statutory changes to the SBIC program in 1992, the Agency believed higher net worth and net income size standards were needed to support the level of small business assistance intended by those changes. To adopt the new levels of standards, SBA examined the maximum level of investment to businesses by a SBIC licensee and the overall level of financing by all investors. Current standards for the SBIC program are $18 million in net worth and $6 million in net income. Corresponding standards for the 504 program are $8.5 million and $3.0 million, respectively.

ADJUSTMENT TO MONETARY BASED SIZE STANDARDS FOR INFLATION

SBA makes adjustments to its monetary based size standards when necessary. Under its current regulations, SBA assesses the impact of inflation on monetary based size standards at least once every five years. This assures the public that SBA monitors inflation and decides whether to adjust size standards at least that often, if not more frequently. Inflation adjustments are separate changes to those made through an analysis of industry structure; they and are intended to maintain the real value of a monetary based size standards until a more detailed size standards analysis may be conducted. SBA made adjustments for inflation in 2008, 2005, 2002, 1994, 1984 and 1975.

To calculate an inflation adjustment, SBA follows the following steps:

1. Determine an inflation index to represent the change in monetary value from one period to the next. There are a number of inflation indexes that the Federal government produces, but for the last several adjustments for inflation, SBA has opted to use the chain-type price index for the Gross Domestic Product (GDP), a broad measure of inflation for the economy as a whole. The U.S. Department of Commerce, Bureau of Economic Analysis (BEA), publishes this index quarterly. To better account for a variation in inflation levels across industries, SBA may consider using industry specific inflation indices in its future inflation adjustments. Some possible industry specific indices include chain-type GDP price indices by industry from BEA and consumer and producer prices by industry from the U.S. Bureau of Labor Statistics.
2. Determine the base or starting period, which is usually the latest quarter for which GDP price index statistics were available at the time of previous inflation adjustment.
3. Determine the ending period, which is usually the latest quarter for which GDP price data are available at the time of current inflation adjustment.
4. Calculate the rate of inflation between base period and ending period as follows:

$$\textit{Rate of inflation (\%)} = \left(\frac{GDP\,PRICE\,INDEX_{End\ period} - GDP\,PRICE\,INDEX_{Base\ period}}{GDP\,PRICE\,INDEX_{Base\ period}} \right) \times 100$$

$$= \left(\frac{GDP\,PRICE\,INDEX_{End\ period}}{GDP\,PRICE\,INDEX_{Base\ period}} - 1 \right) \times 100$$

For the latest inflation adjustment, the third quarter of 2001 was used as the base period and first quarter of 2008 was used as the ending period. When the proposed rule was prepared, the chain-type price index for GDP was 102.690 for the third quarter of 2001 (base period) and 121.363 for the first quarter of 2008 (end period). Based on these values, using the above formula, rate of inflation is 18.2 percent between the two periods.

$$Rate\ of\ inflation = \left(\frac{GDP\ PPRICE\ INDEX_{End\ period}}{GDP\ PRICE\ INDEX_{Base\ period}} - 1\right) \times 100 = \left(\frac{121.363}{120.690} - 1\right) \times 100 = 18.2\%$$

5. Adjust the monetary based size standards using the estimated rate of inflation and round the results off based on what SBA has chosen as the predetermined level. Generally, and most recently, SBA rounded off to the nearest $500,000.

$$Adjusted\ size\ standard_{End\ period}$$
$$= Size\ standard_{Base\ period} + Size\ standard_{Base\ period} \times Rate\ of\ inflation$$

The second term in the above formula is an increase in industry's size standard due to inflation. Adding this increase to the size standard at the base period (*i.e.*, current size standard at the time of adjustment) gives a new size standard adjusted for inflation, which is, in most cases, higher than the current standard.

If an industry's current size standard is $6 million in annual receipts, based on the 18.2% inflation rate, its size standard will be $7 million after being adjusted for inflation. Using the above formula,

$$Adjusted\ size\ standard_{End\ period}$$
$$= Size\ standard_{Base\ period} + Size\ standard_{Base\ period} \times Rate\ of\ inflation$$
$$= 6{,}000{,}000 + 6{,}000{,}000 \times 18.2\%$$
$$= 6{,}000{,}000\ (1 + 0.182)$$
$$= 6{,}000{,}000 \times 1.182$$
$$= \$7{,}092{,}000$$

Rounded to the nearest $500,000, this becomes $7 million.

ALTERNATIVE SIZE STANDARDS METHODOLOGIES

SBA current small business size standards have evolved during the history of the Agency in response to changes in its programs and transformation of the U.S. economy from a manufacturing based industrial structure to an information and services based structure. Most changes to monetary based size standards over the years have resulted from periodic increases for inflation.

One of the most difficult challenges confronting SBA is establishing size standards at levels to adequately reflect differences among industries, yet keeping them simple and easy to use. Over the years, SBA has considered simplifying its size standards in several ways, such as establishing standards based only on number of employees, limiting the number of size standards levels, and establishing size standards based on broader (more aggregated) industry categories. In limited cases, SBA has also attempted to establish a common size standard for a group of closely related industries, even though the characteristics of each industry in the group may support a unique size standard. The simplest alternative would be to have a single, one-size-fits-all size standard for all industries across the board, but this will fail to account for industry differences as intended in the Act.

Another major challenge facing SBA is establishing meaningful size standards for the Federal contracting purposes without breaching the public's notion of what constitutes a small business or creating more complexity. Prior to 1984, SBA had separate sets of size standards for Federal contracting and for all other purposes. For a majority of industries, Federal contracting is a relatively minor source of industry revenues and, thus, not an important factor for size purposes. However, for about 200 industries, the level of Federal contracting and the additional requirements associated with Federal contracts may warrant a much higher size standard than otherwise supported by industry factors. SBA must consider the tradeoff between an appropriate size standard for Federal contracting and the degree of complexity in size standards. The Agency should also balance the public perception on what constitutes small business in deciding size standards.

This document has presented the current size standards methodology employed by SBA. Certainly other methodologies may be developed by applying different assumptions, data sources, and objectives. Over the years, SBA has refined its methodology within a consistent conceptual framework based on the analysis of industry and relevant program data. Several alternative methodologies have been suggested to SBA. In critiquing these, SBA has continued to believe that its historical methodology is sound and adequate because it has resulted in size standards that have been widely accepted by the public and found to be effective in providing Federal assistance to small businesses. Below is a brief description and evaluation of four alternative methodologies suggested to SBA.

Financial Performance Analysis

Industry and financial analysts assess the economic viability of businesses using various financial performance indicators, such as return to capital (assets), gross margins, net worth, *etc.* Several private organizations and government agencies aggregate financial data at the firm level to derive the corresponding data at the industry level. Pursuant to the Small Business Act aimed at assisting businesses that are competitively disadvantaged, financial performance indicators may provide an alternative basis for developing small business size standards.[32]

This approach may provide a basis for identifying businesses, which, due to their size, may be underperforming relative to established industry norms. This, in turn, would form a basis for establishing size standard levels that can target businesses that are in need of Federal assistance.

The major disadvantage of the financial performance analysis is, however, the lack of robust and consistent data across industries for several reasons. First, financial data are not available for all industries at the 6-digit NAICS level, especially the distribution of businesses by size. Second, data at the industry level or by size class may be based only on a limited sample of businesses. Third, financial data are also likely to be riddled with measurement errors and accounting holes. These problems as well as concerns related to how businesses are classified in an industry and the treatment of affiliates may limit the applicability of available financial data to size standards analysis. More importantly, there is not necessarily a robust correlation between financial performance measures and size of a business. For example, during economic downturns even very large businesses may perform very poorly in terms of financial indicators,

[32] See Jim Blum (1991) for evaluation of financial performance analysis as an alternative tool for establishing size standards. Jim was a MBA intern under Gary Jackson, Director of Size Standards.

thereby potentially qualifying them as small businesses under size standards based on financial measures.

Given above problems with financial data and possibilities of very large businesses of being qualified as small based on financial indicators, SBA has determined that a financial performance analysis alone is not applicable to developing small business size standards. However, SBA will explore if certain financial indicators can be incorporated into the existing size standards methodology as additional factors.

Size Standards Based on Program Objectives

Federal contracting and some SBA financial programs have established specific objectives (targets) in providing assistance to small businesses. Some industrial economists suggest that varying size standards may serve as a tool in ensuring that small businesses are receiving the targeted level of Federal assistance.[33]

The advantage of this approach is that SBA and other Federal agencies can identify and estimate gaps between their predetermined objectives and current levels of attainment for an individual industry or a group of industries. Based on these gaps and the expected impacts of changes in current levels of size standards on program objectives, revised levels of size standards can be established. If an industry's gap in attainment of an objective is positive, its size standard can be reduced. Similarly, if the gap is negative, the level of associated size standard can be increased. Through repeated (iterative) adjustments of size standards this way would result in higher degrees of attainment of various objectives and produce uniform levels of size standards for similar groups of industries.

There are several serious flaws with this approach. First, the size standard becomes a function of a size of business supporting some predetermined levels of program objectives instead of identifying businesses that are, due to their size and other reasons, in a competitively disadvantaged position and need Federal assistance. Second, the approach generates fluctuating size standards based on past trends of small business assistance as opposed to those based on current needs of small businesses. Third, this approach assumes that the decision to approve a loan or award a contract is based primarily on the size of a business size rather than its credit worthiness or capabilities to execute Federal contracts. Fourth, the necessary data to evaluate the size standards are not available on a timely basis. For example, detailed industry data are available only once every 5 years. Similarly, verified Federal contacting data usually have least one year time lag. Finally, this approach would require establishing size standards on a program-by-program basis, thereby making size standards more complex and confusing to users.

For the above reasons, SBA has decided not to apply this approach for establishing size standards. The Agency feels that a size standard methodology must focus on identifying businesses that are in need of assistance as opposed to what level of assistance is provided under a particular program. SBA considers the small business participation in Federal contracting and SBA financial programs as one of the five factors in its current methodology. The frequent adjustment of size standards under this approach would create a high level of uncertainty among small businesses and overwhelm the regulatory process. This approach would be more appropriate as a program evaluation tool rather than a size standards methodology.

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[33] CONSAD. Proposed Options for Settings Business Size Standards.

Size Standards Based on General and Administrative Workforce

A size standard for an industry may also be developed by examining the level of general and administrative workforce needed for a business to be competitive and calculating the amount of revenues at that level of workforce. General and administrative workers do not directly contribute to revenues of a business and must be supported by revenues generated from the goods and services produced. Total revenues needed to support the general and administrative workforce for a competitive business can be calculated based on average overhead rates, general and administrative compensation, fess, direct labor costs, materials, and subcontractor costs for a relevant industry.

This approach takes into consideration at what size a business becomes competitive. It attempts to identify the size of business that has overcome the competitive disadvantages associated with size.

The primary disadvantage of this approach is its reliance on an assumption that there exists a level of general and administrative workforce for a business to be competitive. There are no data sources that objectively provide that information. This approach also suffers from several methodological flaws, the most significant of which is inferring specific business level experience to the industry level. The type of data necessary to perform the calculation may be biased towards large businesses that are more likely to report such data.

SBA has not applied this approach because of the degree of arbitrariness of the underlying assumption. Moreover, this approach is likely to result in a much higher level of size standard, while an industry comprises a large number of competitive businesses below that level.

Size Standards Based on Qualitative Characteristics

While most size standards methodologies tend to define a small business in quantitative terms (*e.g.*, the number of employees, annual receipts, amount of assets, *etc*), some business analysts and industry economists have also attempted to define a small business in qualitative terms. Under this approach, certain characteristics are used to differentiate businesses that are small from those that are not small. Some of the most commonly cited characteristics in the literature include the management and ownership structure of the business, control and decision making process, and sources of financing. Specifically, small businesses tend to share the following characteristics: they are independently owned and operated; they are closely controlled by owners/managers who also contribute most of the operating capital; and principal decision making functions rest with owners/managers.[34]

This approach resolves the inherent arbitrariness associated a strict numerical definition. It also focuses on the notion of what factors distinguish a business as small relative to a competitively viable business operation.

The most obvious disadvantage of this approach rests with the ability of SBA to verify the small business status. An on-site review of the business would have to be conducted to determine small business status. Also, businesses would not have definitive criteria to quickly assess their small business status. The difficulty of obtaining a consensus on what characteristics

[34] *See* Holmes and Gibson (2001) for a detailed analysis of various quantitative and qualitative definitions of small business.

to examine and their interpretation would render the implementation of a qualitative small business size standard more contentious than a numerical approach.

The requirement to establish a definitive and easily verifiable small business size standard precludes this approach as an alternative size standards methodology for SBA.

REGULATORY IMPACT ANALYSIS

Need for the Regulatory Action

SBA's mission is to aid and assist small businesses through a variety of financial, procurement, business development, and advocacy programs. To assist effectively the intended beneficiaries of these programs, SBA must establish distinct numerical definitions to determine which businesses are deemed eligible small businesses. The Small Business Act (15 U.S.C. 632(a)) delegates SBA's Administrator the responsibility for establishing small business definitions. The Act defines a small business as one that is independently owned and operated, not dominant in its field of operation, and meets a numerical size standard as established by the SBA Administrator. The Act requires that the numerical definitions of small business vary to reflect industry differences. Size standards have the sole purpose of identifying a target population eligible for Federal small business assistance programs.

Alternative Regulatory Approaches

SBA size standards and related regulations are established pursuant to guidelines stated in the Small Business Act and are published in 13 CFR Part 121. While several alternatives exist, at least conceptually, on how to structure and develop size standards, no practical alternatives exit to promulgating a regulation containing size standards. Federal officials must have specific information on size standards to determine if businesses are small for purposes of administering Federal programs. Similarly, the public must have definitive information to determine if they are eligible for Federal small business assistance.

Identifying and Measuring Benefits and Costs

A revision to an existing size standard changes the population of businesses eligible for small business assistance programs. Because the purpose of the size standard is to ensure that Federal assistance is provided to a certain intended population, SBA assessment of benefits and costs of size regulations focuses on the distributional effects of a transfer of resources between small and large businesses rather than maximizing net benefits to the society. In the context of size regulations, SBA will attempt to estimate the changes in the coverage of eligible businesses and the level program assistance resulting from a size standard revision compared to the coverage and assistance under the existing size standard (the baseline) to identify and measure the impacts of its size regulations.

The most significant benefit to businesses obtaining small business status is eligibility for various Federal assistance programs, including SBA financial assistance programs, economic injury disaster loans, and preference to small businesses in Federal procurement. Other Federal, State and Local Government agencies may also use SBA size standards for a variety of regulatory and program purposes. Through the assistance of these programs, small businesses become more knowledgeable, stable, and competitive in their industries.

The benefits of a size standard increase would accrue to three groups: (1) Existing businesses that gain eligibility for a variety of Federal small business assistance programs; (2) growing small businesses that may exceed the current size standards in the near future will be able to retain their small business status and continue to receive Federal assistance; and (3) with a larger pool of small businesses eligible to compete for Federal contracts under a higher size standard, Federal agencies can more easily achieve their small business contracting goals. In cases where a size standard is lowered, the benefits would accrue to those businesses that retain small business status and obtain greater assistance on average, if the level of assistance is not lowered.

In general, SBA can easily estimate the number of businesses that will gain or lose small business eligibility resulting from a size standard revision and their relative market share of total industry revenues. In most cases, these estimates are derived from the special tabulation of the Economic Census or a comparable database. However, precise levels of monetary impacts of a size regulation are difficult to estimate in advance. Not all businesses gaining small business eligibility will participate in the Federal assistance programs. For example, the amounts of SBA loans to small businesses would depend on the creditworthiness of the individual small businesses. Similarly, the amounts of Federal contracts awarded to small businesses would depend on the capabilities of individual businesses vis-à-vis various requirements associated with individual Federal contracts. Also, an increase in the number of businesses participating in small business assistance program from a size standard revision would not necessarily result in an increase in total level of Federal assistance to small businesses.

To the extent that newly eligible small businesses participate in Federal small business programs, an increase in size standard may entail some additional administrative costs to the Federal Government associated with additional bidders for Federal small business procurement programs, additional firms seeking SBA guaranteed lending programs, additional firms eligible for enrollment in Central Contractor Registration's Dynamic Small Business Search database, and additional firms seeking certification as 8(a) or Historically Underutilized Business Zones (HUBZone) firms. There could also be some additional costs associated with compliance and verification of small business status and with responding to protests of small business status involving newly eligible small businesses. These incremental administrative and compliance costs are likely to be minimal because mechanisms and procedures are already in place to handle these additional tasks.

SBA will also estimate the impact that may result from a revised size standard on small business preference programs of Federal contracting and the SBA's 7(a) Business Loan Program – the two largest small business assistance programs. These estimates approximate the level of transfer of resources between small and large businesses. The newly defined small businesses under the revised standards would also be eligible for benefits from SBA's Economic Injury Disaster Loan (EIDL) Program. Since this program is contingent upon the occurrence and severity of a disaster, no meaningful estimate of benefits or costs can be projected for future disasters.

Within Federal contracting, a revised size standard would affect the potential of small businesses for obtaining Federal contracts through the small business set-aside program, the 8(a), HUBZone, and Service Disabled Veteran-owned Small Businesses (SDVOSB) Programs. In addition, a revised size standard may result in re-designation of future unrestricted Federal

contract awards from large business awards to small business awards, and vice versa, but would not constitute a benefit to either group.

The costs to the Federal Government may be higher for some Federal contracts due to an increase in size standard. With greater number of businesses defined as small, Federal agencies may choose to set-aside more contracts for competition among small businesses rather than using full and open competition. The shift from unrestricted to set-aside contracting is likely to result in competition among fewer bidders. In addition, higher costs may result if additional full and open contracts are awarded to HUBZone businesses because of a price evaluation preference. The additional costs associated with fewer bidders, however, are likely to be minimal since, as a matter of law, procurements may be set aside for small businesses or reserved for the 8(a) or HUBZone programs only if awards are expected to be made at fair and reasonable prices. In some cases, the Federal Government may experience lower costs on procurements reserved for small businesses through increased competition. Additional small businesses may be encouraged to compete for set-aside procurements if they perceive a greater likelihood of wining a contract. Due to data constraints, in most cases SBA will be unable to quantify the net impacts of size standard changes on costs of awarding Federal contracts.

Although the actual outcome of the gains and losses among small and large businesses cannot be estimated with certainty, several likely trends can be projected. First, if a size standard is raised, there would likely be a transfer of some Federal contracts from large businesses to small businesses. Large businesses may have fewer Federal contracting opportunities if Federal agencies decide to set aside more of their contracts for small businesses. Also, some Federal contracts may be awarded to HUBZone firms instead of large businesses since they may be eligible under a price evaluation adjustment for contracts otherwise competed on a full and open basis. Similarly, businesses defined as small under the current standard may obtain fewer Federal contracts in the future due to the increased competition from newly defined small businesses under the revised standard. A greater number of Federal procurements set aside for all small businesses may offset such negative impact on existing small businesses. The potential distributional impacts of these transfers may not be estimated with any degree of precision because the available data on the size of business receiving a Federal contract are limited to identifying small or other-than-small businesses, without regard to the exact size of the business.

Under SBA's 7(a) Guaranteed Loan Program, revising a size standard will likely result in only a small change in small business guaranteed loans. Because of the size of the loan guarantees, most loans are made to small businesses well below the established size standards. Therefore, any effects of a size standard revision are likely to be insignificant. Nonetheless, possible likely effects of a size standard increase may include crowding out of loans available to other eligible small businesses and a decrease in credit risk associated with loans to larger-sized small businesses. Conversely, a size standard decrease is likely to reduce the amount of small business lending and increase credit risks. As a self-funding program, cost implications of a size standard revision would fall on the borrower and not SBA.

POLICY ISSUES

There have always been policy issues for the Agency to address. Many are settled issues, but others remain important questions regarding the direction and objectives of size standards. The following issues are among the most important:

a) Should SBA set standards higher than industry entry-levels? SBA sets size standards higher than entry-level to provide opportunities for existing small businesses to compete against others of their size and (often) considerably larger businesses for Federal contracts set aside for small businesses. Also, SBA considers it important that small businesses be able to apply for and be eligible for its various business development programs, which have their own additional qualifications including a minimum number of years in business. This precludes setting size standards at too low a level or at the entry-level. Also, establishing size standards at industry entry-levels would cause small businesses to outgrow their eligibility very quickly; lacking sufficient cushion or experience to succeed outside of the small business arena would quickly lead to their demise.

   Size standards also must be above the entry-level because Federal government contracting requirements usually cannot be met by a new or very small firm.

b) Should size standards vary from program to program, *e.g.*, one set of standards for SBA loan programs, another for Federal procurement, another for other Federal programs, *etc*? SBA had, in the 1980s, established different size standards for different programs. The result had been that some firms were small for some programs and large for others. The statutory guidance encourages an industry by industry analysis and not a program-by-program analysis. While the characteristics and needs of a particular SBA program may necessitate the deviation from the uniform size standards, the Agency will continue its policy of favoring uniform size standards. These became very confusing to users and caused unnecessary and unwanted complexity in their application. SBA settled on having a single table of size standards for all programs. However, SBA has established 18 special size standards for some activities within certain industries that tend to focus on Federal government contracts.

c) Should size standards apply nationally or should they vary geographically? The data SBA obtains from Census are national data. While Census does publish a Geographic Series of the data, application of those data to evaluating and establishing standards would be cumbersome and time consuming at best, resulting in a very complex set of size standards that would likely be unusable. For example, in Federal contracting, how would a contracting officer set the standard on a contracting opportunity? Would it depend on the contracting officer's location? On the location of the Agency's headquarters? On the place of delivery of the product or service? What about multiple delivery locations? On the location of the prospective contractor? On the location of the prospective contractor's headquarters? What if that were not in the U.S.? What about subcontractors, since size standards apply to their contracts as well? The same questions could be asked about them, which would affect a prime contractor's ability to bid. Would this encourage firms to relocate based upon perceived favorable size standards? That would defeat the purpose behind geographic distinctions. The undue complexity and resulting confusion would render geographic size standards unusable, for all practical purposes.

d) Should there be a single basis for size standards – *i.e.*, should SBA start with number of employees, receipts, or some other basis to establish its size standards for all industries? SBA has considered having a single basis for its size standards in the

past. Most recently, SBA proposed in March 2004 to establish all size standards based on number of employees. This proposal received mixed comments from the public and in July 2004 SBA withdrew the proposal. For many industries under the proposal, either using receipts was a more suitable measure of size or the proposed employment levels were viewed as too low.

Subsequently the Agency issued the ANPRM referred to above (*q.v.*)

e) Should there be a ceiling beyond which there should be no size standard; *i.e.*, should there be a maximum size standard? SBA has not increased its employee based standards beyond the 1,500-employee level. However, monetary based standards have gradually increased to where the highest is now $35.5 million in average annual receipts. This is a policy decision that the Agency should make – is there a size beyond which a business is not small? The Agency should also evaluate the equivalent monetary level of its highest employee based standards and whether they are in line with those with other bases.

f) Should there be a fixed number of size standard ranges or "bands"? This too was the subject of an Agency proposed rule that was favorably received by the public but not implemented by SBA.

g) Outside of a review of inflation's impact, what other reviews should SBA undertake? How often? What should be the impetus for these reviews?

Should SBA review all size standards on a regular basis? If so, how often? Current regulations require SBA to consider adjusting monetary based standards (e.g., receipts, net income, assets) for inflation at least once every 5 years. "If SBA finds that inflation has significantly eroded the value of the monetary based size standards, it will issue a proposed rule to increase size standards." (See 13 CFR § 212.102(c)) Should SBA do so more often than every five years if inflation warrants? If so, how much inflation should occur for more frequent adjustments?

As a corollary, when SBA increases monetary based standards for inflation, should the Agency project future inflation (based on the index it uses in the increase)? When SBA drafts a rule to increase monetary based standards for inflation there is usually a substantial time lag between then and when the new standards are effective. This is due to SBA's internal clearance process. The result is a table of size standards that is out of date as soon as it is published. Therefore, should SBA estimate how much inflation is likely to occur between when it submits the rule for clearance and its publication date?

h) Should SBA consider adjusting employee based size standards for labor productivity growth? Just as firms in industries with receipts based standards may lose small business eligibility due to inflation, firms in industries with employee based standards may gain eligibility due to improvement in labor productivity. While the original $1 million receipts based size standard has now increased to $7 million due to adjustments for inflation, the 500-employee manufacturing size standard set at the inception of SBA has remained the same.

i) Should SBA consider lowering its size standards? SBA receives periodic comments from the public that its standards are too high in certain areas or for some types of

Federal contracting opportunities. The comments generally concern the competitive edge that large small businesses have over the "truly small business" (a phrase heard frequently from commentators). This has always been a problem, one that SBA has had to deal with over the years. SBA's size standards appear large to the smallest of small businesses while larger small business often request even higher size standards. This problem is tied to Federal procurement practice because contracts get larger year after year, and they are often out of the reach of the "truly small business." Because SBA is not among the contracting agencies on these large contracts, SBA can do no more than advocate on small business behalf, often without favorable results.

j) Should SBA size standards be specific, *i.e.*, to the precise dollar calculated based on the data and information it evaluates? SBA's most recent increase for inflation, for example, would have increased the size standards for Architectural Services (NAICS 541310), Engineering Services (NAICS 541330) and Map Drafting (part of NAICS 541340, Drafting Services) from $4.5 million to $4.728 million. Or should SBA recognize that there are other factors that go into establishing size standards, such as the fact that the data SBA evaluates is not static, industries change over the years, and even within a given year?

Should SBA round off its calculated size standards for the various industries? If so, should SBA always round up? To what level? If not, what about those industries that do not get increases in size standards when others are? What should be the cut-off point for rounding either one way or the other?

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APPENDIX

Detailed Analytical Steps for Establishing Size Standards

1. Establish fixed-level size standards
   Receipts based standards will have eight fixed size levels as follows:
   a. $5.0 million
   b. $7 million (anchor standard)
   c. $10 million
   d. $14 million
   e. $19 million,
   f. $25.5 million
   g. $30 million
   h. $35.5 million

   Employee based standards for the manufacturing and mining industries will have four fixed size levels as follows:
   a. 250 employees
   b. 500 employees (anchor standard)
   c. 750 employees
   d. 1,000 employees

   Employee based standards for the wholesale trade industries will have five fixed size levels as follows:
   a. 50 employees
   b. 100 employees (anchor standard)
   c. 150 employees
   d. 200 employees
   e. 250 employees

2. Establish anchor and higher-level size standards

   Receipts based size standards:
   a. Anchor size standard (ASTD) - $7 million
   b. Higher-level size standard (HLSTD) - $25 million to 35.5 million, average $29 million

   Employee based standards for manufacturing and mining
   c. Anchor size standard (ASTD) – 500 employees
   d. Higher-level size standard (HLSTD) – 1,000 employees

   Employee based standards for wholesale trade
   e. Anchor size standard (ASTD) – 100 employees
   f. Higher-level size standard (HLSTD) – 250 employees

3. Evaluate industry structure and federal procurement trends
   a. Simple average firm size
      i. Calculate simple average firm size for industry i ($SAFS_i$)

$$SAFS_i = \frac{Total\ annual\ receipts\ or\ employees\ in\ industry\ i}{Number\ of\ all\ firms\ in\ the\ industry}$$

      where i = 1, 2, 3, …., the number of industries in a 6-digit NAICS basis.

ii. Calculate simple average firm size of all industries with the anchor size standards ($SAFS^{anchor}$)

$$SAFS^{anchor} = \frac{\sum_{i=1}^{N} SAFS_i^{anchor}}{N} = \frac{AFS_1^{anchor} + AFS_2^{anchor} + \cdots + AFS_N^{anchor}}{N}$$

where N denotes the number of industries in the anchor industry group. Alternatively, SBA may calculate the simple average firm size for the anchor group as the median simple average firm size of industries making up the anchor group.

iii. Calculate simple average firm size of all industries with higher-level size standards ($SAFS^{higher\text{-}level}$)

$$SAFS^{hihger-level} = \frac{\sum_{i=1}^{M} AFS_i^{higher-level}}{M} = \frac{AFS_1^{hihger-level} + AFS_2^{hihger-level} + \cdots + AFS_M^{hihger-level}}{M}$$

where M denotes the number of industries in the higher-level size industry group. Alternatively, SBA may calculate the simple average firm size for the higher-level size group as the median simple average firm size of industries making up higher-level size group.

b. Weighted average firm size

i. Calculate weighted average firm size for industry i ($WAFS_i$)

$$WAFS_i = \sum_{k=1} \frac{Total\ receipts\ or\ employees\ in\ size\ class\ k\ for\ industry\ i}{Total\ number\ of\ firms\ in\ size\ class\ k} \times \frac{Total\ receipts\ or\ employees\ in\ size\ class\ k\ for\ industry\ i}{Total\ receipts\ or\ emplpoyees\ in\ industry\ i}$$

where i = 1, 2, 3, ... is the number of industries in a 6-digit NAICS basis, and k = 1, 2, 3, ...is the number of receipts or employee size classes.

ii. Calculate weighted average firm size of all industries with the anchor size standards ($WAFS^{anchor}$)

$$WAFS^{anchor} = \frac{\sum_{i=1}^{N} WAFS_i^{anchor}}{N} = \frac{WAFS_1^{anchor} + WAFS_2^{anchor} + \cdots + WAFS_N^{anchor}}{N}$$

where N denotes the number of industries in the anchor industry group. Alternatively, SBA may calculate the weighted average firm size for the anchor group as the median weighted average firm size of industries making up the anchor group.

iii. Calculate weighted average firm size of all industries with higher-level size standards ($WAFS^{higher\text{-}level}$)

$$WAFS^{hihger-level} = \frac{\sum_{i=1}^{M} WAFS_i^{higher-level}}{M} = \frac{WAFS_1^{hihger-level} + WAFS_2^{hihger-level} + \cdots + WAFS_M^{hihger-level}}{M}$$

where M denotes the number of industries in the higher-level size industry group. Alternatively, SBA may calculate the simple average firm size for the higher-level size group as the median simple average firm size of industries making up the higher-level size group.

c. Average assets size

i. Calculate average assets size for industry i (AAS_i)

$$AAS_i = \left[\frac{1}{(Total\ sales/Total\ assets)_{i,RMA}}\right] \times AFS_i$$

$$= \left(\frac{Total\ assets}{Total\ sales}\right)_i \times AFS_i$$

where i = 1, 2, 3, …., the number of industries in a 6-digit NAICS basis.

ii. Calculate average assets size of all industries with the anchor size standards (AAS^{anchor})

$$AAS^{anchor} = \frac{\sum_{i=1}^{N} AAS_i^{anchor}}{N} = \frac{AAS_1^{anchor} + AAS_2^{anchor} + \cdots + AAS_N^{anchor}}{N}$$

where N denotes the number of industries in the anchor size industry group. Alternatively, SBA may calculate the average assets size for the anchor group as the median average assets size of industries making up the anchor size group.

iii. Calculate average asset size of all industries with higher-level size standards ($AAS^{higher-level}$)

$$AAS^{hihger-level} = \frac{\sum_{i=1}^{M} AAS_i^{higher-level}}{M} = \frac{AAS_1^{hihger-level} + AAS_2^{hihger-level} + \cdots + AAS_M^{hihger-level}}{M}$$

where M denotes the number of industries in the higher-size industry group. Alternatively, SBA may calculate the average assets size for the higher-level group as the median average assets size of industries making up higher-level size group.

d. Four-firm concentration ratio and average firm size of the four largest firms

i. Calculate the four-firm concentration ratio for the *i*-th industry ($CR4_i$)

$$CR4_i = \frac{Total\ receipts\ of\ four\ largest\ firms\ in\ ith\ industry}{Total\ receipts\ in\ that\ industry}$$

ii. If the four-firm concentration ratio ≥ 40%

1. Calculate the average firm size of the largest four firms for the *i*-th industry ($AFS4_i$)

$$AFS4_i = \frac{Total\ receipts\ of\ the\ four\ largest\ firms\ in\ ith\ industry}{4}$$

2. Calculate the average firm size of the largest four firms for all industries with anchor size standards ($AFS4^{anchor}$)

$$AFS4^{anchor} = \frac{\sum_{i=1}^{N} AFS4_i^{anchor}}{N} = \frac{AFS4_1^{anchor} + AFS4_2^{anchor} + \cdots + AFS4_N^{anchor}}{N}$$

where N denotes the number of industries in the anchor size industry group. Alternatively, SBA may calculate the average firm size of the largest four firms for the anchor size group as the median average firm size of the largest four firms for industries making up the anchor size group.

3. Calculate the average firm size of the largest four firms for all industries with higher-size standards ($AFS4^{higher\text{-}level}$)

$$AFS4^{higher-level} = \frac{\sum_{i=1}^{M} AFS4_i^{higher-level}}{M} = \frac{AFS4_1^{higher-level} + AFS4_2^{higher-level} + \cdots + AFS4_M^{higher-level}}{M}$$

where M denotes the number of industries in the higher-level size industry group. Alternatively, SBA may calculate the average firm size of the largest four firms for the higher-level size group as the median average firm size of the largest four firms for industries making up the higher-level size group.

e. Size distribution of firms and Gini coefficient

i. Calculate cumulative shares of firms and receipts by size class as shown below

Size classes for receipts-based standards:

1. < $2.5 million
2. < $6.5 million
3. < $13 million
4. < $23 million
5. < $35 million
6. < $50 million
7. < $100 million
8. < maximum value

Size classes for employee based standards:

1. < 50 employees
2. < 100 employees
3. < 250 employees
4. < 500 employees
5. < 750 employees
6. < 1,000 employees
7. < 1,500 employees
8. < 2,500 employees
9. < maximum value

ii. Calculate Gini coefficient for industry i (G_i)

$$G_i = 1 - \sum_{k=1}^{s} (X_{i,k} - X_{i,k-1}) \cdot (Y_{i,k} + Y_{i,k-1})$$

where i = 1, 2, 3, …., the number of industries in a 6-digit NAICS basis, X_k is cumulative percentage of firms for size class k, Y_k is cumulative percentage of receipts for size class k, and k denotes the receipts and employee size classes defined above.

iii. Calculate Gini coefficient for the anchor size group (G^{anchor})

$$G^{anchor} = \frac{\sum_{i=1}^{N} G_i^{anchor}}{N} = \frac{G_1^{anchor} + G_2^{anchor} + \ldots + G_N^{anchor}}{N}$$

where N denotes the number of industries in the anchor size industry group. Alternatively, SBA may calculate the average Gini coefficient for the anchor group as the median Gini coefficient of industries making up the anchor size group.

iv. Calculate Gini coefficient for the higher-level size group ($G^{higher\text{-}level}$)

$$G^{higher-level} = \frac{\sum_{i=1}^{M} G_i^{anchor}}{M} = \frac{G_1^{higher-level} + G_2^{higher-level} + \ldots + G_M^{higher-level}}{M}$$

where M denotes the number of industries in the higher-level size industry group. Alternatively, SBA may calculate the average Gini coefficient for the higher-level size group as the median Gini coefficient of industries making up the anchor size group.

f. Compute small business share in federal procurement and industry-wide receipts

i. Small business share in the *i*-th industry's total receipts ($SBSHARE_{i,\ receipts}$)

$$= \frac{Total\ dollars\ accounted\ for\ by\ small\ business\ in\ ith\ industry}{Total\ \ dollars\ going\ to\ that\ industry}$$

ii. Small business share in Federal contracting dollars in the *i*-th industry ($SBSHARE_{i,\ contracts}$)

$$= \frac{Total\ federal\ contracting\ dollars\ going\ to\ small\ business\ in\ ith\ industry}{Total\ Federal\ contracting\ dollars\ going\ to\ that\ industry}$$

4. Calculate size standards for each primary factor

Calculation of receipts based size standards

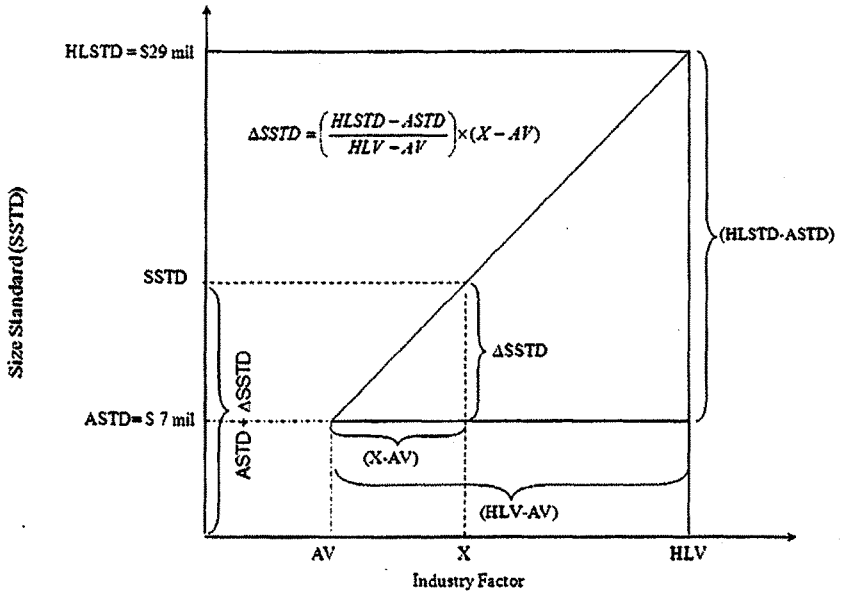
Let X = Factor value for each industry
AV = Average factor value for anchor size standard industry group
HLV = Average factor value for higher-level size standard industry group
ASTD = Anchor size standard ($7 million)
HLSTD = Higher level group average size standard ($29 million)

Size standard for each industry factor is derived using the following general formula.

$$\left[\frac{(X-AV)}{(HLV-AV)}\right]\times(HLSTD-ASTD)+ASTD =$$

$$=\left[\frac{(X-AV)}{(HLV-AV)}\right]\times(29-7)+7=\left[\frac{(X-AV)}{(HLV-AV)}\right]\times 22+7$$

The following chart illustrates this formula graphically.



$$SSTD = \left(\frac{(X - AV)}{(HLV - AV)}\right) \times (HLSTD - ASTD) + ASTD$$

$$= \left(\frac{(HLSTD - ASTD)}{(HLV - AV}\right) \times (X - AV) + ASTD = ASTD + \Delta SSTD$$

a. a. Size standard based on simple average firm size for industry i ($SSTD_{i,SAFS}$)

$$SSTD_{i,SAFS} = \left[\frac{SAFS_i - SAFS^{anchor}}{SAFS^{higher-level} - SAFS^{anchor}}\right] \times 22 + 7$$

The result is then rounded to the nearest fixed-size level.

b. Size standard based on weighted average firm size for industry i ($SSTD_{i,WAFS}$)

$$SSTD_{i,WAFS} = \left[\frac{WAFS_i - WAFS^{anchor}}{WAFS^{higher-level} - WAFS^{anchor}}\right] \times 22 + 7$$

The result is then rounded to the nearest fixed-size level.

c. Size standard based on average assets size for the i-th industry ($SSTD_{i,AAS}$)

$$SSTD_{i,AAS} = \left[\frac{AAS_i - AAS^{anchor}}{AAS^{higher-level} - AAS^{anchor}}\right] \times 22 + 7$$

The result is then rounded to the nearest fixed-size level.

d. Size standard based on four-firm concentration ratio for the i-th industry ($SSTD_{i,CR4}$)
Size standard for this factor is computed if CR4 ≥ 40%.

$$SSTD_{i,CR4} = \left[\frac{AFS4_i - AFS4^{anchor}}{AFS4^{higher-level} - AFS4^{anchor}}\right] \times 22 + 7$$

The result is then rounded to the nearest fixed-size level.

e. Size standard based on size distributions of firms for industry i ($SSTD_{i,SIZEDIST}$)

$$SSTD_{i,SIZEDIST} = \left[\frac{G_i - G^{anchor}}{G^{higher-level} - G^{anchor}}\right] \times 22 + 7$$

The result is then rounded to the nearest fixed-size level.

f. Size standard for Federal procurement for industry i ($SSTD_{i,FEDPROC}$)
Size standard for this factor is computed if an industry's annual federal contracting dollars is ≥ $100 million.

$$SSTD_{i,FEDPROC} = One\ level\ higher\ than\ the\ current\ standard\ of\ industry\ i \quad if\ \left(SBSHARE_{i,receipts} - SBSHARE_{i,contracts}\right) = 10 - 29\%$$

$$SSTD_{i,FEDPROC} = Two\ levels\ higher\ than\ the\ current\ standard\ of\ industry\ i \quad if\ \left(SBSHARE_{i,receipts} - SBSHARE_{i,contracts}\right) \geq 30\%$$

5. Derive composite or average size standard for industry i based on its industry factors and federal procurement factor ($AVGSSTD_i$)

$$AVGSSTD_i = \frac{\left[0.5SSTD_{i,SAFS} + 0.5SSTD_{i,WAFS} + SSTD_{i,AAS} + SSTD_{i,CR4} + SSTD_{i,SIZEDIST} + SSTD_{i,FEDPROC}\right]}{5}$$

The result is then rounded to the nearest fixed-level size level. This method assigns equal weights to all factors in deriving the composite size standard, but SBA can weighs different factors differently in consideration to agency's policy decision and other relevant factors. If different weights are applied, the above formula is modified as follows:

$$AVGSSTD_i = \left(\frac{w_{AFS} \cdot SSTD_{i,AFS} + w_{AAS} \cdot SSTD_{i,AAS} + w_{CR4} \cdot SSTD_{i,CR4} + w_{SIZEDIST} \cdot SSTD_{i,SIZEDIST} + w_{FEDPROC} SSTD_{i,FEDPROC}}{w_{AFS} + w_{AAS} + w_{CR4} + w_{SIZEDIST} + w_{FEDPROC}}\right)$$

where w_s are different weights for different factors.

Calculation of employee based size standards

Employee based size standards for industry factors are computed exactly in the same manner as receipts based size standards except for that employee based anchor and higher-level size standards replace the receipts based anchor and higher-level size standards. For example for manufacturing and mining industries, anchor size standard is 500 employees and higher-level size standard is 1,000 employees. By substituting these, we get the manufacturing size standard formula as follows:

$$\left[\frac{(X - AV)}{(HLV - AV)}\right] \times (1000 - 500) + 500 = \left[\frac{(X - AV)}{(HLV - AV)}\right] \times 500 + 500$$

Based on the anchor standard of 100 employees and higher-level standard of 250 employees, we get the wholesale trade size standard formula as:

$$\left[\frac{(X-AV)}{(HLV-AV)}\right]\times(250-100)+100=\left[\frac{(X-AV)}{(HLV-AV)}\right]\times 150+100$$

6. Evaluate secondary factors
    a. Technological change
    b. Competing products from other industries
    c. Industry growth trends
    d. History of activity in the industry
    e. Impacts on SBA programs
7. Issue proposed rule
8. Evaluate public comment
9. Issue final rule

CONTRACT BUNDLING TESTIMONY

Good Morning Chairwoman Velazquez and members of the committee. On behalf of myself, Bobbie Gentile, and the staff of Q-Mark Inc., and Innovative Supply Source (ISS) I would like to thank you for granting me the opportunity to speak with you today regarding the affect that contract bundling and other Department of Defense contracting practices will have on small businesses.

I am the President of the National Association of Manufacturers and Representatives (NAMR), and I have been hearing from small businesses nationwide concerned about contract bundling.

For years, small businesses have been valuable partners to the Federal Procurement system, supplying both Military Specifications and commercial products. Now, we find ourselves in a position of being displaced, due to the initiative called **CONTRACT BUNDLING.**

Since I last testified, I opened Innovative Supply Source in order to team with the prime contractors that won the bundles.

On the Tobyhanna initiative, we teamed with the winning contractor and ISS was asked to participate in the Mentor-Protégé Program (which we did). Once we teamed with this company, we found out they were under investigation by the Government and facing possible debarment and were not allowed to supply parts to the Defense Logistics Agency.

My question is, how could this happen that a large prime contractor was awarded a bundled order while under investigation?

I now need to find someone within the Government to help dissolve our Mentor-Protégé relationship with this contractor, as I do not wish my company's reputation to be jeopardized.

In our teaming process on the Tobyhanna initiative, the prime contractor did not understand how to purchase the proper product. They called to inquire if parts manufactured in 1978 were acceptable for use. Only after entering into this teaming agreement did we discover that these contractors were not experienced enough to procure electronic products properly to support the war fighter on systems that fly, float, roll or shoot.

We have also experienced unethical practices by large prime contractors involved in bundling. ISS was contacted by one of the Government's largest prime contractors, who stated that if I dissolved my relationship with NAMR, and not make waves or testify regarding bundling, they would allow ISS to team with them. If I continued to protect small business, they would not consider teaming with my company.

Recently, NAMR was involved in challenging a bundle under the name the Maritime Initiative, which was eventually cancelled in early February of this year. We now find the initiative is being issued in smaller segments, though they still constitute bundled actions.

The Procurement Center Representative at Defense Supply Center Columbus forwarded an appeal package on the original Maritime Initiative to SBA headquarters. The SBA negotiated an agreement with Defense Logistics Agency regarding this initiative. This negotiation was not made public, however, the initiative went forward with a new acquisition strategy.

On one of the previous Government awarded Bundles, we requested, under the Freedom of Information Act, an abstract of the awarded prices. What we received back was an abstract with all pricing blacked out. This is hard to understand when every bid submitted by the average contractor has the past purchase history openly available.

The ability to participate in the Federal Procurement Process is going to be eliminated with contract bundling. Items will be purchased behind closed doors. Industry will lose the opportunity to bid on items the government is purchasing. There will be no fair and open competition. It will destroy the industrial base, create higher prices, cause longer delivery times, and reduce military readiness.

Fair & open competition must be maintained. It is crucial to saving taxpayers' money and maintaining readiness as I can attest on behalf of just one of NAMR's members. This company, which specializes in designing and manufacturing spare parts for the military, has been able to save the Federal government and in turn taxpayers, millions of dollars by being able to quote items the government is buying. This company saves the government and taxpayers' money by manufacturing replacements for spare parts the OEM or prime contractors manufacture and sell to the government at inflated prices.

Under current contracting regulations, all interested companies can see and bid on any item the Federal government is buying. If the items are bundled, companies will lose this opportunity, and the government will spend millions of dollars more. In addition the government will spend millions more in mark-up as the items pass through multiple layers of distribution.

And, now there is talk about the government implementing so-called "High Road" contracting rules. The administration is

considering requiring that federal contracts go to businesses that pay high wages and provide benefits – a policy clearly meant to help labor unions and large corporations.

Contract bundling has all but eliminated fair competition for contracts – if the administration adds their "high road" contracting rules, the role of small business in government contracting will be further diminished and costs will increase.

Bundled contracts will drive companies out of business, put the Government into sole source situations, and result in higher prices.

As President of NAMR, Q-Mark, and ISS, and a member of NFIB, I urge you to pass legislation to stop contract bundling and ensure "high road" contracting rules are not implemented.

Testimony of John O. Woods, Jr., P.E
Principal,
Woods Peacock Engineering Consultants, Inc.

Before the House Committee on Small Business,
March 24, 2010

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AMERICAN COUNCIL OF ENGINEERING COMPANIES

Summary

The A/E services industry is unique in the impact their work has on the nation's infrastructure and long term related costs. For these and other reasons for public benefit A/E services contracts are awarded based on qualifications. It is an industry that is mostly composed of small high quality, specialized firms. The varied disciplines and unique factors that impact A/E services efforts result in significant natural teaming of firms to achieve most qualified firm status.

The combination of above facts leads to a need for focused federal contracting statutes and measurement requirements. Among these are including all work performed by A/E services firms at prime and subcontract levels when measuring small business participation by federal agencies and establishing subcontract goals as a percentage of funded prime contract value. Several other recommendations are made to improve the effective use of small businesses in the A/E services sector.

Introduction

Chairwoman Velazquez, Ranking Member Graves, and Members of the Committee,

I appreciate the opportunity to testify before you today about *Small Business Participation in the Federal Procurement Marketplace* and specifically about the unique nature of A/E services procurements. In addition, I will address the composition of the engineering industry, why small specialized firms like my own compose the majority of our industry, how we view federal government policies, and provide individual recommendations to enhance results to our firms and the tax payer.

My name is John Woods, and I am the founder and principal of Woods Peacock Engineering Consultants, Inc., a consulting structural engineering firm located in Alexandria, Virginia. Woods Peacock is a Small Service-Disabled Veteran Owned Firm with 16 employees, three of whom have been hired in the past 12 months. All of them are committed to providing our clients structurally sound designs for various sized projects, at home and around the world. I have also served on several councils, foundations, and boards dealing with veterans, children, business, community, and disadvantaged persons' issues, as well as being a Presidential appointee to the U.S. Access Board, a leading Federal agency on accessibility for persons with disabilities and accessible design.

My firm is an active member of the American Council of Engineering Companies (ACEC); the voice of America's engineering industry. ACEC's almost 6,000 member firms employ more than 500,000 engineers, architects, land surveyors, and other professionals, responsible for more than $500 billion of private and public works annually. Almost 70% of these firms are small businesses, with less than 30 employees. Our industry has significant impact on the long term performance and costs of our nation's infrastructure and facilities. I currently serve on ACEC's Federal Agencies Committee and the Small Firm Coalition, which develop Council positions on legislation and promote infrastructure issues before Congress, executive agencies, and states.

In over 40 years of experience I have designed or been in responsible charge of the design several hundred significant building structures and provided structural consultation on several thousand other projects, both domestic and international. I have served on the national committee of the Coalition of American Structural Engineers which wrote the National Guidelines of Practice and was on the industry committees that wrote the Critical Structures Manuals and the Complex Structures Manuals for many local governments. I have acted both as expert and advisor for legal counsel, particularly in the areas of standard of care and state of the trade, and more recently for design-build contracts. Notable present federal projects include the renovations of the West Wing of the National Museum of Natural History, U.S. Embassies in Rome, Monrovia, Liberia, Kigali, Rwanda, Johannesburg, S. Africa, and Karachi, Pakistan, and the new Department of Homeland Security Headquarters and New Operations Center.

We are at a critical juncture in our nation's history – the risk to people and infrastructure is growing at an alarming rate as a result of more than 100 years of neglect to the nation's infrastructure. At the same time we are in the throws of an economic crisis that is impacting long term infrastructure spending and our small professional architecture and engineering (A/E) services firms directly. The combination of my small firm ownership, long history of involvement with my industry and small firms' issues, performance under federal contracts, and personal interest in serving my community and nation provides me the background to address the following issues.

Uniqueness of the Architect/Engineering Industry

A/E firms provide services in varied technical disciplines (e.g. architecture; mechanical, electrical, civil, structural, chemical, and other engineering; surveying; etc.). States require professional licenses for the individuals performing this work. In most states, the majority ownership of firms providing such services must be held by individuals licensed in their states in their respective disciplines, for the firm to be licensed to work in that state. The ethical codes for licensed professionals to retain their licenses require them to perform work only that they are capable of performing, based on education and experience.

Because of the state individual and firm licensing requirements, firms need to vary their structure for the state in which they are working. This, along with the ethical requirements for retaining their licenses, is why a majority of A/E firms are small and specialized. Since the work is performed by individuals, the quality of the services offered is independent of size. That is why

a firm like Woods Peacock is sought out for its structural engineering services. The principals of such firms are directly involved with work performance.

The reason for state licensing is the direct impact that A/E services have on the life and safety of the public that use or depend on the infrastructure and/or facilities projects designed and constructed. In addition, each project's performance, construction and life-cycle costs, longevity, sustainability, resiliency, energy use, adaptability to on-going technology changes, and similar criteria are established through the A/E services performed. The integration of varying criteria across multiple technical disciplines to assure optimal design is the goal of project owners, users/operators, and the public alike. The costs of A/E services are a very small fraction of the life costs of a project (less than 0.5%), but the impact of those services are significant.

As indicated above, there are many technical disciplines that are required to complete infrastructure and facilities projects. These disciplines must work together under common leadership to achieve optimum and integrated results. Project design management is often a discipline itself. The better the disciplines work together, the better the results. This teaming, whether internal to a large multi-disciplined firm or from separate highly qualified specialty discipline firms is a key to success. Quality teaming may be produced through formalized processes, experience of working together, or both.

Due to varying functions and performance requirements, physical conditions (soils, weather, etc.), locations and jurisdictions (access, utilities, building codes, permitting requirements, etc.) and similar considerations, each project is unique, requiring special capabilities and experience. Teaming arrangements need to accommodate the unique factors of each project. A team formed to optimize services performance for one project may not be the right team for a similar project in a different location or a different project at the same location. Sometimes teams can be optimized with minor changes of the individuals involved and sometimes whole new teams are better. Each project needs to have the project specific qualifications requirements identified and the A/E services teams established by evaluating and choosing the team members with the most capabilities to satisfy those qualifications.

The long term business success of individuals and firms providing A/E services is achieved only when clients and potential teaming partners recognize and accept their qualifications to perform quality services in specific disciplines and areas. A reputation for quality work, working well as a team member, and innovative solutions to technical problems that arise on projects are key to receiving repeat or future work.

Throughout the industry and codified by the Brooks Act (Public Law 92-582) for federal work, A/E services offerors are selected for work based on being the most qualified for the particular project or series of tasks. Since cost of those services are so relatively small in comparison to the resulting benefits of optimum performance of the results, working with the most qualified services provider at a fair and reasonable cost is paramount.

As needs for services are identified and qualifications requirements are made known, potential offerors look at their own capabilities and decide what they need to do to not just perform the

work, but to assure the owner/client that they are the most qualified to successfully complete the effort. Team formation internally and externally becomes critical to obtain the best individuals that can work successfully together on the project and also convince the client that they can. This is why high quality small businesses are routinely included on teams to improve the team's chances of winning and performing individual projects.

Degree of Small Business Participation can only be Known by Determining Total Performance of Work (Prime and Subcontract)

The requirements of the federal government to increase small business participation on government work at the prime contract level is complicating the natural selection and teaming of A/E services providers identified earlier. As discussed, most projects require a mix of technical disciplines to be performed in an integrated and coordinated manner. The ownership, licensing, and ethical requirements for A/E services work has resulted in an industry mostly comprised of small specialized firms working in the technical disciplines.

In order to be selected for work based on being the most qualified offeror, teams are formed based on the contribution brought by each team member to a specific project. Most such teams include small businesses, but under current procedures agencies only report on prime contracts to small businesses when assessing small business participation. This creates a false impression in two ways. First, the entire prime contract is credited to small business participation, even when a significant portion may be subcontracted to large businesses. Second, the record of work performed by small businesses as subcontractors to large businesses is lost. A better process would be to have agencies report the work actually performed by small businesses under any type of contract. This information is already being reported, as currently required, by prime contractors, as part of contract administration and measurement of subcontracting goals.

Problems Winning and Doing Federal Work

The current size standard for A/E services is $4.5 million based on gross revenues averaged over three (3) years. Pass through costs, including subcontract work and project equipment rentals inflate revenues without indicating real firm growth. This becomes a problem when poorly planned small business set-aside contracts are won by firms that must add technical disciplines and management capabilities to perform the project. The growth therefore is false or forced.

Individual state licensing requirements and large variances in state costs of living also impact gross revenues. The same size firm operating in a state with a high cost of living may show inflated revenues that graduate it from a small business only because of the higher costs of labor and services. Since size standards are consistent across the country and state restrictions do not exist for federal contracts, firms in high cost areas are being penalized.

The unique procurement aspects of the A/E industry vary considerably from the federal procurement "norm". Often the benefits of selecting offerors based on qualifications prior to addressing the costs of services is not fully understood by procurement officers and specialists that do not regularly do such procurements. Also the specialization based on technical disciplines and technical nature of firm principals is not fully considered when developing prime

contacts intended for small A/E businesses. While training of federal procurement staff occurs, the lack of or sporadic use of the unique A/E services tools and processes creates errors. There is a need for a separate career path for A/E procurement staffs and requirements for all such procurements to be appropriately staffed. Assuring that such staffs are properly sized and retained is also needed.

Federal contract planning and sizes do not match the specialized nature of the work, small size standard, need for teaming to perform, and state licensing factors. Care is needed to assure that the contracts developed can be performed by small businesses in the location required, by the experienced personnel offered, and managed properly.

Subcontracting percentage goals for federal large prime contractors is based on amount subcontracted. This allows the prime contractor to adjust the amount subcontracted to achieve the goals. A small firm cannot plan on a certain level of work over an extended period of time. While all A/E services are subject to client requirements and physical conditions encountered, percentage goals based on the funded amount of the prime contract would provide a clearer picture of the future for small business subcontractors. In addition, the latter goal setting eliminates an unintended penalty on mid-size firms and small businesses that graduate. With the goal based on contract dollar amount, other subcontracting is not a factor and teams can be established based on capabilities needed and existing relationships rather than on controlling ratios of subcontracted work. This even allows mid-size and large firms to team with each other in subcontractor roles without penalty on goals attainment.

Of course, the continuously changing federal rules and extensive oversight requirements present a burden of their own. A professional firm involves its principals in the performance of technical discipline work. To keep up with ever increasing statutory requirements and corresponding implementing regulations requires small A/E services firm owners to forgo their technical work or hire additional staff to learn, understand, and comply with the federal specific requirements.

Best Use of Industry Achieved Through Understanding of Roles

The federal workforce needs the managerial and administrative capabilities and numbers of personnel to procure, coordinate, run, and accept the A/E services work. This work is ongoing and consistent and must be performed in a consistent and stable manner.

The private sector provides the project unique capabilities, varied experience, surge ability, and innovation to efficiently and effectively perform on limited duration project work. Using federal in-house technical staffs to perform project A/E services is similar to awarding all such work sole source to a single firm. They could not have all of the capabilities on hand to innovatively and efficiently perform quality work for each unique project. Private sector firms can team or add and delete staff as needed to meet fluctuating technical and schedule demands and are selected for being the most qualified for the specific project. In addition, project work performed by federal technical staffs is done at actual cost (staff payments), while private sector performance is done at negotiated contractual cost. Risks to the government are contained through use of the private sector for A/E services.

Conclusions and Recommendations

The A/E services industry is unique in how firms are established, perform work, selected to benefit their clients, and work with each other. Most firms in the industry are small, specialized, and have a business plan to remain that way to assure performance an reputation. They also perform technical work on unique projects, of limited duration, and requiring specific capabilities and innovation. These factors result in the need for special considerations when trying to assure appropriate small business participation in federal procurements.

Our industry recommends the following measures to be considered in efforts of making the use of small businesses more effective:

- **Small Business Subcontracting should be Counted as Small Business Participation to Meet Agency Goals.** Small and large business participation should be based on work actually performed by small and large firms, not on who holds the prime contract. Contracts awarded to large businesses require a small business subcontracting plan. The results of that plan are reported to the respective agency. To not count this subcontract work as part of the agency goal would appear to be inconsistent with the small business subcontracting plan requirement.

- **Establish that Large Prime Contractors Account for Small Business Subcontracting Goals by the Prime Contract Funded Value, Rather Than a Percentage of Work Subcontracted.** This:
  - Discourages the prime contractor from reducing subcontract work and doing more in-house, thereby increasing the reported percent of work subcontracted to small businesses of various categories.
  - Provides small business subcontractors with a reasonable expectation of being utilized.
  - Provides a level of effort for the small businesses to perform subcontract work awarded, and a target level, plus verification, of the actual amount to be completed. Hence, the small business can plan accordingly.
  - Encourages the use of both small and mid-size firms based on capability and contribution to contract performance, which is in alignment with the Brooks Act.

- **Stronger Certification Guidelines and Establishment of a Centralized Database Receiving Experience Input from Multiple Agencies**
  - Self-certification allows for inaccuracy and error.
  - A central database of agencies experience with firms, supplements enhanced guidelines.
  - Discovery and punishment of violators does not reverse the damage done to the small businesses losing the original contract opportunities.
  - Awards are going to companies that do not fall under the small businesses classification because they either exceed small business-size standards or are not really qualified.

- **Reinstate the Department of Defense's Small Business Competitiveness Demonstration Program (SBCDP) for A-E Contracts and Expand it to all Federal Agencies**
  - The SBCDP assures that 40% of contracts go to small businesses in open competition, with a requirement for set asides to secure attainment.

- Establishes a 15% participation goal for Emerging Small Businesses (ESB) within each Designated Industry Group.
- Encourages proper contract planning to use the natural teaming of the A/E industry and providing prime contract opportunities for small businesses.
- Eliminates the industry harming effects of overusing AE services as a resource for agencies to attain overall small business goals through set aside contracts.

- **Establish Size Standards Based on Industrial Base and Actual Use at All Levels**
  - Establish small business size standards based on the data gathered on the businesses by sector (classification).
  - Establish categorical small business size standards that reflect subcontractor performance, as much as prime contract, roles by the small business industrial base.
  - Measure work actually performed by small businesses at all levels. Work performed by large firms as subcontractors to small firms, but credited to small firm use, distorts the true extent of effective small business involvement. (Many small business firms are selected by procurement officers because they are subcontracting (backed by) to a large firm.)

- **Small Business Set-Aside Contracts Should be Consistent with the Maximum Size of Small Business Competitors**
  - Large contracts are currently being awarded to small businesses that within a year will exceed the small business standards (when averaged over the last three (3) years), hence, disqualifying them from re-competing the work.
  - Contract size should be limited to a reasonable factor of the size standard.
  - Requirements for the majority of work to be performed by the small business prime when compared to actual staff size must be a consideration.

- **Change Contract Bundling Practices to Ensure Reasonable Small Business Prime Contract Opportunities Exist**
  - Adjust current contract bundling practices to ensure that prime contract opportunities are aligned better with small business capabilities; hence, encouraging more small businesses to compete for federal projects.
  - Presently complex contracts are being awarded to small firms in amounts large enough to negatively impact the sustainability and life of the firm.

- **Strengthen Enforcement of Subcontracting Goals and Plans with Data Monitoring**
  - Verify prime contractor reporting of work performed by small businesses and enforce attainment of goals.
  - Prevent prime contractors from creating requirements and restrictions that small businesses cannot attain and are unnecessary for contract performance.

- **Develop a Career Path for Contracting Officers Specializing in AE Contracting and Hire or Develop Personnel in Sufficient Numbers**
  - Significantly increase the numbers and assure continued competence and retention.
  - Create a cadre that understands and appreciates the benefits of QBS.
  - Fashion contracts of a size and scope that attract qualified small businesses.

- **Consider Changing Size Standards to Number of Full Time Equivalent Employees, Based on SF 330 Forms.** Eliminates the issues of significant pass through costs and the varying costs of living across the nation.

- **Have the Private Sector Perform all A/E Services Work on Unique and Limited Duration Projects or Tasks.** Properly use the diverse capabilities and innovation of the private sector, while controlling risk for the federal government.

Government Withholding Relief Coalition

March 2, 2010

The Honorable Nancy Pelosi
Speaker
U.S. House of Representatives
Washington, DC 20515

The Honorable John Boehner
Minority Leader
U.S. House of Representatives
Washington, DC 20515

Dear Speaker Pelosi and Leader Boehner:

The Government Withholding Relief Coalition and its member organizations strongly urge you to repeal the 3% tax withholding law this year. This law, which was enacted in Section 511 of the *Tax Increase Prevention and Reconciliation Act of 2005* (P.L. 109-222), mandates that federal, state, and local governments withhold 3% of nearly all of their contract payments, Medicare payments, farm payments, and certain grants. Compliance with this law will impose significant, unnecessary financial burdens on both the public and private sectors, and the Coalition stands ready to work with you to improve tax compliance for companies receiving federal dollars while also repealing the onerous 3% withholding law.

The Administration recently proposed two such methods which obviate any rationale or need for retaining the withholding mandate and will be far more cost-effective for the government. On January 20, 2010, the Administration released a memo requiring the Internal Revenue Service to review the certifications of non-delinquency in taxes that are required on all federal contracts. In addition, the Office of Management and Budget, working with other agencies, is to develop recommendations to prevent companies with serious tax delinquencies from receiving contracts and to make contractor certifications more easily available.

Also, included in the Department of the Treasury's Green Book (page 101) that was released with the President's Budget is a proposal to allow information reporting on federal non-wage government payments. This proposal would enhance transparency and therefore increase tax compliance without imposing an enormous burden on the government sector.

These two proposals directly address the real concern about companies not paying legitimate taxes and still receiving federal monies, and they are a much better approach than the costly, broad brush mandate of the 3% withholding law. The withholding is already proving costly, and such costs will increase exponentially as the implementation deadline moves closer. While this requirement is not scheduled to go into effect until January 1, 2012, businesses and governmental entities are spending funds now in preparation for implementation due to major system and regulatory changes that have to be made well in advance of 2012. As an example, the Department of Defense estimated in a 2008 report that it will cost the Department more than $17 billion in the first five years to comply with the 3% withholding requirement. While only a small portion of total compliance costs for all levels of government, it nonetheless far exceeds any projected revenue gains from increases in tax compliance. Moreover, imposition of this requirement comes at a time when neither the public nor private sector can afford to be burdened with unnecessary costs at the expense of providing government services and investing in jobs.

We strongly believe that private entities providing goods and services to the government should comply with federal, state, and local tax requirements—companies that do not comply have an unfair competitive advantage over law-abiding contractors that pay their taxes. However, withholding on government payments is not the answer. We believe there can be a more reasonable approach that ensures tax

compliance, but does not place undue burden on companies or federal, state, and local government agencies.

The Coalition believes that the concepts in the Administration's new directive and budget proposal described above represent a more measured, responsible approach to accomplishing the aims of the 3% withholding law without the enormously costly and resource-intensive efforts necessary to comply with it. We look forward to being an active partner and contributor to developing a cost-effective means to increase tax compliance and repeal the 3% tax withholding law.

Sincerely,

Government Withholding Relief Coalition

- Aeronautical Repair Station Association
- Aerospace Industries Association
- Air Conditioning Contractors of America
- Air Transport Association
- America's Health Insurance Plans
- American Bankers Association
- American Clinical Laboratory Association
- American Concrete Pressure Pipe Association
- American Congress on Surveying and Mapping
- American Council of Engineering Companies
- American Farm Bureau Federation
- American Heath Care Association
- American Institute of Architects
- American Logistics Association
- American Moving and Storage Association
- American Nursery and Landscape Association
- American Road & Transportation Builders Association
- American Shipbuilding Association
- American Society of Civil Engineers
- American Subcontractors Association
- American Supply Association
- American Traffic Safety Services Association
- American Trucking Associations
- Armed Forces Marketing Council
- Associated Builders and Contractors
- Associated Equipment Distributors
- Association of National Account Executives
- Coalition for Government Procurement
- Colorado Motor Carriers Association
- Computing Technology Industry Association
- Construction Contractors Association
- Construction Industry Round Table
- Construction Management Association of America
- Design Professionals Coalition
- Edison Electric Institute
- Electronic Security Association
- Engineering & Utility Contractors Association
- Federation of American Hospitals
- Financial Executives International's Committee on Government Business
- Financial Executives International's Committee on Taxation
- Finishing Contractors Association
- Gold Coast Hispanic Chamber of Commerce
- Government Finance Officers Association
- Independent Electrical Contractors, Inc
- International Council of Employers of Bricklayers and Allied Craftworkers
- International Foodservice Distributors Association
- International Municipal Lawyers Association
- Management Association for Private Photogrammetric Surveyors
- Mason Contractors Association of America
- Mechanical Contractors Association of America
- Medical Group Management Association
- Messenger Courier Association of the Americas
- Miami Dade County
- Modular Building Institute
- National Association for Self-Employed
- National Association of Counties
- National Association of Credit Management
- National Association of Manufacturers
- National Association of Minority Contractors
- National Association of State Procurement Officials
- National Association of Wholesaler-Distributors
- National Beer Wholesalers Association
- National Defense Industrial Association
- National Electrical Contractors Association
- National Electrical Manufacturers Association

- National Emergency Equipment Dealers Association
- National Federation of Independent Business
- National Institute of Governmental Purchasing
- National Italian-American Business Association
- National League of Cities
- National Precast Concrete Association
- National Office Products Alliance
- National Roofing Contractors Association
- National Small Business Association
- National Society of Professional Engineers
- National Society of Professional Surveyors
- National Utility Contractors Association
- National Wooden Pallet and Container Association
- North-American Association of Uniform Manufacturers & Distributors
- North Coast Builders Exchange
- Office Furniture Dealers Alliance
- Oregon Trucking Association
- Plumbing-Heating-Cooling Contractors - National Association
- Printing Industries of America
- Professional Services Council
- Regional Legislative Alliance of Ventura and Santa Barbara Counties
- Santa Rosa Chamber of Commerce
- Security Industry Association
- Sheet Metal and Air Conditioning Contractors National Association, Inc.
- Small Business & Entrepreneurship Council
- Small Business Legislative Council
- TechAmerica
- Textile Rental Services Association of America
- The Associated General Contractors of America
- The Association of Union Constructors
- The Distilled Spirits Council of the U.S.
- The Financial Services Roundtable
- U.S. Chamber of Commerce
- United States Telecom Association
- Veterans Entrepreneurship Task Force
- Women Impacting Public Policy

Increasing the Capacity of the Nation's Small Disadvantaged Businesses (SDBs)

A EuQuant Report

Commissioned by the Congressional Black Caucus Foundation

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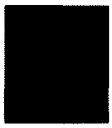

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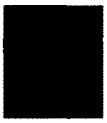


Executive Summary

EuQuant (formerly Boston Research Group) was commissioned by the Congressional Black Caucus Foundation to conduct a comprehensive study of the Small Disadvantaged Business (SDB) Program run by the U.S. Small Business Administration. The report seeks to increase the national and global competitiveness of SDBs by offering recommendations that are designed to increase their capacity and success in federal procurement and in corporate supply chain relations. The primary recommendation is that the $750,000 personal net worth ceiling of the SDB program should be adjusted so that participants can build greater capacity. By building greater capacity, SDBs are able to operate more successfully in the public and private sectors. Their greater success adds significant value to overall economic output and generates jobs, income, and wealth in the general economy and especially in underserved communities.

Background and Purpose

- The government's Small Disadvantaged Business (SDB) Program was established to help mitigate the effects of discrimination on the performance of businesses owned by minorities and other socially and economically disadvantaged individuals.
- This comprehensive report assesses the impact of the SDB Program on minority-owned businesses and examines the contribution of SDBs to national output and employment.
- A major section of the report is devoted to exploring how the SDB Program's $750,000 personal net worth (PNW) ceiling affects SDBs.
- After determining that the PNW ceiling is too low and that it adversely affects the operation of SDBs, new program changes are proposed.
- The recommendations are designed to increase the capacity of SDBs so they will become more competitive in federal procurement and in corporate supply chains.[1]
- The results are based on an examination of 47,254 Small Business Concerns (SBCs)[2] listed with the government's Central Contractor Registration (CCR) in 2006.

What the Reader can Expect

The report has thirteen sections. These sections describe the current status of minority-owned businesses, document the critical importance of government contracting to minority business viability, and examine the plight of more than 10,000 minority-owned SBCs that are listed in the CCR but have never participated in the SDB program. The report considers how the U.S. Supreme Court Adarand Decision has changed the SDB Program. It measures the impact of the SDB Program on minority business performance and analyzes how the $750,000 PNW ceiling has affected SDB capacity. Finally, it estimates the influence of the SDB Program on national output and employment and it analyzes where minority and non-minority-owned firms are located in relation to the most distressed areas of central cities.

[1] As used in this report, capacity is synonymous with the three-year average revenue of a firm.

[2] A Small Business Concern (SBC) means any for-profit business that meets the industry and employment size standards as determined by the Office of Small Business Standards of the Small Business Administration (See Federal Acquisition Regulation FAR 19.101, at: http://acquisition.gov/far/current/html/FARTOCP19.html). This report does not examine SBCs that register with CCR as Women-owned Small Business Concerns, Veteran-owned or Disabled Veteran-owned Small Business Concerns.

Findings[3]

In 2006, the SDB Program had an economic impact of $5.5 billion on U.S. final demand and created over 124,000 jobs.

Minority-owned small businesses also contributed to the economic development of distressed central cities. In 2006, 31% of minority-owned businesses listed in CCR were located in high poverty areas of central cities as compared to 24% of non-minority-owned companies.[4]

In some central cities a very high percentage of minority-owned businesses were located in high poverty areas: In Baltimore (69%), Philadelphia (60%), Detroit (50%) and Boston (48%).

Despite the significant contribution that minority-owned businesses make to the U.S. economy, they still encounter large disparities in private sector business transactions. Consequently, they depend more heavily upon government contracting because access to government contracts is usually more equal than is access to private sector opportunities. While minority-owned businesses comprised 18% of all U.S. small businesses, they made up 35% of the 47,254 small businesses listed in CCR in 2006.

Between 2004 and 2006 the SDB program had a significant effect on the performance of SDB certified firms. The average revenue of SDBs was $2.8 million greater than the average revenue of identical firms that did not participate in the SDB Program.

SDBs experienced an annual disparity in revenue of $0.9 million in comparison to non-minority-owned small-business concerns with similar characteristics.

There were 10,513 minority-owned small businesses listed in CCR in 2006 that had never been SDB certified. These firms experienced the greatest disparities of all small businesses that sought federal government contracting.

The $750,000 personal net worth (PNW) ceiling of the SDB Program has not been adjusted for inflation in nine years. Therefore, the current real value of the ceiling is $558,070. Yet innovations in corporate supply chains and the increasing use of contract bundling in government procurement require SDBs to have greater capacity.

The capacity of SDBs and the personal net worth of their owners is closely related. When capacity increases by 10%, PNW increases by 4%. Therefore, if the PNW ceiling is too low, it is impossible for SDBs to reach their optimum capacity. In a marketplace free of discrimination we estimated that the average capacity of SDBs would be $4.1 million. The current PNW ceiling prevents SDBs from achieving this average capacity.

A PNW ceiling that is set too low causes other economic hardships. For example, in February of 2007 seventeen firms were graduated out of the Georgia Department of Transportation Disadvantaged Business Enterprise Program when an audit revealed that their PNW surpassed the $750,000 ceiling. We interviewed the owners of these firms and tracked their monthly financial performance. The owners felt that they were being penalized for being successful and they complained that very few corporations solicited or engaged their services after they were de-certified. They also stated that the low PNW ceiling had not allowed them to build sufficient bonding capacity to compete successfully as prime contractors. During the first five months of 2007, their average monthly revenue decreased by 45% in comparison to 2005 and 2006.

Many large businesses are incorrectly registered in CCR as small businesses. In a recent Congressional hearing, SBA Inspector General Eric Thorson stated that, "The number 1 management challenge facing the SBA is that large firms are receiving small business contracts and federal agencies are receiving credit for these awards."[5] This report identified 442 companies registered as small businesses that exceeded the small-business size standard for their industry. In 2006, the average revenue of these 442 companies ($172 million) was forty-four times larger than the average revenue of legitimate small business concerns.

[3] The study used regression analysis and decomposition analysis extensively to explain the differences in performance between minority-owned firms that never entered the SDB Program (10,513), active SDBs (6,758) and other small business concerns that were not minority-owned in 2006 (27,087). A multivariate propensity score matching procedure was used to measure performance differences between firms with identical characteristics that were SDBs and non-SDBs.

[4] High poverty areas are defined as census tracts where poverty was 20% or greater in 2000.

[5] Chapman, Lloyd. 2006. "SBA Reauthorization Lacks Provisions to stop Fraud and Abuse." American Small Business League, July 20, 2006:
Accessed at: http://www.asbl.com/showmedia.php?id=275

Recommendations

1) **Increase the PNW ceiling for construction industries to $979,000, for manufacturing industries to $1,043,000 and for professional and scientific service and IT services industries to $1,026,000. The PNW ceilings should be adjusted annually for inflation. In addition SDBs that exceed the PNW ceiling should be given a two year transition period during which they remain eligible to participate in the SDB Program.**

   The rationale for this recommendation
   First, the current PNW ceiling has not been adjusted for inflation since it was established in 1998. If adjusted, the current PNW would be $977,560. Second, the SDB Program was established to help mitigate the effects of discrimination. But it is very difficult for SDBs to achieve the capacity they would be expected to have in a non-discriminatory market because the PNW ceiling is too low and capacity and PNW are closely related. Third, the PNW regulation assumes that "one size fits all". Therefore, only one PNW ceiling has been set for all industries. This contrasts with small business size standards that are set for each industry. The single PNW ceiling does not take into consideration the level of capitalization required by different industries.[6] Finally, when SDBs are "graduated" from the program unexpectedly because of the PNW ceiling, they face significant short-run decreases in revenue. For example recent data from the Georgia DOT indicated that when minority-owned firms were "graduated" from the DBE program because of an audit of PNW, their monthly revenue decreased by 45% during the first six months following their exit.

2) **The SBA should establish race-neutral monitoring procedures for small minority-owned firms that are not SDB certified.**

   Rationale for the recommendation
   First, it is important to know whether minority-owned firms have fair access to corporate supply chains and government procurement in the absence of SDB mandates. Results of this study indicate that they do not. For example the 10,513 minority-owned small businesses listed in CCR that were not SDB certified in 2006 experienced the largest disparities in government procurement awards and supply chain utilization among all CCR firms. Second, it is important to know why so many minority-owned businesses are not SDB certified. Some owners have indicated that the costs and paperwork involved in certification are deterrents while others maintain that the benefits of the program have been greatly reduced over time. A revision should be made to Standard Form 295 (Summary Subcontract Report) by including a category to record the utilization of minority firms that are not SDBs. Additionally, improvements should be made to the way that corporations and government agencies report subcontracting data.

3) **Reauthorize all preferential procurement benefits of SDB status including Price Evaluation Adjustment (designed to assist SDBs as prime contractors), Subcontracting Evaluation Factors and Monetary Subcontracting Incentives (designed to increase SDB subcontracting opportunities).**

   Rationale for the recommendation
   First, SDBs add significant value to national output and employment. In 2006 SDBs added $5.5 billion to U.S. final demand and created 124,000 jobs that would not have existed without the program. Second SDBs, in comparison to non-SDBs, add significantly to economic opportunity in high poverty areas of central cities. Therefore by reinstating SDB procurement incentives, the goals of the HUBZone Program will be reinforced.[7] Third,

[6] The research team was unable to determine why the initial PNW ceiling for the SDB program was set at $750,000 and we did not have access to PNW data for non-SDBs. Therefore, we could not determine the industry specific PNW for all small businesses; but only for SDBs. As a result, we had to use the current PNW ceiling as our starting point for making an adjustment.

[7] If enacted, H.R. 1873, Sec. 214 would provide financial support to conduct of a study on the "feasibility and desirability" of providing financial incentives to contractors for meeting subcontracting utilization goals. PEAs allowed SDBs to receive a price benefit of up to 10% in specified industries. They expired in 2004. The HUBZone Empowerment Contracting Program is part of the Small Business Reauthorization Act of 1997. It is designed to stimulate economic development and create jobs in hard-pressed urban and rural communities. Contracting preferences are given to small businesses that are

SDBs still face significant inequality in business transactions. For example, SDBs experienced an annual disparity in revenue of $0.9 million in comparison to non-minority-owned small-business concerns with similar characteristics. Finally, the procurement benefits are a major incentive for participating in the SDB Program.

4) **Existing regulations that penalize large businesses for self-certifying as small business concerns (SBCs) should be enforced more vigorously and new penalties should be established. Additionally, the SBA Inspector General should audit the CCR annually to identify and penalize firms that are inappropriately self-certified as SBCs.**[8]

Rationale for the recommendation

Inaccurate self-certification has been cited as a growing problem that is adversely affecting small business opportunity. This report identified 442 companies, that exceeded the small-business size standard for their industry, registered as small businesses. The average revenue of these firms was $172 million, which was forty-four times larger than the average revenue of legitimate small business concerns.

5) **Additional studies are needed to further illuminate factors that may enhance the competitiveness of SDBs. These additional studies should examine:**

- What happens to firms following their exit from the SDB Program;
- Ways of improving the global competitiveness of SDBs;
- The extent to which government procurement dollars are shifting from SDBs to other CCR groups;
- The relationship of PNW and firm capacity for non-minority-owned firms;
- The impact of the PNW ceiling on the ability to secure bonding, financing and supply chain opportunities; and, monitor the performance of minority-owned firms that are not-SDB certified.

located in a HUBZone and that hire employees who live in a HUBZone.

[8] House of Representative Bill H.R. 1873: "Small Business Fairness in Contracting Act" passed the House on May 10, 2007 and has been sent to the Senate for consideration. Sec. 301-303 of the bill contains language specifying penalties for large businesses that fraudulently certify as small business concerns.

1

Background and Rationale

In his June 6, 2007 opening statement as Chairman of the U.S. Senate Committee on Small Business and Entrepreneurship, Senator John Kerry noted that over the last decade minority entrepreneurs started more than 50% of the nation's two million new businesses. Minority persons will comprise 90% the country's 131 million new citizens between 1995 and 2050. These trends show the growing importance of minorities to the underlying growth and competitiveness of the American economy.[9] President Bush's 2002 Small Business Agenda proposed a number of steps to increase small business access to federal contracting- including a reduction in contract bundling. More recently, the Government Contracting and Business Development Office requested additional funds in the financial year 2008 to identify methods of improving opportunities for Small Disadvantaged Businesses (SDBs) and other small business contractors.

Minority-owned businesses represent the fastest growing sector of all U.S. firms. Despite their improving status and the value they add to the U.S. economy, they remain significantly under-represented in the national markets.

This under-representation is due in part to historical and contemporary practices of discrimination. These practices have constrained their access to markets and limited their endowment and accumulation of factors, that are essential for starting and operating successful dynamically-growing businesses.

The existence of unequal business practices in the private sector forces minority firms to rely more heavily on government procurement opportunities.

In fact, the SDB Program has been designed so that federal procurement can be used in remedying the effects of societal and marketplace discrimination. The Program's benefits are structured to increase government procurement opportunities and minority business access to the supply chains of corporations that are prime contractors to the government.

Adjustments must be made to the SDB Program

On July 30, 1998 the Government revised Federal Acquisition Regulations (FAR) governing eligibility criteria for participating in the SDB Program. The revisions were in response to the U.S. Supreme Court 1995 Adarand Decision and to President Clinton's mandate to "mend, rather than end" affirmative action. A major review of all federal affirmative action procurement programs was undertaken. The review was designed to ensure that the potential benefits of the program were narrowly tailored as mandated by the Adarand Decision. Some federal procurement programs and policies were suspended temporarily, others were changed or terminated. Major changes to the SDB Program involved the use of industry benchmarks to establish SDB utilization goals and to determine the industries where the goals should be applied and a personal net worth (PNW) of $750,000 was established for individuals participating in the SDB Program.[10] The new $750,000 PNW ceiling was also imposed on 8(a) program participants. This meant that two PNW ceilings affected the 8(a) program. Specifically, business owners' PNW cannot exceed $250,000 at the time they enter the program, and has to remain below $750,000 during the 9-year life time eligibility for the program.

[9] Kerry, John F. 2007. "Kerry Opening Statement on Minority Entrepreneurship Hearing" U.S. Senate Committee on Small Business and Entrepreneurship. May 22, 2007, cited at: http://sbc.senate.gov/record.cfm?id=74847 accessed 6/6/2007 10:37 a.m.

[10] The ceiling excluded the net value of the owner's primary residence and net assets in the business from the net worth determination.

The comprehensive revisions also required that SDBs be certified by the SBA or an organization approved by the agency to certify SDB status. Finally, the benefits of SDB status were expanded to include a Price Evaluation Adjustment (PEA) for SDBs bidding as prime contractors, Subcontracting Evaluation Factors and Monetary Subcontracting Incentives, to increase SDB subcontracting opportunities. The new regulation modified the Federal Acquisition Streamlining Act of 1994 (Pub. L. 103-355, Sec. 7102), by using benchmarking criteria to determine the specific industries where incentives would apply.

PEAs allowed SDBs to receive a price benefit on procurements in specified industries. This policy was accomplished by adding up to 10% to the price of bids or offers received from non-SDBs. To apply Subcontracting Evaluation Factors, the contracting officer awarded the highest points to the bidder with the most dollars targeted to SDB subcontractors in authorized industries. Monetary Subcontracting Incentives allowed contracting officers to make monetary awards to prime contractors of up to 10% of the value by which SDB utilization exceeded the authorized industry target; (See, U.S. SBA America's Small Business Resource, Federal Acquisition Regulation (FAR) Council Rules, final rule published on July 2, 1999).[11] On December 9, 2004 the SBA's authority to use PEAs for civilian agencies expired and was not renewed as part of the Small-Cap and Business Reauthorization and Manufacturing Assistance Act of 2004 (Pub.L.108-447, Division K). The expiration covers all non-Department of Defense agencies, with the exception of the National Aeronautics and Space Administration (NASA) and the Coast Guard.[12]

If the SDB Program is to continue to operate efficiently and accomplish its stated goals, several important adjustments should be made. This report identifies those adjustments and provides a rationale for them based on empirical research.

The imposition of the PNW ceiling is problematic for several reasons.

The static cap has made it more difficult for SDBs to win awards in corporate supply chains because global competitive pressures have forced corporations to reduce the number of suppliers they use. This means that suppliers must have larger capacities today than ever before. At the same time, government agencies have increasingly "bundled" procurement solicitations as a way of reducing administrative expenses and performance costs.[13] These changes require all corporate suppliers to have significantly greater capacity to enter core areas of supply chains or to participate as government prime contractors.

1) ***For almost a decade, the $750,000 personal net worth eligibility criterion has been capped at the same level. By failing to adjust the net worth ceiling for inflation, the 2007 real value of $750,000 (1998) is $558,070.***

Capacity in this report is specified as average firm revenue over a three-year period. The report examines the relationship between firm capacity and personal net worth. We found that the elasticity or responsiveness of personal net worth to changes in firm capacity is 40%. This means that when the capacity of a firm increases by 10%, personal net worth of the owner increases by 4%. Therefore, when a ceiling is placed on the personal net worth of individuals in the SDB Program, that ceiling also limits the capacity of their firms.

[11] See also, Office of Management and Budget, Office of Federal Procurement Policy, SDB Procurement: Reform of Affirmative action in Federal Procurement. Accessed electronically at: http://www.whitehouse.gov/omb/fedreg/sdb-ref.html June 15, 2007. Code of Federal Regulations, Title 13, Volume 1, Revised as of January 1, 2005. From the U.S. Government printing office via GPO access [CITE: 13CFR124]. Available electronically at: http://SBAs.gov/library/cfrs/13cfr124.html.

[12] See also, [Federal Register: April 19, 2006 (Volume 71, Number 75)] [Rules and Regulations] [Page 20304-20305] From the Federal Register Online via GPO Access [wais.access.gpo.gov] [DOCID:fr19ap06-21]. The Department of Defense, NASA and the Coast Guard operate under a separate statutory authority and continue to use these preferences.

[13] House of Representative bill H.R 1813 reauthorizes the Small business Administration's procurement programs under the Small Business Fairness in Contracting Act. It scales back "contract bundling" – the practice of grouping small government contracts together and awarding them as one large contract. House Small Business Committee Chairwoman Nydia Velazquez, D-N.Y., said the bill was needed to help small businesses gain more opportunities, because the federal government has been "bundling" individual contracts into mega-contracts out of the price range for small businesses to place bids.

If the ceiling on personal net worth is set too low, firms that should be eligible to participate in the SDB Program are barred by the ceiling cap. This report finds that the ceiling on personal net worth is incorrect for several reasons. First, it has not been adjusted for inflation in nine years. Second, it does not allow SDBs to achieve the level of capacity that they would be able to achieve in the absence of discrimination. We note that industry benchmarks, used to establish goals for SDB utilization and identify industries where goals will be applied, are determined by the Department of Commerce (DOC). DOC's benchmarks are based on evaluating seventy major industry groups to determine how the share of federal contracts that SDBs actually receive compares to the share they would be expected to receive in the absence of discrimination. Similarly, this report argues that any net worth ceiling must at a minimum, allow SDBs to attain the capacity they would achieve in the absence of discrimination. Any ceiling that does not allow this level of capacity to be achieved is a burden on small disadvantaged business owners. Finally, the current PNW assumes that "one size fits all". Therefore, only one PNW ceiling has been set for all industries, including Construction Services, Manufacturing and Professional and Scientific Services. This practice contrasts with how the SBA sets small business size standards, which are set for each industry.

2) Corporate sector prime contractors argue that the ceiling does not allow SDBs to build the capacity needed to perform in core business areas of their supply chain. Furthermore, their incentive to mentor SDB suppliers is reduced because when SDBs build sufficient capacity, they may become disqualified by the PNW ceiling.

3) Some administrators of the SDB and DBE programs indicate that the PNW ceiling limits the number of available vendors with sufficient capacity to attain their program goals.

4) SDBs argue that the SBA's failure to adjust the PNW ceiling forces them to exit from the program prematurely. In addition, the low ceiling constrains their ability to secure capital and finance and the bonding capacity they are able to build, making it difficult for them to compete as prime contractors. At the same time, prime contractors do not employ their services if they are not SDB certified.

In February of 2007, the Georgia DOT Disadvantaged Business Enterprise (DBE) program graduated seventeen DBEs after an audit revealed the owners' PNW exceeded the program ceiling. During the first five months of 2007, these firms' average monthly revenue decreased by 45% in comparison to 2005 and 2006. Table 1 and Figure 1 describes what happened to these seventeen firms that experienced an unanticipated decertification.

Table 1

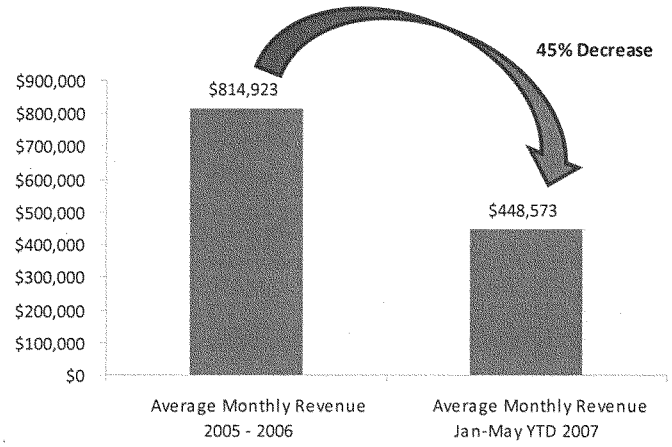
Effect of an Unanticipated Graduation on DBE Revenue in Georgia's DOT Program

Symbol for Graduated Firm	Firm's Monthly Revenue; 2005 - 2006	Firm's Monthly Revenue; Jan-May YTD 07	Percent Change in Monthly Revenue
A	$ 495,671	$ 290,200	-41%
B	$ 1,668,657	$ 420,029	-75%
C	$ 886,664	$ 284,000	-68%
D	$ 2,375,602	$ 686,510	-71%
E	$ 263,907	$ 89,075	-66%
F	$ 103,440	$ 103,588	0%
G	$ 934,130	$1,062,276	14%
H	$ 878,940	$ 563,599	-36%
I	$ 1,073,963	$ 595,127	-45%
J	$ 192,217	$ 15,320	-92%
K	$ 90,965	$824,579	806%
Average	**$ 814,923**	**$ 448,573**	**-45%**

Note: In February 2007 all firms above were graduated following a program audit.

Figure 1

Effect of Graduation on DBE Revenue



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Objectives, Outline and Data

Objectives

This report documents the contribution of minority entrepreneurs and small businesses to the nation's well-being. It also identifies sectors of the economy where qualified, willing and able minority businesses continue to face unfair treatment. The conclusions are based on an examination of 47,254 Small Business Concerns (SBCs)[14] registered with the government's Central Contractor Registration (CCR) database. The firms analyzed in this study meet small business size standards established by the Office of Size Standards (OSS).[15]

Outline

The study is organized into thirteen sections. The first section consists of the background, rationale and recommendations of the study. Section II outlines the objectives and data of the study. Section III explores the current state of minority-owned businesses while Section IV looks at the race and ethnic characteristics of minority businesses in the selected industries. Section V examines disparities between minority and non-minority business owners in the general marketplace. This section looks at the nature of disparities across different industries and summarizes the research findings that attempt to explain them. Section VI analyzes why government contracting remains the most viable option for small businesses owned by minorities. In Section VII, we examine the disparities among minority small businesses that are registered with CCR but do not participate in the SDB Program. The long standing persistence of disparities in private and government sector contracting, led to the establishment of the SDB Program, which is the focus of Section VIII. Section IX describes the effect of the U.S. Supreme Court's Adarand Decision on the SDB Program. In the next section, we develop a methodology to determine the capacity of small businesses in the absence of discrimination. We follow this analysis in Section XI where we determine the relationship between SDB capacity and the new ceiling for the personal net worth. Section XII analyzes the economic impact of the SDB Program on jobs and income. The final section of the report, Section XIII, describes the spatial impact of minority-owned firms; that is, it investigates the characteristics of communities where companies choose to locate. The primary objective is to determine whether minority-owned firms and SDBs as compared to Other Small Business Concerns (OSDBs) tend to locate in communities that experience greater economic and social distress, such as low income inner cities, high unemployment areas or areas where poverty is concentrated. The street addresses of companies are geo-coded and their neighborhood characteristics (poverty rate, median family income, unemployment rate and racial composition) are examined.

Categories of Unique Data

The primary database used in preparing this report was the CCR for the period 2004 through 2006. All companies, whether large or small, desiring to contract with the Federal Government must register with the CCR. Categories of small business concerns considered in this report are listed in Table 2.

[14] As used in this report, a "Small Business Concern" means any business entity that meets the industry and employment size standards for small businesses and is organized for profit (even if its ownership is in the hands of a nonprofit entity). It must have a place of business located in the United States or its outlying areas and it must make a significant contribution to the U.S. economy through payment of taxes and/or use of American products, material and/or labor, etc. "Concern" includes but is not limited to an individual, partnership, corporation, joint venture, association, or cooperative (See FAR 19.101). The full regulation is available at: http://acquisition.gov/far/current/html/FARTOCP19.html.

[15] The report does not include firms certified as Women-owned Business Concerns (WOBCs), Veteran-owned or Disabled Veteran-owned Business Concerns (VO/DVOBCs).

Table 2

Categories of Small Business Concerns Analyzed
(all firms are currently registered through the CCR System)

Category		Number in CCR Database
1.	Small Business Concerns (SBCs)	47,254
2.	Non-Minority SBCs; non-minority firms in all categories	28,017
3.	Minority SBCs; minority firms in all categories	19,237
4.	Minority, not SDB; all minority firms excluding active SDBs and Graduated SDBs	10,513
5.	SDBs (Small Disadvantaged Businesses); all certified and active SDBs-- 8(a) firms are automatically SDB Certified	6,758
6.	Graduated SDBs; former SDBs that exceed industry or net worth size standard	2,848
7.	OSBC (Other Small Business Concerns), includes all non-minority SBCs except those certified as SDBs	27,081

Total excludes firms registered as Women-owned Small Business Concerns and Veteran-owned/Disabled Veteran-owned Small Business Concerns. Total also includes firms in selected industries only.

Source: CCR, January 2007.

Category 1 lists the total number of SBCs that are registered with CCR as "Small Business Concerns" (47,254 firms). The second category consists of SBCs that are owned by non-minority persons (28,017 firms). They may or may not be SDB certified. Category 3 is the total number of firms that are owned by minority persons, independent of whether they are SDB certified. The number of minority-owned firms that are registered with CCR and have never been SDB certified is 10,513 firms. These firms comprise Category 4. Category 5 consists of SBCs that are SDB Certified (6,758 firms). In considering this category, it is important to keep in mind that all 8(a) certified firms are automatically SDB Certified.[16] Category 6 lists SBCs that were formerly SDB Certified but are no longer eligible due to their size or their owner's net worth. These firms are presumed to have graduated from the SDB Program (2,848 firms). Finally, Category 7 lists the total number of Other Small Business Concerns (OSBCs). These are firms that are not owned by minority persons and have never been SDB Certified (27,081 firms). The study examines prime contracting of SBCs.[17] To examine the relationship between SDB capacity and the net worth of business owners, we used data that preceded the establishment of the PNW ceiling to avoid the potential for statistical bias.

In this regard, historical administrative data on the 8(a) program was used because it contains information on Net Assets and SDB Capacity. The data, formerly referred to as ERDB, has detailed financial and owner attribute information on businesses that were involved in the 8(a) small business program between 1995 and 1997. The information includes unadjusted and adjusted personal net worth of business owners who enrolled in the program, the legal form of the company organization, the businesses SIC number, the 8(a) program status of the company (active, inactive, terminated), the racial and ethnic status of the owner, size of employment, the volume of non-8(a) and 8(a) sales and the Dun and Bradstreet number of the firm. Program data for 8(a) was used to investigate the relationship between personal net worth and capacity during a period when the $750,000 PNW was not in effect. These data were also merged with the Federal Procurement Data System (FPDS) data.

CCR and FPDS-NG data were used to analyze SDBs between 2004 and 2006. The Federal Procurement Data System – Next Generation or FPDS-NG database contains information on all government awards to prime contractors. This data was used to supplement CCR data. The data contains pertinent information on the firms' specialization (NAICS code), the age of the business, the legal form of business organization, the race and ethnicity of the owner, the gender of the owner and the program status of the firm (that is, SDB concern, 8(a) concern, Women-owned Business concern, Veteran-owned Business Concern, or Disabled Veteran-owned Business Concern).

[16] All 8(a) Certified firms are automatically SDB Certified and activities for these firms are not reported separately from SDB totals.

[17] Data regarding subcontracting activity of SBCs are becoming more accurate and more readily available. Recently completed studies in this area suggest SDBs experience significantly greater disparities in access to subcontracting opportunities than they encounter in prime procurement opportunities. See Clark, M., C. Moutray and R. Saade 2006. "The Government's Role in Aiding Small Business Federal Subcontracting Programs in the United States," Office of Advocacy, U.S. Small Business Administration *Small Business Research Summary*. September 2006. No. 281. pp 1-31.

Since the public version of CCR does not contain revenue or employment information, we were granted clearance to access the private portion of the CCR database. This access made available two additional pieces of information; the average total revenue, and the average employment, both over the three years from 2004-2006.

3

Current State of Minority-Owned Businesses

It is widely recognized that small businesses are a primary engine of innovation and job growth in the economy. During the period 1998 to 2004 small businesses produced 50.5% of the total gross domestic product of the United States. They accounted for 85% of the total value added in the construction industry, 33% of the total value added in manufacturing, 41% in wholesale trades, about 67% in professional and technical services and 48% of the total value added in retail trade. In 2004 small businesses added $4,717 billion to the U.S. GDP while large businesses added $4,593 billion (See Table 3).[18]

Table 3

Small Business Contribution to Employment and GDP, 1998-2004

	Value
Number of Small Businesses with Employees	6,331,242
Number of Jobs in Small Businesses	58,597,452
Percent of All Employees in Small Businesses	51.0%
Percent of Value Added in Construction	85.5%
Percent of Value Added in Professional and Tech. Service Industries	66.6%
Percent of Value Added in Wholesale Industry	55.4%

Source: Kobe, Katherine. 2007.

Between 1982 and 1992, the number of all small firms increased by 91% and the number of firms owned by Whites increased by 66%. In comparison, firms owned by Blacks increased by 288% while firms owned by Asians and Hispanics increased by 353% and 454% respectively (Table 4). Between 1997 and 2002, the number of firms owned by Blacks increased faster than the number of firms owned by all other racial and ethnic groups. However, this growth was largely confined to businesses without paid employees.

Table 4

Number and Percent Change of Minority-Owned Firms Between 1982 and 2002

Race or Hispanic Origin Category	1982	2002	Percent Change, 1982-2002
All Firms	12,059,950	22,974,655	90.5%
White alone, not Hispanic	11,234,999	18,609,599	65.6%
Hispanic or Latino (any race)	284,011	1,573,464	454.0%
Black or African American	308,260	1,197,567	288.5%
American Indian and Alaskan Native	17,100	201,387	1077.7%
Asian	240,806	1,103,587	358.3%

Source: Lowry, Ying 2007.

[18] Kobe, Katherine. 2007. The Small Business Share of GDP, 1998-2004, Small Business Research Summary, SBA Office of Advocacy, April 2007, No. 299, pp 1 - 37.

4

Industries Examined in the Report (Race, Ethnicity and Industry Characteristics)

This report examined Small Business Concerns only in the following industries:

Construction of Buildings
Heavy Construction and Civil Engineering
Specialty Trade Contractors
Textile and Leather Manufacturing
Paper, Printing and Related Manufacturing
Chemical, Non-Metallic Minerals Manufacturing
Plastics and Rubber Manufacturing
Primary Metals and Machinery Manufacturing
Computer and Electronic Manufacturing
Wholesale Trade In Durable and Non-Durable Goods
Publishing, except the Internet
Internet Publishing, Telecommunications and ISP
Professional, Scientific and Technical Services

The race and ethnic ownership characteristics of these businesses are given in detail in the 2002 Census Bureau's Survey of Business Owners (SBO). This section describes the industry characteristics of small businesses with paid employees, as provided in the SBO data.

Construction of Buildings
According to the 2002 SBO, there are 220,348 small firms with paid employees involved in the Construction of Buildings (NAICS code 236). They comprised about 32.3% of all firms in the industry with paid employees. The combined sales and receipts of these firms was over $522 billion for year 2002 (See Table 5). In the same industry, the five racial minorities together made up almost 5.5% of total small firms with paid employees, of which 5,789 firms were Hispanic-owned, 2,782 Asian-owned and 2,179 businesses owned by Blacks. In comparison, minority-owned small businesses received 2.9% of all industry revenue (See Table 6).

Heavy Construction and Civil Engineering
There were 51,122 small businesses involved in Heavy and Civil Engineering Construction (NAICS code 237) that had paid employees. Among the five minorities, Hispanics-owned 1,404 businesses, more than half of total minority firms. Of the rest, 542 businesses were Black-owned, followed by 402 American Indian and 361 Asian-owned firms. While the average employment for all firms was 22.6 workers per firm, the same average for minority-owned firms was 15.6 persons per firm. There were a total of 42,748 workers employed by minority firms and 24,399 of them worked in firms with Hispanic ownership. Small business revenue in heavy construction was $205.6 billion in 2002; in comparison, small minority business receipts totaled $6.45 billion, or 3.1% of the total. Hispanic businesses ranked highest among minorities with almost $3.27 billion, followed by American Indian businesses that made $1.23 billion. Black businesses outnumbered American Indian businesses by 140 firms, but ranked third in terms of receipts and sales, making $899.0 million.

Specialty Trade Contractors
The 2002 SBO indicates that there were over 1.9 million small firms operating in the NAICS code 238, as Specialty Trade Contractors and 458,750 of these firms had paid employees. A total of 4,210,594 workers were employed in the industry which made over $205 billion in 2002. Minority businesses made up 6.8% of all firms and employed 209,571 workers. They received 4.5% of total revenue. Once again, Hispanic firms ranked first among the minorities in the number of businesses, number of employees and receipts. There were 17,954 Hispanic firms employing an average of 7.1 workers per firm, and making almost $12.4 billion in sales and receipts. Although there were more Black firms than Asian firms, the latter recorded slightly higher sales at $3.53 billion when compared with $3.51 billion made by Black firms.

Textile and Leather Manufacturing
Small businesses under the NAICS codes 313, 314, 315 and 316 together make up the Textile and Leather Manufacturing Industry. According to the SBO, firms with paid employees made up about 41% of the 60,892 small firms in this industry in 2002. Of these, 5,110 firms were minority-owned: Asians owned 3,539 firms, Hispanics 1,316 firms, and Blacks 129 firms. The total employment in the industry for firms with paid employees was 854,831 workers. The average employment per firm was highest in Hispanic-owned firms at almost 10 workers per firm, followed by Black firms with 7.5 workers. Asian firms on an average employed 4.5 workers which was lower than American Indian firms with 5.5 workers. Total receipts in all firms for the year 2002 were close to $132 billion; minority-owned firms received 4.5% of total revenue.

Paper, Printing and Related Manufacturing
Of the 69,600 small businesses in the Paper, Printing and Related Manufacturing industry (NAICS 322 and 323), 39,957 firms had paid employees. Total minority-owned firms in 2002 was 2,781; 1,313 of these were owned by Asians, 1,045 by Hispanics and Blacks owned 415 businesses. A total of 1.2 million workers were employed in this industry, at an average of 30.6 workers per firm. Among minorities, Hispanic-owned firms employed 9,916 workers, at 9.5 workers per firm, Asian owners followed with 9,000 employees and Black firms with 3,490 employees. The total receipts for the industry in 2002 was over $253.5 billion and of the minorities, Hispanic businesses totaled over $1.1 billion, followed by $414.1 million for Black-owned firms.

Chemical, Non-Metallic Minerals Manufacturing
There were 39,534 small firms registered under NAICS codes 325 and 327, in the Chemical and Non-metallic Minerals Manufacturing Industry; 21,594 of these firms had paid employees, and 5.7% of these were owned by minorities. The industry employed 1.4 million workers, and average firm employment was 63 workers, but minority owners employed only 15 workers per firm. Total sales for all small firms with paid employees was over $580 billion in 2002, but minority firms made just over $4 billion dollars.

Plastics and Rubber Manufacturing
Almost 70% of small businesses in the Plastics and Rubber Manufacturing industry (NAICS 326) had paid employees, and each firm on an average employed over 79 workers. Of the 12,421 firms with employees, Hispanics and Asians owned over 90% of the 690 minority firms and employed 6,597 and 15,001 workers each. Asian firms were most successful recording $2.4 billion dollar revenues, followed by Hispanics with over $928 million and Blacks with $487.7 million revenue.

Primary Metals and Machinery Manufacturing
The Primary Metals and Machinery Manufacturing industry includes firms registered under NAICS codes 331, 332 and 333. According to the 2002 SBO, 89,592 of the 142,403 firms in the industry employed a total of over 3.3 million paid workers. Among firms with paid employees, minorities owned 5.2% of all firms, and on average, each firm employed less than a third of the 37 workers that non-minority firms employed. The total revenue for firms with paid employees was over $655.7 billion in the year surveyed. Minorities' share of the revenue was almost a tenth, at $7.7 billion. Hispanics owned 2,487 firms, more than half of all minority firms, employed 29,358 workers and recorded revenues of over $4 billion. The 1,494 Asian-owned businesses employed 14,955 workers and listed revenue of $2.11 billion dollars. There were relatively fewer Black owners in the industry with just 313 firms employing 5,864 workers.

Computer and Electronic Manufacturing
According to the SBO, two out of every three of the 21,638 firms in the Computer and Electronic Manufacturing industry (NAICS 334) had paid workers. The industry also had the highest employee per firm ratio of 92 workers and employed a total of 1,313,608 workers. Minority firms employed significantly lower number of workers, on an average, 20 workers in each firm. Asians owned close to 70% of all minority-owned businesses in the industry and employed 17,500 workers. Hispanics ranked second in terms of ownership and total employment, with 6,029 workers in the 270 firms they owned. Black owners in this industry provided the most employment per firm among the minorities, employing 28 workers in each of the 84 firms they owned. The total revenue recorded for these firms was over $378 billion of which minorities' share was less than a billion dollars in total.

Wholesale Trade in Durable and Non-Durable Goods
A total of 657,593 firms were involved in Wholesale Trade of Durable and Non-durable goods in 2002. Registered under the NAICS codes 423 and 424, there were 317,846 firms which had a total of 5.7 million paid employees. Of the 13 industries examined in this report, firms in wholesale trade recorded the highest revenue of $4.26 trillion. The 38,171 minority firms made a total of $40.66 billion in revenue (excluding Asian firms for which there was no revenue reported). There were 23,460 Asian firms and they provided jobs to 150,000 employees. Hispanic-owned firms came in next at almost 12,000 firms making a sum of $33.97 billion in revenue and employing over 84,000 employees. With combined revenue of $4.85 billion, the 1,877 African American firms employed an average of six workers in each firm. American Indians owned 765 firms, the second highest industry participation of the minority group and registered $1.84 billion in receipts.

Publishing, except the Internet
Small businesses under the NAICS code 511 are classified as the Publishing Industry. There were a total of 24,337 firms with paid employees in this industry and 1,722 of them were minority-owned: Asians owned 3.4% of the firms, Hispanics 1.7%, African Americans 1.1% and American Indians 0.4% of the minority firms. In terms of employment, Asians employed 7,500 of the 16,157 workers employed by minority owners, followed by Hispanic and Black employers engaging 3,916 and 3,217 workers respectively. Financially, the small businesses in the industry received over $245.8 billion. Minorities received only 0.5% of the revenue while constituting over 7% of all firms. Among the minorities, African American firms performed the best, with $676 million in revenue, followed by Hispanics at $484.35 million.

Internet Publishing, Telecommunications and ISP
Firms under the NAICS codes 516, 517 and 518 collectively constitute the Internet Publishing, Telecommunication and ISP industry. According to the 2002 SBO, 25,406 of the 91,997 firms in the industry employed a total of over 2 million workers. The industry revenue was over $511 billion. Minority firm ownership was 10.8% and the firms employed 1.2% of all employees. The 1,531 Asian-owned firms employed over 11,000 workers, more than double that of the next major group, Hispanics owned 745 firms and employed 5,314 workers and recorded revenue of almost a billion dollars. Black owners were the third most prominent group in the industry owning 394 firms and employing an average of 12 workers per firm.

Professional, Scientific and Technical Services
Over 3.2 million firms in various areas of business ranging from architectural consulting to translation services, with a common NAICS code of 541 were categorized under the Professional, Scientific and Technical Services Industry. Of these, 727,893 firms employed 10 workers, and reported total industry revenue of $911.5 billion. 63,966 firms, identified as belonging to minority owners, employed 382,008 workers and reported over $43.7 billion in revenue. Asians owned 30,000 firms, followed by Hispanics at 19,360 firms, Blacks at 11,014 firms, American Indians at 3,271 and 321 firms owned by Native Hawaiian. While Asians hired almost 6.5 workers per firm, Black firms had 6.4 workers, Hispanic 5.1 workers and American Indians and Native Hawaiian an average of 4.7 and 4.2 workers per firm. Financially, Asians reported over $23 billion in revenue, followed by Hispanic owners at over $11.5 billion and Black owners at over $7 billion in revenue.

Table 5

Number of Firms, Employees in Firms and Receipts of Firms in Industry Race and Hispanic Origin

Industry Name	All Firms	All Minority	American Indian & Alaska Native	Asian	Black or African American	Hispanic or Latino	Native Hawaiian & Pacific Islander
Construction of buildings							
Number of firms with paid employees	220,348	12,043	1,184	2,782	2,179	5,789	109
Receipts for firms with paid employees ($'000)	$522,063,852	15,500,905	$1,443,428	$3,783,550	$3,088,438	$7,003,527	$181,962
Total number of employees	1,624,657	72,687	5,500	14,374	14,103	38,012	698
Average employees per firm	7.4	6.0	4.6	5.2	6.5	6.6	6.4
Heavy and Civil Engineering Construction							
Number of firms with paid employees	51,112	2,741	402	361	542	1,404	32
Receipts for firms with paid employees ($'000)	$205,628,844	$6,449,085	$1,232,240	$814,328	$899,009	$3,268,807	$234,701
Total number of employees	1,156,027	42,748	6,577	4,558	6,310	24,399	904
Average employees per firm	22.6	15.6	16.4	12.6	11.6	17.4	28.3
Specialty Trades Contractors							
Number of firms with paid employees	458,750	31,454	3,249	4,246	6,005	17,954	NA
Receipts for firms with paid employees ($'000)	$481,219,852	$21,626,330	$2,189,873	$3,531,454	$3,516,097	$12,388,906	NA
Total number of employees	4,210,594	209,571	19,262	27,918	34,723	127,668	NA
Average employees per firm	9.2	6.7	5.9	6.6	5.8	7.1	NA
Textile and leather Manufacturing							
Number of firms with paid employees	24,950	5,110	126	3,539	129	1,316	NA
Receipts for firms with paid employees ($'000)	$131,992,127	$1,331,959	$66,850	NA	NA	$1,265,109	NA
Total number of employees	854,831	30,538	692	15,873	967	12,947	59
Average employees per firm	34.3	6.0	5.5	4.5	7.5	9.8	NA
Paper, Printing and Related Manufacturing							
Number of firms with paid employees	39,957	2,781	3	1,313	415	1,045	5
Receipts for firms with paid employees ($'000)	$253,506,291	$1,523,408	NA	NA	$414,122	$1,109,286	NA
Total number of employees	1,223,746	22,456	40	9,000	3,490	9,916	10
Average employees per firm	30.6	8.1	13.3	6.9	8.4	9.5	2.0
Chemical, Non-metallic minerals Manufacturing							
Number of firms with paid employees	21,594	1,232	73	554	155	446	4
Receipts for firms with paid employees ($'000)	$580,832,157	$4,008,408	$94,269	$2,455,990	$316,002	$1,115,615	$26,532
Total number of employees	1,362,970	18,679	514	10,509	1,826	5,644	186
Average employees per firm	63.1	15.2	7.0	19.0	11.8	12.7	46.5
Plastics and Rubber Manufacturing							
Number of firms with paid employees	12,421	690	NA	309	58	323	0
Receipts for firms with paid employees ($'000)	$175,094,500	$3,824,611	NA	$2,408,851	$487,696	$928,064	NA
Total number of employees	986,603	24,716	NA	15,001	3,118	6,597	0
Average employees per firm	79.4	35.8	NA	48.5	53.8	20.4	NA
Primary Metals and Machinery Manufacturing							
Number of firms with paid employees	89,592	4,697	403	1,494	313	2,487	NA
Receipts for firms with paid employees ($'000)	$655,772,165	$7,700,960	$721,884	$2,111,829	$798,931	$4,068,316	NA
Total number of employees	3,304,887	55,816	5,579	14,955	5,864	29,358	60
Average employees per firm	36.9	11.9	13.8	10.0	18.7	11.8	NA
Computer and Electronic Manufacturing							
Number of firms with paid employees	14,282	1,313	44	915	84	270	NA
Receipts for firms with paid employees ($'000)	$378,094,641	$929,202	$62,278	NA	$117,159	$749,765	NA
Total number of employees	1,313,608	26,486	428	17,500	2,354	6,029	175
Average employees per firm	92.0	20.2	9.7	19.1	28.0	22.3	NA

CONTINUED

Table 5 (Continued)

Number of Firms, Employees in Firms and Receipts of Firms in Industry Race and Hispanic Origin

Industry Name	All Firms	All Minority	American Indian & Alaska Native	Asian	Black or African American	Hispanic or Latino	Native Hawaiian & Pacific Islander
Wholesale Trade in Durable / Non-durable Goods							
Number of firms with paid employees	317,846	38,171	765	23,460	1,877	11,991	78
Receipts for firms with paid employees ($'000)	$4,260,775,896	$40,657,519	$1,836,572	NA	$4,846,244	$33,974,703	NA
Total number of employees	5,748,199	252,141	5,575	150,000	11,232	84,209	1,125
Average employees per firm	18.1	6.6	7.3	6.4	6.0	7.0	14.4
Publishing except Internet							
Number of firms with paid employees	24,337	1,722	108	931	273	401	9
Receipts for firms with paid employees ($'000)	$245,876,005	$1,252,552	$92,283	NA	$675,921	$484,348	NA
Total number of employees	1,099,157	16,157	1,349	7,500	3,217	3,916	175
Average employees per firm	45.2	9.4	12.5	8.1	11.8	9.8	19.4
Internet Publishing, Telecommunication and ISP							
Number of firms with paid employees	25,406	2,734	44	1,531	394	745	20
Receipts for firms with paid employees ($'000)	$511,537,853	$1,737,172	$129,427	$0	$612,938	$994,807	$0
Total number of employees	2,050,704	24,016	2,113	11,625	4,744	5,314	220
Average employees per firm	80.7	8.8	48.0	7.6	12.0	7.1	11.0
Professional, Scientific and Technical Services							
Number of firms with paid employees	727,893	63,966	3,271	30,000	11,014	19,360	321
Receipts for firms with paid employees ($'000)	$911,568,291	$43,727,866	$1,569,868	$23,359,848	$7,096,863	$11,528,555	$172,732
Total number of employees	$7,426,468	$382,008	$15,310	$196,057	$70,852	$98,438	$1,351
Average employees per firm	$10	$6	$5	$7	$6	$5	$4

Note: Some Minority group total receipts are not given. This causes an understatement of the total receipts by minorities.

Source: Survey of Business Owners, 2002.

Table 6

Percentage of Total Firms, Receipts, Employees and Disparity Index by Industry, Race and Ethnicity

Industry Name	Total Minority	American Indian & Alaska Native	Asian	Black	Hispanic or Latino	Native Hawaiian & Pacific Islander
Construction of buildings						
Percent of firms with paid employees	5.47%	0.54%	1.26%	0.99%	2.63%	0.05%
Percent of Receipts for firms with paid employees	2.97%	0.28%	0.72%	0.59%	1.34%	0.03%
Total Percent of employees	4.47%	0.34%	0.88%	0.87%	2.34%	0.04%
Heavy and Civil Engineering Construction						
Percent of firms with paid employees	5.36%	0.79%	0.71%	1.06%	2.75%	0.06%
Percent of Receipts for firms with paid employees	3.14%	0.60%	0.40%	0.44%	1.59%	0.11%
Total Percent of employees	3.70%	0.57%	0.39%	0.55%	2.11%	0.08%
Specialty Trades Contractors						
Percent of firms with paid employees	6.86%	0.71%	0.93%	1.31%	3.91%	NA
Percent of Receipts for firms with paid employees	4.49%	0.46%	0.73%	0.73%	2.57%	NA
Total Percent of employees	4.98%	0.46%	0.66%	0.82%	3.03%	NA
Textile and leather Manufacturing						
Percent of firms with paid employees	20.48%	0.51%	14.18%	0.52%	5.27%	NA
Percent of Receipts for firms with paid employees	1.01%	0.05%	NA	NA	0.96%	NA
Total Percent of employees	3.57%	0.08%	1.86%	0.11%	1.51%	0.01%
Paper, Printing and Related Manufacturing						
Percent of firms with paid employees	6.96%	0.01%	3.29%	1.04%	2.62%	0.01%
Percent of Receipts for firms with paid employees	0.60%	0.00%	NA	0.16%	0.44%	NA
Total Percent of employees	1.84%	0.00%	0.74%	0.29%	0.81%	0.00%
Chemical, Non-metallic minerals Manufacturing						
Percent of firms with paid employees	5.71%	0.34%	2.57%	0.72%	2.07%	0.02%
Percent of Receipts for firms with paid employees	0.69%	0.02%	0.42%	0.05%	0.19%	0.00%
Total Percent of employees	1.37%	0.04%	0.77%	0.13%	0.41%	0.01%
Plastics and Rubber Manufacturing						
Percent of firms with paid employees	5.56%	NA	2.49%	0.47%	2.60%	0.00%
Percent of Receipts for firms with paid employees	2.18%	NA	1.38%	0.28%	0.53%	NA
Total Percent of employees	2.51%	NA	1.52%	0.32%	0.67%	0.00%
Primary Metals and Machinery Manufacturing						
Percent of firms with paid employees	5.24%	0.45%	1.67%	0.35%	2.78%	NA
Percent of Receipts for firms with paid employees	1.17%	0.11%	0.32%	0.12%	0.62%	NA
Total Percent of employees	1.69%	0.17%	0.45%	0.18%	0.89%	0.00%
Computer and Electronic Manufacturing						
Percent of firms with paid employees	9.19%	0.31%	6.41%	0.59%	1.89%	NA
Percent of Receipts for firms with paid employees	0.25%	0.02%	NA	0.03%	0.20%	NA
Total Percent of employees	2.02%	0.03%	1.33%	0.18%	0.46%	0.01%
Wholesale Trade in Durable / Non-durable Goods						
Percent of firms with paid employees	12.01%	0.24%	7.38%	0.59%	3.77%	0.02%
Percent of Receipts for firms with paid employees	0.95%	0.04%	NA	0.11%	0.80%	NA
Total Percent of employees	4.39%	0.10%	2.61%	0.20%	1.46%	0.02%
Publishing except internet						
Percent of firms with paid employees	7.08%	0.44%	3.83%	1.12%	1.65%	0.04%
Percent of Receipts for firms with paid employees	0.51%	0.04%	NA	0.27%	0.20%	NA
Total Percent of employees	1.47%	0.12%	0.68%	0.29%	0.36%	0.02%
Internet Publishing, Telecommunication and ISP						
Percent of firms with paid employees	10.76%	0.17%	6.03%	1.55%	2.93%	0.08%
Percent of Receipts for firms with paid employees	0.34%	0.03%	0.00%	0.12%	0.19%	0.00%
Total Percent of employees	1.17%	0.10%	0.57%	0.23%	0.26%	0.01%
Professional, Scientific and Technical Services						
Percent of firms with paid employees	8.79%	0.45%	4.12%	1.51%	2.66%	0.04%
Percent of Receipts for firms with paid employees	4.80%	0.17%	2.56%	0.78%	1.26%	0.02%
Total Percent of employees	5.14%	0.21%	2.64%	0.95%	1.33%	0.02%

Note: Some minority group total receipts are not given. This causes an understatement of the total percent of receipts by minorities.

Source: Survey of Business Owners, 2002.

5

Minority Business Disparities – Characteristics and Causes

Despite the rapid growth of minority-owned firms, the owners of these firms continue to encounter significant disparities in the general market place. While racial and ethnic minorities comprise approximately 30% of the U.S. population, they own just 18% of all U.S. businesses.

Disparities by Industry, Race and Ethnicity

In 2002 Blacks comprised 12.8% of the total population and owned 5.2% of all businesses. Hispanics comprised 14.1% of the total population and owned 6.8% of all businesses; Subcontinent Asians comprised 4.2% of the total population and held 4.8% of all businesses; Pacific Islanders comprised 0.1% of the total population and owned 0.1% of all businesses; and American Indians and Alaska Natives comprised 1% of the total population and owned 0.9% of all businesses.[19] In comparison, non-Hispanic Whites comprised 67.4% of the total population, and owned 81% of all non-publicly traded businesses (See Table 7).

Racial disparities in small business revenue are significant among all groups except Asians and American Indians. Furthermore, it is impossible to determine with precision the racial and ethnic ownership of publicly held companies. However, if we assume that the largest share of the receipts of these companies were held by non-Hispanic Whites, disparities in business revenue among minorities would be even greater. Specifically, while publicly held businesses comprised only 2.2% of all businesses in 2002, they accounted for 60.7% of total business revenue. Among non-publicly held companies Whites received 36.4% of total revenue. Of all business revenues, minority percent of total revenue is much lower if we include revenue of public and non-public businesses. Hispanics received 0.1% of total business revenue, Blacks 0.4%, Native Americans 0.1%, Asians 1.4%, and Pacific Islanders 0.02%.[20]

Disparities in family income and poverty contributed to disparities in minority business performance, compared with businesses owned by non-minorities. For example, in 2005 the median income of non-Hispanic Whites was $50,784, for Blacks it was $30,858, for Asians $61,094, and for Hispanics it was $35,967. Blacks also had the highest percentage of households in poverty at 23.8%, followed by Hispanics 20.6%, Asians 8.9%, and non-Hispanic Whites at 6.0% (See Table 8).

Table 7

Difference Between Population Percent and Business Ownership Percent

Race	Population, 2004	Non-Publicly Held Businesses, 2002	Percent of Total Population	Percent of Non-Publicly Held Businesses	Percentage Point Difference (Business % - Pop %)
White alone, not Hispanic	197,840,800	18,609,599	67.4%	81.0%	+13.6%
Hispanic or Latino (any race)	41,322,100	1,573,464	14.1%	6.8%	-7.3%
Black or African American	37,502,300	1,197,567	12.8%	5.2%	-7.6%
American Indian and Alaskan Native	2,824,800	201,387	1.0%	0.9%	-0.1%
Asian	12,326,000	1,103,587	4.2%	4.8%	0.6%
Total or Average	**293,655,400**	**22,974,655**	**100.0%**	**100.0%**	

Source: U.S. Census Bureau 2005 (a), Lowery, 2007.

[19] Lowery, Ying. 2007 and Survey of Business Owners, 2002.

[20] Lowery, Ying. 2007. Minorities in Business: a Demographic Review of Minority Business Ownership, Small Business Research Summary, SBA Office of Advocacy, April 2007, No. 298, pp 1 - 50).

Table 8

Racial Disparities in Attributes Associated with Business Viability

Race or Hispanic Origin Category	Median Income, Three-year Average 2003-2005	Poverty Rate, Three-year Average 2003-2005	Percent Using Bank Loans to Start Business, 2002	Median Net Worth, 2000	Business Ownership Rate (Businesses per 1000 persons)
White alone, not Hispanic	$50,677	8.4%	23.1%	$79,400	94
Hispanic or Latino (any race)	$35,467	22.2%	14.8%	$9,750	38
Black	$31,140	24.7%	17.6%	$7,500	32
American Indian and Alaskan Native	$33,627	12.2%	20.0%		71
Asian	$59,877	10.9%	20.1%		90
Total or Average	**$46,037**	**12.6%**	**22.2%**	**$55,000**	**78**

Source: U.S. Census Bureau, 2005(a); Census Bureau, 2005(b); Lowery, 2007; Census Bureau, 2003.

In 2002, racial and ethnic disparities in business ownership and business receipts existed in all industries examined in this report. The simplest way of measuring disparities is with the disparity index (See Table 9); a numerical ratio of the percent of total business receipts going to a race or ethnic group, divided by the percent of all firms in the industry accounted for by that group. For example, Table 9 shows that every industry examined in this report had a disparity index for minority business owners that was less than 0.80 - the benchmark that court proceedings have established as indicating an inference of discrimination.

Disparities existed in all industries for all race and ethnic groups. The only exceptions were Native Hawaiians and Pacific Islanders in the heavy construction and civil engineering industry, and Asians in specialty trade contracting.

Table 9

Disparity Index by Industry Race and Ethnicity

Industry Name	Total Minority	American Indian & Alaska Native	Asian	Black	Hispanic or Latino	Native Hawaiian & Pacific Islander
Construction of Buildings	0.54	0.51	0.57	0.60	0.51	0.70
Heavy and Civil Engineering Construction	0.58	0.76	0.56	0.41	0.58	1.82
Specialty Trade Contractors	0.66	0.64	0.79	0.56	0.66	
Textile and Leather Manufacturing	0.05	0.10			0.18	
Paper, Printing and Related Manufacturing	0.09	0.00		0.16	0.17	
Chemical, Non-metallic minerals Manufacturing	0.12	0.05	0.16	0.08	0.09	0.25
Plastics and Rubber Manufacturing	0.39					
Primary Metals and Machinery Manufacturing	0.22	0.24	0.19	0.35	0.22	
Computer and Electronic Manufacturing	0.03	0.05		0.05	0.10	
Wholesale Trade In Durable / Non-durable Goods	0.08	0.18		0.19	0.21	
Publishing except /internet	0.07	0.08		0.25	0.12	
Internet Publishing, Telecommunication and ISP	0.03	0.15	0.00	0.08	0.07	0.00
Professional, Scientific and Technical Services	0.55	0.38	0.62	0.51	0.48	0.43

Note: Simple Disparity Index: % of Receipts ÷ % of Firms
Some disparity values may be biased downward in cases where industry revenue data were not available.

Source: Survey of Business Owners, 2002.

The Causes of Racial and Ethnic Disparities

Studies suggest that the factors contributing to the financial viability and growth of minority businesses are as follows:

1) Individual-specific factors, including owner's business acumen, relevant education and experience, choice of industry and business location.

2) Environment-consequent factors, such as access to capital, to supportive networks, presence of role models and absence of racial discrimination.

3) Group-specific factors include set-aside programs for minorities, equal employment opportunities and environments where there is significant minority political power (Ahiarah, 1993).

Insufficient access to start-up capital is the most widespread reason typically given for the lower level of self-employment among racial and ethnic minorities. Research has indicated that minority businesses experience a substantial disadvantage at the start-up phase (Fairlie, 1999). A frequently cited study by Cavaluzzo, Cavaluzzo and Wolken (2002) examines patterns of credit application for 4,570 small businesses, including 1,025 minority-owned businesses run by men and women in 1993. The size of owner's assets significantly influenced the probability of securing a credit line.

After holding other factors constant, Black-owned businesses were denied credit 2.5 times more frequently than White-owned businesses. Hispanic males were denied two times as often as White males.

Moreover, interest rates paid by Black males who gained credit approval, were 11.1% higher than interest rates paid by White males.

Education has also been cited as a factor in determining the success of business owners. Bates (1990) used information on males who entered self-employment between 1976 and 1982, and found that the level of education positively contributed to the probability of business longevity.

Bates also showed that groups with the highest education levels also had the most access to debt capital. Christopher (1998) developed a "Basic Survival Model" that analyzed small business performance and viability between 1987 and 1991 as a function of numerous exogenous variables. The author found that the probability of minority business survival increases with the number of years of formal education of the owner.

Craig, Gent, Palumbo and Wall (2001) analyzed the factors that contributed to viability of small businesses in Buffalo, NY. They identified how financial and non-financial assets of business owners influenced the success of businesses. They found that having a formal business plan increased sales by 55.8%, while availability of loans increased sales by 55.4%. Also formal education and non-minority status were positively correlated with sales. Dunn and Holtz-Eakin (2000) used samples from the National Longitudinal Surveys of Labor Market Experience and found that parental wealth and self-employment were important in the inter-generational transmission of self-employment skills. Fairlie and Meyer (1996), using 1990 U.S. Census of Population, discovered significant differences in self-employment rates across six ethnic and racial groups in the U.S.. They demonstrated that salary and personal income are positively correlated with self-employment rates.

Finally, Audretsch (1991) investigated rates of firms survival varies across 295 industries, using the SBA data merge with Dun & Bradstreet data. He concluded that innovation substantially contributed to survival rates of these companies and that survival rates varied across industries.

In summary, research has shown that access to capital and credit, personal net worth and income, educational attainment and a legacy of family entrepreneurship, all contribute positively to business start-ups and viability. In each case, the historical legacy of discrimination has lowered the accumulation of these attributes for minorities.

6

Government Contracting Remains the Most Viable Option for Minorities

National business statistics show that minority-owned firms engage in government contracting to a larger extent than do non-minority firms. This is because minority business owners are much more likely to be adversely affected by discriminatory practices in the private sector than in the public sector.

Laws governing discrimination in business practices pertain primarily to government contracting activity and not to private sector business to business transactions.

The greater representation of minority contractors as government vendors is readily apparent in Table 10. The table shows that in 2006 there were 47,254 small business concerns registered with the federal government's CCR database. Of this number, 19,237 (or 40.7%) were minority-owned businesses. In contrast, minorities owned 18% of all U.S. businesses. Among the 19,237 minority-owned SBCs, 3,388 specialized in the construction of buildings, 1,935 concentrated primarily in special trades contracting, and 671 were in the heavy construction industry. But the largest concentration of minority-owned SBCs was in professional, scientific and technical services; 6,843. In total SBCs employed 821,315 workers in 2006; minority-owned SBCs employed 287,482 (or 35% of all workers employed by SBCs) while non-minority-owned SBCs employed 533,833 workers. Among minority SBCs, the industry creating the largest number of jobs was construction of buildings, 66,136, followed by professional, scientific and technical services; 64,506. Internet publishing and telecommunications was third with 35,025 employees.

Table 10

Number and Employment in Minority and Non-minority SBCs, 2006

	Minority-owned SBCs			Non-Minority-owned SBCs		All SBCs	
Industry	Minority-owned SBCs	Employment in minority-owned SBCs	Percent of all employees in SBCs	Non-minority-owned SBCs	Employment in non-minority-owned SBCs	Number of SBCs	Total employees in SBCs
Construction of Buildings	3,388	66,136	66%	2,147	33,543	5,535	99,679
Heavy Construction	671	13,781	37%	1,205	23,042	1,876	36,823
Specialty Trades Contracting	1,935	22,421	36%	2,957	39,977	4,892	62,398
Textile and Leather Manufacturing	381	6,467	18%	747	29,755	1,128	36,222
Paper, Printing and Related Manufacturing	572	5,175	23%	741	17,296	1,313	22,471
Chemical, Non-Metallic Minerals Manufacturing	318	3,515	13%	896	23,650	1,214	27,165
Plastics and Rubber Manufacturing	154	2,190	11%	625	16,969	779	19,159
Primary Metal and Machinery Manufacturing	1,287	23,648	15%	4,909	133,029	6,196	156,677
Computer and Electronic Manufacturing	1,341	29,745	27%	2,722	80,873	4,063	110,618
Wholesale Trade (Durable and Non-Durable)	955	6,685	23%	1,639	21,987	2,594	28,672
Publishing, Except Internet	509	8,188	44%	824	10,592	1,333	18,780
Internet Publishing, Telecommunications and ISP	883	35,025	66%	650	18,400	1,533	53,425
Professional, Scientific and Technical Services	6,843	64,506	43%	7,955	84,720	14,798	149,226
Total	**19,237**	**287,482**	**35%**	**28,017**	**533,833**	**47,254**	**821,315**

Source: CCR, 2007 and FPDS, 2005-2007.

Tables 11 through 15 describe various characteristics of minority SBCs by industry, race and ethnicity. Blacks comprised the largest number of minority SBCs (7,223), representing 15.3% of all SBCs. Blacks were followed in respective order by Hispanics (5,102 SBCs or 10.8%), Asian and Pacific Americans (2,828 or 6% of all SBCs), Subcontinent Asian Americans (2,049 or 4.3% of SBCs), and Native Americans (2,035 SBCs or 4.7%). Non-minority SBCs comprised 59.3% of all firms (See Tables 11 and 12).

Table 11

Number of Minority and Non-Minority SBCs by Industry, Race and Ethnicity, 2006

Industry	Asian Pacific	Black	Hispanic	Native Americans	Subcontinent Asian	Non-Minority SBCs
Construction of Buildings	354	1,192	1,037	638	167	2,147
Heavy Construction	62	203	238	144	24	1,205
Specialty Trades Contracting	195	776	682	231	51	2,957
Textile and Leather Manufacturing	66	143	109	37	26	747
Paper, Printing and Related Manufacturing	74	247	176	42	33	741
Chemical, Non-Metallic Minerals Manufacturing	66	106	82	21	43	896
Plastics and Rubber Manufacturing	19	30	65	22	18	625
Primary Metal and Machinery Manufacturing	245	228	488	203	123	4,909
Computer and Electronic Manufacturing	362	374	266	95	244	2,722
Wholesale Trade (Durable and Non-Durable)	141	387	251	91	85	1,639
Publishing, Except Internet	94	194	84	24	113	824
Internet Publishing, Telecommunications and ISP	124	382	144	65	168	650
Professional, Scientific and Technical Services	1,026	2,961	1,480	422	954	7,955
Total	**2,828**	**7,223**	**5,102**	**2,035**	**2,049**	**28,017**

Table 12

Percent of Minority and Non-Minority SBCs by Industry, Race and Ethnicity, 2006

Industry	Asian Pacific	Black	Hispanic	Native Americans	Subcontinent Asian	Non-Minority SBCs	Total
Construction of Buildings	6.4%	21.5%	18.7%	11.5%	3.0%	38.8%	100.0%
Heavy Construction	3.3%	10.8%	12.7%	7.7%	1.3%	64.2%	100.0%
Specialty Trades Contracting	4.0%	15.9%	13.9%	4.7%	1.0%	60.4%	100.0%
Textile and Leather Manufacturing	5.9%	12.7%	9.7%	3.3%	2.3%	66.2%	100.0%
Paper, Printing and Related Manufacturing	5.6%	18.8%	13.4%	3.2%	2.5%	56.4%	100.0%
Chemical, Non-Metallic Minerals Manufacturing	5.4%	8.7%	6.8%	1.7%	3.5%	73.8%	100.0%
Plastics and Rubber Manufacturing	2.4%	3.9%	8.3%	2.8%	2.3%	80.2%	100.0%
Primary Metal and Machinery Manufacturing	4.0%	3.7%	7.9%	3.3%	2.0%	79.2%	100.0%
Computer and Electronic Manufacturing	8.9%	9.2%	6.5%	2.3%	6.0%	67.0%	100.0%
Wholesale Trade (Durable and Non-Durable)	5.4%	14.9%	9.7%	3.5%	3.3%	63.2%	100.0%
Publishing, Except Internet	7.1%	14.6%	6.3%	1.8%	8.5%	61.8%	100.0%
Internet Publishing, Telecommunications and ISP	8.1%	24.9%	9.4%	4.2%	11.0%	42.4%	100.0%
Professional, Scientific and Technical Services	6.9%	20.0%	10.0%	2.9%	6.4%	53.8%	100.0%
Total	**6.0%**	**15.3%**	**10.8%**	**4.3%**	**4.3%**	**59.3%**	**100.0%**

Table 13

Revenue of Minority and Non-Minority SBCs by Industry, Race and Ethnicity, 2006

Industry	Asian Pacific	Black	Hispanic	Native Americans
Construction of Buildings	$ 1,213,297,452	$ 2,003,544,462	$ 3,178,094,149	$ 2,638,624,991
Heavy Construction	$ 164,025,683	$ 343,894,463	$ 728,909,201	$ 289,763,607
Specialty Trades Contracting	$ 285,955,872	$ 433,337,335	$ 738,439,530	$ 263,021,894
Textile and Leather Manufacturing	$ 135,447,577	$ 42,734,535	$ 204,147,514	$ 153,863,863
Paper, Printing and Related Manufacturing	$ 61,090,819	$ 186,274,889	$ 240,553,982	$ 325,905,825
Chemical, Non-Metallic Minerals Manufacturing	$ 111,808,324	$ 263,141,794	$ 146,319,445	$ 81,455,723
Plastics and Rubber Manufacturing	$ 28,069,301	$ 120,265,763	$ 100,922,036	$ 52,146,250
Primary Metal and Machinery Manufacturing	$ 1,018,687,152	$ 346,221,838	$ 1,013,767,528	$ 632,575,687
Computer and Electronic Manufacturing	$ 2,414,157,208	$ 2,283,408,017	$ 927,921,327	$ 447,803,475
Wholesale Trade (Durable and Non-Durable)	$ 389,088,875	$ 582,339,104	$ 687,361,118	$ 250,219,583
Publishing, Except Internet	$ 142,695,417	$ 172,865,553	$ 116,308,424	$ 10,283,002
Internet Publishing, Telecommunications and ISP	$ 1,036,643,737	$ 2,715,018,966	$ 408,086,569	$ 467,232,590
Professional, Scientific and Technical Services	$ 1,006,520,699	$ 1,506,124,929	$1,180,214,983	$ 351,922,844
Total	**$ 8,007,488,116**	**$ 10,999,171,648**	**$ 9,671,045,806**	**$ 5,964,819,334**

Industry	Subcontinent Asian	Non-Minority SBCs	Total
Construction of Buildings	$ 843,642,226	$ 6,569,060,081	$ 7,412,702,307
Heavy Construction	$ 64,980,777	$ 3,471,796,962	$ 3,536,777,739
Specialty Trades Contracting	$ 46,844,721	$ 4,529,894,116	$ 4,576,738,837
Textile and Leather Manufacturing	$ 22,714,968	$ 3,732,809,657	$ 3,755,524,625
Paper, Printing and Related Manufacturing	$ 44,993,000	$ 2,935,265,689	$ 2,980,258,689
Chemical, Non-Metallic Minerals Manufacturing	$ 82,042,500	$ 3,891,460,954	$ 3,973,503,454
Plastics and Rubber Manufacturing	$ 45,020,000	$ 2,444,081,648	$ 2,489,101,648
Primary Metal and Machinery Manufacturing	$ 463,946,368	$ 22,675,953,901	$ 23,139,900,269
Computer and Electronic Manufacturing	$ 882,732,259	$ 13,897,698,980	$ 14,780,431,239
Wholesale Trade (Durable and Non-Durable)	$ 247,181,228	$ 8,756,154,774	$ 9,003,336,002
Publishing, Except Internet	$ 243,034,626	$ 1,369,586,203	$ 1,612,620,829
Internet Publishing, Telecommunications and ISP	$ 1,360,669,578	$ 2,176,230,922	$ 3,536,900,500
Professional, Scientific and Technical Services	$ 1,224,103,491	$ 9,455,611,988	$ 10,679,715,479
Total	**$ 5,571,905,742**	**$ 85,905,605,875**	**$ 91,477,511,617**

Table 13 provides the total revenue received by SBCs by race, ethnicity and industry. The largest revenue to a minority group ($11 billion) went to Blacks, followed in respective order by Hispanics, Asian and Pacific Islanders, Native Americans, and Subcontinent Asians. Overall, Blacks represented 15.3% of all CCR-listed small business concerns (SBCs) and received 8.7% of the total revenue of those firms. The comparable figures for Hispanics were 10.8% and 7.7%; for Asian and Pacific Islanders the revenue percent was 6.3% and they comprised 6.0% of all SBCs. Native Americans and Subcontinent Asians received 4.7% and 4.4% of total revenue respectively (See Table 14). They each comprised 4.3% of all available SBCs.

Blacks comprised 21.5% of small business concerns in construction of buildings and received 12.2% of total revenue going to SBCs. Hispanics comprised 18.7% of all firms in this industry and received 19.3% of total revenue. In contrast, Native Americans and Subcontinent Asians comprised 11.5% and 3% of SBCs but accounted for 16% and 5.1% respectively, of total revenue received by these firms. Fifty-nine and three-tenths percent of all firms were owned by non-minorities and they received 68.1% of the total revenue.

Table 14

Percent of Revenue for Minority and Non-Minority SBCs by Industry, Race and Ethnicity, 2006

Industry	Asian Pacific	Black	Hispanic	Native Americans	Subcontinent Asian	Non-Minority SBCs	Total
Construction of Buildings	7.4%	12.2%	19.3%	16.0%	5.1%	39.9%	100.0%
Heavy Construction	3.2%	6.8%	14.4%	5.7%	1.3%	68.6%	100.0%
Specialty Trades Contracting	4.5%	6.9%	11.7%	4.2%	0.7%	71.9%	100.0%
Textile and Leather Manufacturing	3.2%	1.0%	4.8%	3.6%	0.5%	87.0%	100.0%
Paper, Printing and Related Manufacturing	1.6%	4.9%	6.3%	8.6%	1.2%	77.4%	100.0%
Chemical, Non-Metallic Minerals Manufacturing	2.4%	5.8%	3.2%	1.8%	1.8%	85.0%	100.0%
Plastics and Rubber Manufacturing	1.0%	4.3%	3.6%	1.9%	1.6%	87.6%	100.0%
Primary Metal and Machinery Manufacturing	3.9%	1.3%	3.9%	2.4%	1.8%	86.7%	100.0%
Computer and Electronic Manufacturing	11.6%	10.%	4.4%	2.1%	4.2%	66.6%	100.0%
Wholesale Trade (Durable and Non-Durable)	3.6%	5.3%	6.3%	2.3%	2.3%	80.2%	100.0%
Publishing, Except Internet	6.9%	8.4%	5.7%	0.5%	11.8%	66.7%	100.0%
Internet Publishing, Telecommunications and ISP	12.7%	33.3%	5.0%	5.7%	16.7%	26.7%	100.0%
Professional, Scientific and Technical Services	6.8%	10.2%	8.0%	2.4%	8.3%	64.2%	100.0%
Total	**6.3%**	**8.7%**	**7.7%**	**4.7%**	**4.4%**	**68.1%**	**100.0%**

Table 15

Mean Years of Business Operation for Minority and Non-Minority SBCs by Industry, Race and Ethnicity, 2006

Industry	Asian Pacific	Black	Hispanic	Native Americans	Subcontinent Asian	Non-Minority SBCs
Construction of Buildings	12	9	10	10	11	16
Heavy Construction	12	10	12	11	12	17
Specialty Trades Contracting	12	8	11	9	10	17
Textile and Leather Manufacturing	14	8	13	12	13	28
Paper, Printing and Related Manufacturing	16	17	14	17	12	24
Chemical, Non-Metallic Minerals Manufacturing	13	30	14	10	15	24
Plastics and Rubber Manufacturing	14	11	16	13	13	24
Primary Metal and Machinery Manufacturing	15	13	17	15	15	27
Computer and Electronic Manufacturing	13	10	12	11	13	18
Wholesale Trade (Durable and Non-Durable)	13	8	13	11	10	24
Publishing, Except Internet	8	8	9	6	8	12
Internet Publishing, Telecommunications and ISP	9	7	7	7	9	10
Professional, Scientific and Technical Services	10	8	9	9	10	11
Mean, All Industries	**12**	**9**	**11**	**11**	**11**	**18**

In the heavy construction industry, the total number of Hispanic-owned firms was 238 and they accounted for 12.7% of all firms. There were a total of 203 Black-owned firms constituting 10.8% of the industry. However, the total revenue of Black-owned firms, $343.9 million, made up only 7% of total industry revenue. In the specialty trades contractor industry, Black and Hispanic-owned businesses comprised 15.9% and 13.9% of the total number of firms. Four-percent of the total number firms were Pacific Asian-owned, while 4.7% were owned by Native Americans (See Table 12). Although the minorities together owned 40% of all firms in this industry, their total revenue comprised 28% (See Table 14). Over 18.8% of the total 1,313 firms in the paper, printing and related manufacturing industry were Black-owned. Hispanic-owned firms formed the second largest minority group with a total of 176 firms. Asian, Native American and Subcontinent firms made up a relatively small portion of the number of firms. The 247 Black-owned firms shared 5% of the total revenue and had an average of nine years in business (See Table 15 also).

The computer and electronic manufacturing industry had more Black (9.2%) and Asian (8.9%) owned firms than Hispanic firms (6.5%), followed by Subcontinent Asians who owned a relatively high 6% in this industry. Black-owned firms received 8% of the total industry revenue. In professional, scientific and technical services,. Black-owned firms were the largest group with almost 3,000 firms or about 19.8%. They accounted for 10% of the total industry revenue. Hispanic-owned firms represented 10% of the industry and received 8% of total revenue.

A recurring pattern of disparity exists in virtually all industries between the share of revenue received by minority firms and their share of all firms in the industry.

Minority-owned businesses are heavily represented among Federal Government contractors. However, there is a significant gap between the share of firms that minorities comprise and the share of total revenue they receive. The gap is even larger for minority firms that have never participated in the SDB program.

7

Disparities Among Minority CCR Vendors that are not SDB Certified

This section focuses on minority-owned SBCs that are registered with CCR, but have never been SDB certified. We focus specifically on the experiences of these firms as a way of emphasizing the importance of the SDB program to the viability and growth of minority-owned firms. New federal regulations require that all firms seeking to engage in contracting with the federal government must register with the CCR database. This requirement allowed us to determine the total revenue that each firm received. This report tracked total firm revenue between 2004 and 2006.

In Section 6 of the report we demonstrated that minority contractors are more dependent upon government sector revenue than are non-minority contractors.

In contrast to SDBs, minority firms that do not participate in the government's SDB program experience significantly greater disparities in total revenue when compared to non-minority-owned firms.

More specifically, we found that after holding constant the differences between minority and non-minority businesses in years of operation, number of employees, legal formal business organization, industry of operation and success at government contracting, minority business owners who do not participate in the SDB program received significantly less revenue than non-minority business owners.

Other things being constant, minority business owners that were not SDB certified received $554,245 less in yearly revenue in comparison to OSBCs between 2004 and 2006.

Also, being a successful federal government contractor added about $2.4 million to small business revenue regardless of the race or ethnicity of the business owner.

In 2006, there were 10,513 minority-owned small business concerns that were not SDB certified (See Table 16). These businesses had combined annual revenues of $10.2 billion in 2006. We compared these firms to Other Small Business Concerns (OSBC). That is, firms primarily owned by White Males who are not socially or economically disadvantaged. In total, there were 27,087 OSBCs and their combined annual revenue was $82.6 billion (See Table 16).

Table 16

Comparison Between Percent of Total Revenue and Percent of Firms for Minority Firms-not SDBs and OSBCs, 2006

	Minority Firm Not-SDB			
	Total Revenue	% of Total SBC Revenue	No. of Firms	% of all SBC Firms
Construction of Buildings	$1,156,946,726	16.7	1398	41.7
Heavy Construction	$478,866,084	12.8	344	23.0
Specialty Trades Contracting	$738,283,137	14.3	1281	30.8
Textile and Leather Manufacturing	$264,634,769	6.7	264	26.6
Paper, Printing and Related Manufacturing	$570,747,649	16.4	362	33.5
Chemical, Non-Metallic Minerals Manufacturing	$262,319,508	6.3	214	19.5
Plastics and Rubber Manufacturing	$192,920,052	7.3	86	12.2
Primary Metal and Machinery Manufacturing	$1,243,665,766	5.2	663	12.1
Computer and Electronic Manufacturing	$1,520,366,799	10.2	672	20.3
Wholesale Trade (Durable and Non-Durable)	$973,739,009	10.1	656	29.0
Publishing, Except Internet	$178,878,197	12.4	276	25.7
Internet Publishing, Telecommunications and ISP	$1,001,971,072	35.4	474	43.8
Professional, Scientific and Technical Services	$1,615,087,973	15.7	3823	33.3
Total	**$10,198,426,741**	**11.0**	**10513**	**28.0**

	Other Small Business Concerns			
	Total Revenue	% of Total SBC Revenue	No. of Firms	% of all SBC Firms
Construction of Buildings	$5,755,347,491	83.3	1956	58.3
Heavy Construction	$3,268,926,920	87.2	1152	77.0
Specialty Trades Contracting	$4,426,006,261	85.7	2884	69.2
Textile and Leather Manufacturing	$3,696,693,394	93.3	730	73.4
Paper, Printing and Related Manufacturing	$2,902,050,368	83.6	720	66.5
Chemical, Non-Metallic Minerals Manufacturing	$3,878,600,954	93.7	886	80.5
Plastics and Rubber Manufacturing	$2,434,651,648	92.7	618	87.8
Primary Metal and Machinery Manufacturing	$22,489,161,877	94.8	4835	87.9
Computer and Electronic Manufacturing	$13,326,421,928	89.8	2645	79.7
Wholesale Trade (Durable and Non-Durable)	$8,653,258,471	89.9	1607	71.0
Publishing, Except Internet	$1,265,043,857	87.6	799	74.3
Internet Publishing, Telecommunications and ISP	$1,824,964,602	64.6	607	56.2
Professional, Scientific and Technical Services	$8,649,633,543	84.3	7648	66.7
Total	**$82,570,761,314**	**89.0**	**27087**	**72.0**

In Table 17, we record the total revenue percentage (utilization) and availability percentage of minority firms that are not SDBs. This Table indicates that the revenue received by all minorities (that were not SDBs) was 11% of total revenue and these firms comprised 28% of all vendors. The disparity index is therefore 0.39 (See last line of Table 17). Similarly, a disparity index is calculated for minorities in each industry and Internet publishing is the only industry whose disparity index is not below the 0.80 threshold that indicates an inference of discrimination by legal standards.

Table 17

Utilization, Availability and Disparity Index for Non-SDBs by Industry, 2006

	Utilization Percentage	Availability Percentage	Simple Disparity Index
Construction of Buildings	16.7	41.7	0.40
Heavy Construction	12.8	23.0	0.56
Specialty Trades Contracting	14.3	30.8	0.46
Textile and Leather Manufacturing	6.7	26.6	0.25
Paper, Printing and Related Manufacturing	16.4	33.5	0.49
Chemical, Non-Metallic Minerals Manufacturing	6.3	19.5	0.33
Plastics and Rubber Manufacturing	7.3	12.2	0.60
Primary Metal and Machinery Manufacturing	5.2	12.1	0.43
Computer and Electronic Manufacturing	10.2	20.3	0.51
Wholesale Trade (Durable and Non-Durable)	10.1	29.0	0.35
Publishing, Except Internet	12.4	25.7	0.48
Internet Publishing, Telecommunications and ISP	35.4	43.8	0.81
Professional, Scientific and Technical Services	15.7	33.3	0.47
Total	**11.0**	**28.0**	**0.39**

Note: Simple Disparity Index: Utilization % ÷ Availability %.
Some disparity values may be biased downward in cases where industry revenue data were not available.

To eliminate the possibility that other factors might account for the disparity that exists between minority firms that are not SDBs and OSBCs, we used a regression analysis. The dependent variable was average income over a three-year period, 2004 through 2006. The explanatory variables included the age of the business, the number of employees, the legal form of business organization, the industry that the business operated in, and a dummy variable indicating whether the firm received government contracting revenue. Also included among the explanatory variables was a variable that indicated whether the firm being observed was a minority-owned firm (not a SDB) or whether it was an OSBC (i.e., other small business concerns). The results revealed that firms' average revenue increased by $43,732 for each additional year of operation; it increased by $92,666 for each additional employee; and average revenue was much greater for a corporation ($1,074,656) as opposed to a regular proprietorship (See Table 18). The most important variable observed was whether average revenue increased or decreased for minority-owned firms that were not SDBs. The results indicated that these firms experienced a $544,245 decrease in average revenue. This result provides an even more compelling inference of discrimination since it is statistically significant (See regression results in Table 18). The regression results also show that firms that successfully received government contracts had average revenues of $2.4 million greater than those who were unsuccessful.

Table 18

Regression Equation: Three-Year Revenue is Estimated for Minority Firms Not-SDB and OSBCs after Controlling for Business Attributes

Dependent Variable = Three Year Average Revenue

Explanatory Variables	Unstandardized Coefficients		Standardized Coefficients	t-Statistic	Significance Level
	B	Std. Error	Beta		
Constant	-37987	427195		-0.089	0.929
Age of Business	43732	5712	0.050	7.657	0.000
Number of Employees	92666	1577	0.356	58.775	0.000
Legal Form of Business Organization					
Proprietorship: Reference Category					
Regular Corporation	1074656	325004	0.034	3.307	0.001
S Corporation or LLC	836545	314404	0.026	2.661	0.008
Partnership	958701	745459	0.008	1.286	0.198
Industry					
Construction of Buildings = Reference Category					
Construction: Heavy	-613493	541502	-0.008	-1.133	0.257
Construction: Specialty Trades	-1282749	419434	-0.025	-3.058	0.002
Manufacturing: Textiles	-671051	657450	-0.007	-1.021	0.307
Manufacturing: Paper	968851	666050	0.009	1.455	0.146
Manufacturing: Chemical	278721	614459	0.003	0.454	0.650
Manufacturing: Plastic	-38795	740819	0.000	-0.052	0.958
Manufacturing: Metals	705802	400968	0.016	1.760	0.078
Manufacturing: Computer Electronics	954588	434219	0.018	2.198	0.028
Wholesale Trade	2656977	478711	0.041	5.550	0.000
Publishing Except Internet	-999751	635723	-0.010	-1.573	0.116
Internet/ISP/Telecom	60780	618582	0.001	0.098	0.922
Professional, Scientific & Technical	-1033015	356988	-0.030	-2.894	0.004
Minority Not SDB (versus OSBCs)	-544245	223807	-0.015	-2.432	0.015
Received Government Contract (Versus Did Not)	2390033	319713	0.044	7.476	0.000
Degrees of Freedom	25037				
Adjusted R Square	0.159				
Mean Value of Dependent Variable	3,705,283				
Standard Error of Estimate	14,506,960				

8

The Small Disadvantaged Business (SDB) Program

Eligibility Requirements and Operation of the SDB Program

There are two business assistance programs administered by the SBA for Small Disadvantaged Businesses. The 8(a) Business Development Program offers a broad range of assistance to socially and economically disadvantaged firms.

The Small Disadvantaged Business Certification Program (SDB Program) offers benefits to SDBs in federal procurement and provides incentives to corporate prime contractors to the government to encourage their use of SDBs as subcontractors.

The SDB program is currently structured so as to:

1) Use federal procurement to overcome the effects of discrimination.
2) Ensure that the benefits of federal procurement are used in a fair and effective manner.
3) Ensure that the operation of the program conforms to the U.S. Supreme Court's 1995 Adarand Decision.

The SBA (or an independent organization designated by SBA) certifies small firms to make sure that they meet specific social, economic and ownership criteria, in addition to other eligibility criteria. SDB certification remains effective for three years. Large business concerns that pursue government prime contracting opportunities use the CCR on-line to identify potential SDB suppliers and subcontractors. The benefits of the SDB program are as follows:

- When bidding as prime contractors, SDBs are eligible for *price evaluation adjustments* of up to 10%. This is accomplished by adding up to 10% to the price of bids received from non-SDBs.[21] The U.S. Department of Commerce uses a benchmarking procedure to determine the under-representation of SDBs in particular industries. Identified industries are eligible for price evaluation of adjustments:
  - Price credits are not applied to industries that do not reflect under-representation.[22]
  - Price credits are not applied to acquisitions below $100,000.
  - Price credits are not applied to procurements set aside for small businesses.
  - Price credits do not apply to procurement under the SBA 8(a) Program.
- Large prime contractors are eligible for *evaluation credits* for reaching SDB's subcontracting targets. This is accomplished by awarding the highest points to the bid proposal with the most targeted dollars, to SDB subcontractors in authorized industries. This credit is available only on negotiated acquisitions greater than $500,000 or construction projects greater than $1 million. Credits are not applied to contracts performed outside of the United States, or to contracts in industries outside of those that are benchmarked. The government-wide goal for SDB participation in prime contracts is 5%.
- Monetary incentives can be provided to prime contractors for exceeding SDB subcontracting targets on negotiated contracts. This can be up to 10% of the difference between the actual and target amount.
- The HUBZone program allows small businesses to engage in sole-source contracting in HUBZones (Historically Under-utilized Business Zones). SDBs

[21] The co-author, T. D. Boston assisted the U.S. Department of Commerce in developing the current benchmarking procedure.

[22] This provision of the SDB Program expired in 2004 and has not been reauthorized. However, DoD and NASA still use price incentives.

located in these zones are eligible for benefits under both programs.

Eligibility for the SDB program and the 8(a) Business Development Program are the same, with the exception that 8(a) participants cannot have personal adjusted net worth of greater than $250,000 when entering the program. All 8(a) certified firms are automatically SDB certified. To become certified businesses:

- Must meet size standards for small businesses in their industry. The SBA office of size standards develops and recommends small-business size standards that vary by industry group. For example, in manufacturing, the standard generally varies between 500 to 1,000 employees. In general construction the size standard is $31 million revenue and in architectural, engineering and professional industries it is $6.5 million.
- Must be at least 51% owned and controlled by a socially and economically disadvantaged individual/s. Blacks, Hispanic Americans, Asian Pacific Americans, Subcontinent Asian Americans and Native Americans are presumed to qualify within this category. Other individuals can qualify by showing a preponderance of evidence that they are disadvantaged.
- Owners must have a personal net worth of less than $750,000 excluding the equity in their business and primary residence.

SDB Certification is conducted electronically by SBA or a designated independent contracting organization.

Applicants must complete SBA form 1010-personal information and business profile, SBA form 413-personal financial statement, provide two years' personal tax returns, provide three years' business tax returns and provide updated business financial statements. Table 19 gives the number of SDBs and OSBCs with their associated total revenue by industry. The table shows that SDBs comprised 20% of small business concerns' (their availability) and received 18.9% of total revenue received by these firms (utilization). A simple Disparity Index for the SDBs yields 0.95 (18.9%/20%). This indicates that firms that participated in the SDB program did not experience significant disparities. In contrast, the Disparity Index was 0.39 for minority firms that did not participate in the SDB program. We can therefore conclude that the program is achieving its intended purpose, to remedy the effects of discrimination.

Table 19

Number, Revenue, Availability and Utilization of SDBs and OSBCs, 2006

	Small Disadvantage Businesses (SDBs)			
Industry Category	Number of SDBs	Availability: SDB percent of SBCs	Revenue of SDBs	Utilization: SDB percent of SBC total revenue
Construction of Buildings	1,841	48.5	$7,592,748,388	56.9
Heavy Construction	304	20.9	$902,419,353	21.6
Specialty Trades Contracting	581	16.8	$915,455,451	17.1
Textile and Leather Manufacturing	74	9.2	$149,284,536	3.9
Paper, Printing and Related Manufacturing	131	15.4	$182,985,539	6
Chemical, Non-Metallic Minerals Manufacturing	53	5.6	$332,921,440	7.9
Plastics and Rubber Manufacturing	49	7.4	$111,183,298	4.4
Primary Metal and Machinery Manufacturing	336	6.5	$1,280,108,097	5.4
Computer and Electronic Manufacturing	444	14.4	$2,606,881,317	16.4
Wholesale Trade (Durable and Non-Durable)	259	13.9	$885,483,366	9.3
Publishing, Except Internet	189	19.1	$464,216,277	26.8
Internet Publishing, Telecommunications and ISP	357	37	$1,172,286,467	39.1
Professional, Scientific and Technical Services	2,140	21.9	$2,696,568,004	23.8
Total	**6,758**	**20**	**$19,292,541,533**	**18.9**

CONTINUED

Table 19 (Continued)

Industry Category	Other Small Business Concerns (OSBCs)			
	Number of Non-SBCs	Availability: OSBCs percent of SBCs	Revenue of OSBCs	Utilization: OSBC percent of SBC total revenue
Construction of Buildings	1,956	51.5	$5,755,347,491	43.1
Heavy Construction	1,152	79.1	$3,268,926,920	78.4
Specialty Trades Contracting	2,884	83.2	$4,426,006,261	82.9
Textile and Leather Manufacturing	730	90.8	$3,696,693,394	96.1
Paper, Printing and Related Manufacturing	719	84.6	$2,885,050,368	94
Chemical, Non-Metallic Minerals Manufacturing	886	94.4	$3,878,600,954	92.1
Plastics and Rubber Manufacturing	617	92.6	$2,434,651,648	95.6
Primary Metal and Machinery Manufacturing	4,833	93.5	$22,453,063,761	94.6
Computer and Electronic Manufacturing	2,644	85.6	$13,326,421,928	83.6
Wholesale Trade (Durable and Non-Durable)	1,607	86.1	$8,653,258,471	90.7
Publishing, Except Internet	799	80.9	$1,265,043,857	73.2
Internet Publishing, Telecommunications and ISP	607	63	$1,824,964,602	60.9
Professional, Scientific and Technical Services	7,647	78.1	$8,649,633,543	76.2
Total	**27,081**	**80**	**$82,517,663,198**	**81.1**

How Goals and Objectives of the SDB Program are Achieved

The SBA works with each agency's procurement authority to establish its goals for SBCs, and it is responsible for tracking and reporting on these agencies attainment. Goals are set for all categories of small business concerns separately (See Table 20 below). A procurement award can be counted in more than one sub-category, except the 8(a) and the SDB categories as they are reported separately. Together, they form the achievement of the government's SDB goals.

Large business concerns that operate as prime contractors to the government must submit form SF-294, the Subcontracting Report for Individual Contracts, on a semi-annual basis. Subcontracts are reported on SF-295 SDB the "Breakout of Subcontracting Awards to SDBs."[23] This is required at the end of the fiscal or calendar year. Optional Form 312 may be submitted at the end of a contract. It allows the contracting officer to determine the extent to which the subcontracting target was met in a particular industry. This form includes only contract activity involving SDBs in benchmarked industry.

[23] Effective January 1, 1999 the SF-295 SDB breakout report was required for all government contracts, not just those associated with evaluation factors.

Table 20

Matrix of the Small Business Administration's Programs

Program Name	Small Business Concerns	Small Disadvantaged Business [Non-8(a)]
Prime Contract Utilization Goal	23%	5% combined goal (split evenly with 8(a) contractors)
Sub-contract Utilization Goal	None	5% combined goal (split evenly with 8(a) contractors)
Description of Program	→ Small Business Development Centers (SBDCs) → SCORE Association (Service Corps of Retired Executives) provide management and technical assistance.	→ Certification strictly pertains to benefits in Federal procurement. → SBA certifies SDBs to make them eligible for special bidding benefits. → Evaluation credits and monetary incentives available to prime contractors who boost subcontracting opportunities for SDBs.
Eligibility Criteria	→ Independently owned and operated. → Not dominant in its field of operation. → Meets employment and industry size standards.	→ Must be at least 51% owned and controlled by a socially and economically disadvantaged individual or individuals. → Other individuals can qualify if they show by a "preponderance of the evidence" that they are disadvantaged. → Must have a net worth of less than $750,000, excluding the equity of the business and primary residence. → Successful applicants must also meet applicable size standards for small businesses in their industry. → 8(a) concerns automatically qualify for SDB certification.
Net Worth Limitation	None	Net worth must be less than $750,000 after taking into account certain exclusions applicable by law.
Self Certify or Independent Organization	Self	SBA or approved Independent Organization must certify
Overall Objective	Help small businesses gain access to Federal Procurement	Expand economic opportunity for disadvantaged businesses.

CONTINUED

Table 20 (Continued)

Matrix of the Small Business Administration's Programs

Program Name	SDB 8(a) Contractors	HUBZone Contractors
Prime Contract Utilization Goal	5% combined goal (split evenly with SDB-non-8(a) contractors)	3%
Sub-contract Utilization Goal	5% combined goal (split evenly with SDB-non-8(a) contractors)	3%
Description	→ SBA program for small business concerns owned by socially and economically disadvantaged persons. → Admitted firms can receive Federal contracts designated for 8(a) Business Development Program participants, as well as management and technical assistance. → Participation is divided into two phases over nine years: a 4-year developmental stage and a 5-year transition stage.	→Program encourages economic development in historically underutilized business zones, 'HUBZones', through the establishment of preferences.
Eligibility Criteria	→ All SDB criteria are applicable → Small businesses owned and controlled by a socially and economically disadvantaged individual. → To enter program, owners must have a net worth of less than $250,000, excluding the value of the business and personal residence and net worth cannot exceed $750,000 during program matriculation.	→ Must be located in a "historically underutilized business zone" or HUBZone. → Must be owned and controlled by one or more U.S. Citizens, and at least 35% of its employees must reside in a HUBZone. → HUBZone must be a recognized census tract, a non-metropolitan county or lands within the boundaries of federally recognized Indian reservations.
Net Worth Limitation	Entering net worth less than $250,000 after taking into account certain exclusions applicable by law. For continued 8(a) eligibility after admission to the program, net worth must be less than $750,000.	None
Self Certify or Independent Organization	Same as for SDB	Self
Overall Objective	To teach 8(a) and other small companies how to compete in the Federal contracting arena and how to take advantage of greater subcontracting opportunities available from large firms as the result of public-private partnerships.	Expand economic opportunity for disadvantaged businesses in economically distressed areas.

CONTINUED

Table 20. (Continued)

Matrix of the Small Business Administration's Programs

Program Name	Women-owned Small Business	Service Disabled Veterans/Veterans
Prime Contract Utilization Goal	5%	3%
Sub-contract Utilization Goal	5%	3%
Description	→ Offers unique opportunities and guidance for women entrepreneurs through special programs and services. → Provides business development, management and technical assistance to emerging, intermediate and advance-stage women entrepreneurs for running successful businesses. → The Office of Women's Business ownership also provides access to credit and capital, federal contracts, and international trade opportunities.	→ Provides entrepreneurial development services such as business training, counseling and mentoring to eligible veterans owning or considering starting a small business. →Also provides assistance with financing a business and business development.
Eligibility Criteria	→ A small business concern that is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; → Whose management and daily business operations are controlled by one or more women.	→ At least 51 percent owned by one or more service-disabled veterans (a veteran with a disability that is service-connected, i.e., the disability was incurred in the line of duty while serving in the U.S. active military, naval or air service); or in the case of a publicly owned small business, at least 51 percent of the stock is owned by one or more service-disabled veterans. Does not require a minimum disability rating.
Net Worth Limitation	None	None
Self Certify or Independent Organization	Self	Self, Veterans' Administration
Overall Objective	Designed to assist women start and grow small businesses. Women's Business Centers operate with the mission to level the playing field for women entrepreneurs, who still face unique obstacles in the world of business.	Expand economic opportunities for service disabled veterans and other veterans.

Note: See Office of Government Contracting 2003 "Goaling Guidelines for the Small Business Preference Programs: For Prime and Subcontract Federal Procurement Goals and Achievements" July 3, 2003 [29].

9

The Impact of the Adarand Decision on the Small Disadvantaged Business (SDB) Program

As a result of the U.S. Supreme Court's Adarand Decision, in 1995 President Clinton ordered the Justice Department to review all federal race-based affirmative action programs.[24] A race conscious program is one that "confers a benefit or imposes a burden on individuals."

Major changes to the SDB Program following Adarand included the use of industry benchmarks to establish SDB utilization goals, to determine industries where the benchmarks should be applied, and the establishment of a $750,000 personal net worth ceiling for individuals participating in the SDB Program.

The revisions also require SBA certification or independent certification of all SDBs, implementation of price evaluation adjustments, subcontractor evaluation factors and monetary incentives, to encourage the use of SDBs in specified industries. In September 2000, the 10th Circuit Court of Appeals found that the Federal Transportation Program that was previously challenged had been revised and amended in 1997. Also, it was narrowly tailored to meet a compelling government interest and it passed constitutional muster. In 2001, the U.S. Supreme Court agreed with this decision. The new SDB regulations complied with Adarand, by applying preferences to specific industries only instead of to all federal procurement and by requiring all companies to be certified, limiting preferences to only those who were truly disadvantaged.

Legal Background

In Adarand, the U.S. Supreme Court ruled that all federal government programs that use racial or ethnic criteria as factors in procurement decisions must pass a test of strict scrutiny in order to survive constitutional muster.

Adarand involved a Federal highway construction project awarded by the U.S. DOT, Federal Highway Administration, and Central Federal Lands Highway Division (CFLHD). This Federal contract contained a provision referred to as the "Subcontracting Compensation Clause" (SCC). The SCC authorized an additional payment to the prime contractor as an incentive to award subcontracts to minorities and females. The SCC clause implemented a DOT requirement under the Surface Transportation and Uniform Assistance Act (STURAA) that established a SDB goal of 10 percent for federally-funded transportation programs. The prime contractor solicited bids for the guardrail portion of the project from Adarand Constructors, Inc. ("Adarand"), a non-minority subcontractor, and a DBE subcontractor. Despite the fact that Adarand submitted the lowest bid, the prime contractor awarded the subcontract to the DBE.[25] The prime contractor testified that it would have awarded the guardrail subcontract to Adarand were it not for the monetary bonus that it received by hiring a DBE. Id.

*The legal analysis in this section was prepared by Attorney Keith Wiener of the Law firm of Holland and Knight, LLP. However, the authors takes full responsibility for any errors or omissions in summarizing his analysis.

[24] United States Supreme Court decision in Adarand Construction, Inc. v. Pena, 515 U.S. 200 (1995).

[25] Id. at 2102.

Adarand filed suit in the U.S. District Court for the District of Colorado arguing that the SCC violated Adarand's constitutional right to Equal Protection under the law. The District Court granted summary judgment in favor of DOT and Adarand appealed to the U.S. Court of Appeals for the Tenth Circuit. The Tenth Circuit determined that Federal Government affirmative action programs need only satisfy a standard of "intermediate scrutiny" and held that the CFLHD disadvantaged business preference program withstood Constitutional review under the lesser intermediate scrutiny standard.

The Supreme Court, in a 5-4 decision, ruled that all race-based classifications must now withstand "strict scrutiny." The Court stopped short of declaring the CFLHD program unconstitutional and, instead, returned the case to the lower Court for further proceedings. The 10th Circuit, found the Subcontractor Compensation Clause to be constitutionally satisfactory and found this aspect of the DOT's program to have a compelling interest and to meet the narrowly tailored test. Thus, the program withstood the strict scrutiny standard.[26]

The Adarand Decision evolved out of issues regarding disadvantaged, minority and female business enterprise participation programs as considered, developed and adopted by local, state and federal governmental entities in connection with their contracting and procurement activities. These decisions date to the landmark United States Supreme Court decision in City of Richmond v. J.A. Croson, 488 U.S. 469 (1989). They apply the strict scrutiny analysis set forth in Croson to Federal Programs.

In Croson, the U.S. Supreme Court struck down a City affirmative action set-aside program as unconstitutional because it did not satisfy the strict scrutiny analysis applied to "race based" governmental programs. J.A. Croson Co. ("Croson") challenged the City of Richmond's minority contracting preference plan, which required prime contractors to subcontract at least 30 percent of the dollar amount of contracts to one or more Minority Owned Business Enterprises (MBEs). The City defined MBEs as "business[es] at least 51 percent of which [are] owned and controlled . . . by minority group members."[27] Minority group members were defined as "[c]itizens of the United States who are Blacks, Spanish-speaking, Oriental, Indians, Eskimos, or Aleuts."[28] In enacting the plan, the City cited past discrimination and intent to increase minority business participation in construction projects as motivating factors.

The Supreme Court held the City of Richmond's affirmative action plan violated the Equal Protection Clause of the Fourteenth Amendment. The Court applied the "strict scrutiny" standard, generally applicable to any race-based classification, which requires a governmental entity to have a "compelling governmental interest" in remedying past identified discrimination, and that any program adopted by a local or state government must be "narrowly tailored" to achieve the goal of remedying the identified discrimination.

The Court determined that the plan neither served a "compelling governmental interest" nor offered a "narrowly tailored" remedy to prior discrimination. The Court found no "compelling governmental interest" because the City had not provided "a strong basis in evidence for its conclusion that [race-based] remedial action was necessary."[29] The Court held the City presented no direct evidence of any race discrimination on its part in awarding construction contracts or any evidence that the City's prime contractors had discriminated against minority-owned subcontractors. The Court concluded that this was insufficient evidence to demonstrate a compelling interest in awarding public contracts on the basis of race.

Similarly, the Court held the City failed to demonstrate that the statute was "narrowly tailored" for several reasons, including the fact that there did not appear to have been any consideration of race-neutral means to increase minority business participation in city contracting. The Court found the City's 30 percent quota could not be said to be narrowly tailored to any goal, except perhaps outright "racial balancing."[30] In particular, the Court found it rested upon the "completely unrealistic" assumption that minorities will choose a particular trade in lockstep proportion to their representation in the local population. Id. The Court also noted that the City of Richmond's minority population was predominately Black. The Court held it

[26] ADARAND CONSTRUCTION, INC. V. PENA, 515 U.S. 200 (1995) and 2000 U.S. APP. Lexis, pp 23725, 10th Circuit, Sep. 25, 2000.

[27] 488 U.S. at 478.

[28] 488 U.S. at 469.

[29] 488 U.S. at 499.

[30] 488 U.S. at 507.

could not find the "set-aside" program narrowly tailored because of the over inclusiveness of other minorities in the preference programs (for example, Aleuts) without any evidence they suffered discrimination in Richmond. Despite its analysis of the City of Richmond's affirmative action plan, the Supreme Court noted that it did not intend its decision to preclude a State or local government from "taking action to rectify the effects of identified discrimination within its jurisdiction."[31]

The Meaning of the COMPELLING GOVERNMENTAL INTEREST REQUIREMENT

Statistical evidence of discrimination is the primary method used to determine whether there is or is not a strong basis for a remedial program, i.e. that there is a compelling governmental interest. Statistical evidence is used to compare the government's **utilization** of Minority-and Women-owned Business Enterprises (MFBE) to the **availability** of qualified, willing and able MFBEs.[32]

An important component of statistical evidence of discrimination is the disparity index.‡ The disparity index consists of the percentage of minority contractor participation in government contracts divided by the percentage of available minorities. Id.

This equation yields a percentage figure which is then multiplied by 100 to generate a number between 0 and 100, with 100 consisting of full participation by minority contractors.[33] Disparity indices are considered by the Courts as highly probative evidence of discrimination because they ensure that the "relevant statistical pool" of minority contractors is being considered. A disparity greater than two or three standard deviations has been held to be statistically significant and may create a presumption of discriminatory conduct.[34]

The Meaning of the NARROWLY TAILORED LEGISLATION REQUIREMENT

The Courts require that race or ethnic based legislation to remedy past identified discrimination must be "narrowly tailored." The Courts analyze several criteria or factors in determining whether a program or legislation satisfies the narrowly tailored requirement.

The Sixth Circuit Court of Appeals in Drabik stated the following:

> Adarand teaches that a court called upon to address the question of narrow tailoring must ask, "for example, whether there was 'any consideration of the use of race-neutral means to increase minority business participation' in government contracting, Croson, [488 U.S.] at 507, 109 S. Ct. 706 ... or whether the program was appropriately limited such that it 'will not last longer than the discriminatory effects it is designed to eliminate,' Fullilove, [448 U.S.] at 513, 100 S. Ct. 2758...." Adarand, 515 U.S. at 237-38, 115 S. Ct. 2097. A narrowly-tailored set-aside program must be "linked to identified discrimination." Croson, 488 U.S. at 507, 109 S. Ct. 706. Its criteria and measures of success must be particularized, not reduced to rigid quotas driven by "simple administrative convenience." Id. at 508, 109 S. Ct. 706. It must also not suffer from "overinclusiveness."[35]

Federal Government's Response to Adarand

In 1998 the Government revised the eligibility criteria for participating in the SDB Program in response to the U.S. Supreme Court's 1995 Adarand Decision. Major changes to the SDB Program involved the use of industry benchmarks to establish SDB utilization goals, to determine the industries where the goals should be applied, and the establishment of a $750,000 personal net worth (PNW) ceiling for individuals participating in the SDB Program.

The benefits of SDB status were expanded to include a Price Evaluation Adjustment (PEA) for SDBs bidding as prime contractors, Subcontracting Evaluation Factors, and Monetary Subcontracting Incentives to improve SDB subcontracting opportunities. The new regulation

[31] 488 U.S. at 509.

[32] Croson, 448 U.S. at 509; see Drabik, 214 F.3d 730, 2000 WL 703031 at *5.

[33] 6 F.3d at 1005.

[34] Peightal v. Metropolitan Dade County, 26 F. 3d 1545, 1556 (11th Cir. 1994); see Dade County, 122 F.3d at 917.

‡ Id. at 506, 109 S. Ct. 706.Dade County, 122 F.3d at 926. 214 F.3d 730, 2000 WL 703031 at *6.

modified the Federal Acquisition Streamlining Act of 1994 (Pub. L. 103-355, Sec. 7102) under which incentives were originally implemented. New benchmarking criteria were developed to determine the specific industries where incentives would apply.

SDBs are eligible to receive a price benefit of up to 10% in industries where benchmarks applied. This policy was accomplished by adding up to 10% to the price of bids or offers received from non-SDBs. To apply Subcontracting Evaluation Factors, the contracting officer awards the highest points to the bidder with the most dollars targeted to SDB subcontractors in authorized industries. Monetary Subcontracting Incentives allow contracting officers to provide a monetary incentive to the prime contractor of up to 10% of the value by which SDB utilization exceeds the authorized industry target (See also, U.S. SBA America's Small Business Resource, Federal Acquisition Regulation (FAR) Council Rules, final rule published on July 2, 1999).[36] The benefits of the SDB program accrue to firms that have met the certification criteria.

On December 9, 2004 the SBA's authority to use PEAs for civilian agencies expired and was not renewed as part of the SBA Reauthorization Act of 2004 (Pub.L.108-447, Division K). The expiration covers all non-Department of Defense agencies with the exception of the National Aeronautics and Space Administration (NASA) and the Coast Guard.†

[36] See, Office of Management and Budget, Office of Federal Procurement Policy, SDB Procurement: Reform of Affirmative action in Federal Procurement. Accessed electronically on June 15, 2007 at:
http://www.whitehouse.gov/omb/fedreg/sdb-ref.html.

†Code of Federal Regulations, Title 13, Volume 1, Revised as of January 1, 2005. From the U.S. Government printing office via GPO access [CITE: 13CFR124]. Available electronically at: http://SBAs.gov/library/cfrs/13cfr124.html.
Available electronically at: www.sba.gov.

10

Determining the Capacity of Firms but for Discrimination

Major Findings

For almost a decade, the personal net worth ceiling has been capped at $750,000. By failing to adjust the net worth ceiling for inflation, the 2007 real value of $750,000 (1998 dollars) is $558,070. The unadjusted ceiling has made it more difficult for SDBs to win awards in corporate supply chains because global competitive pressures have forced corporations to greatly reduce the number of suppliers they use. This means that suppliers must have larger capacities today. At the same time, government agencies have increasingly "bundled" procurement solicitations as a way of cutting administrative expenses and performance costs.[37] These changes mean that SDBs must have significantly greater capacity to enter core areas of supply chains or compete as government prime contractors.

This section determines what the capacity of SDBs would be in a market free of discrimination. In the next section, we explain our findings that the elasticity or responsiveness of personal net worth to changes in firm capacity is 40%. This means that when the capacity of a firm increases by 100%, personal net worth of the owner increases by 40%. Therefore, when a ceiling is placed on the personal net worth of individuals in the SDB Program, that ceiling also limits the capacity of firms that are eligible for the program (See Figure 2).

We find that the PNW ceiling is set too low. Therefore firms that should be eligible to participate in the SDB program are barred by the ceiling cap. This report finds that the ceiling is low because, it has not been adjusted for inflation in nine years. Second, it is not consistent with the level of capacity that SDBs would be expected to achieve in the absence of discrimination.[38] This report argues that any net worth ceiling must at a minimum, allow SDBs to achieve the capacity that they would in the absence of discrimination. Any ceiling set below this level is a burden on small disadvantaged business owners. Third, the PNW ceiling does not consider that different industries require greater capacities.

Summary of how the New PNW Ceiling was Determined

Had the appropriate inflationary adjustment been made to PNW, the 2006 real value of $750,000 (1998) would have been $916,294.[39] In addition, the study used regression analysis and a decomposition methodology to estimate the average capacity of non-SDBs on an industry by industry basis. The estimated coefficients were then applied to SDBs to determine their average capacity assuming they were treated the same as non-SDBs. This yielded an estimate of what their capacity would be in a nondiscriminatory environment. Actual SDB capacity across all industries between 2004 and 2006 was $3.4 million. SDB capacity in the absence of discrimination was estimated at $4.3 million, or 27% higher. We shall see that personal net worth increases by 40% for every 100% increase in business capacity. Therefore the personal net worth ceiling must be increased overall by 11% (or 40% x 27%) to allow SDBs to achieve a non-discriminatory level of capacity.

[37] House of Representative bill H.R 1813, "Small Business Fairness in Contracting Act" calls for a scale back of "contract bundling" – the practice of grouping small government contracts together and awarding them as one large contract. House Small Business Committee Chairwoman Nydia Velazquez, D-N.Y., said the bill was needed to help small businesses gain more opportunities, because the federal government has been "bundling" individual contracts into mega-contracts out of the price range for small businesses to place bids. This bill is currently in committee.

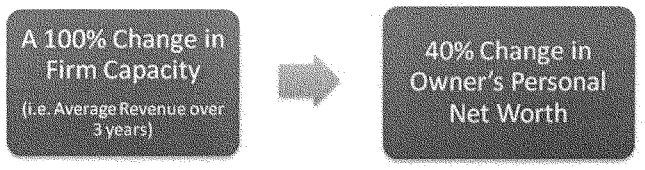
[38] The Department of Commerce's benchmarks for setting SDB goals are based on evaluating seventy major industry groups to determine how the share of federal contracts SDBs actually receive compares to the share they would be expected to receive in the absence of discrimination.

[39] We used the S. Morgan Friedman Inflation Calculator, between 1998 and 2006, see electronically at: http://www.westegg.com/inflation/

This report calculates the capacity but for discrimination on an industry basis for all Construction industries, all Manufacturing industries and all Professional, Scientific services and IT services.

Figure 2

Effect of Firm Capacity on Personal Net Worth



Detailed Explanation of Results

This section explains in detail the methodology and results used in determining a new PNW for participating in the SDB Program. To estimate what the capacity of SDB firms would be without discrimination, we used the technique of decomposition pioneered by economists Blinder and Oaxaca. For each industry we defined one regression equation describing the relationship between average total revenue (2004-2006) and the following set of explanatory variables: age of firm, number of employees, legal form of organization and government award indicator variable. This equation was then applied to two separate groups; OSBCs, a group which is presumed to operate without the presence of discrimination, and active-SDB firms, a group presumed to be adversely affected by discrimination. In the next step, we assigned SDB firms the coefficient estimates from the OSBC regression equation. This equation predicted the average revenue (or capacity) of active SDB firms, if they received the same return on attributes as their non-SDB counterparts. A regression equation was estimated for each industry. The overall average SDB capacity was determined by weighting each industry average by the number of firms in the industry.

Average Revenue

In the first step of this analysis we limited the set of firms to those that reported positive revenue over the years 2004 to 2006. This reduced the original list of over 47,000 firms to 32,072. The dependent variable used was the average revenue of firms between 2004 and 2006.[40]

Explanatory Variables

Number of Employees

There is a positive linear relationship between the number of employees and the average revenue of firms; this value is 0.343. The correlation between the number of employees and average revenue depends heavily on the industry being analyzed. Table 21 details the industry specific correlations and is organized from weakest to strongest relationship. Manufacturing industries had the strongest relationship between revenue and employment; professional, scientific and technical industries had the weakest relationship. Clearly, an industry variable should be included in the regression equation predicting average revenue.

[40] Although the structure of the dependent variable suggested the use of a log transformation, in the final results we did not transform the variable, this made the results easier to interpret.

Table 21

Correlation between Number of Employees and Average Revenue, by Industry

Industry	Correlation
Professional, Scientific and Technical Services	0.1428
Wholesale Trade in Durable / Non-durable Goods	0.3172
Computer and Electronic Manufacturing	0.3323
Primary Metals and Machinery Manufacturing	0.4248
Internet Publishing, Telecommunication and ISP	0.4499
Specialty Trades Contractors	0.5513
Construction of buildings	0.5537
Textile and Leather Manufacturing	0.6229
Chemical, Non-metallic minerals Manufacturing	0.6716
Heavy and Civil Engineering Construction	0.7421
Publishing except internet	0.7445
Plastic Manufacturing	0.7540
Paper, Printing and Related Manufacturing	0.7795

Legal Form of Organization

The overall set of data exhibits the expected relationship between the average revenue of a firm and their legal form of organization; C-corporations have the highest mean average revenue, followed by the category which includes both S-corporations and Limited Liability Companies. General partnerships have the third highest mean average revenue and Sole proprietorships have the lowest mean average revenue.

Age of Business

The overall correlation between log of average revenue and age is about 0.1.

Government Contract Award

The final explanatory variable is a binary indicator. It has a value of one for firms that received a government contract over the years 2004 to 2006 and a value of zero otherwise. Its inclusion in the regression model predicting revenue indicated that it has a large impact on the average revenue of a firm. For the entire 32,072 firms, the average revenue of firms that received a government contract was $8.1 million dollars; the average revenue of firms that did not receive a government contract was $3.2 million dollars. For active-SDB companies these averages were $4.9 million for those receiving government contracts, and $2.6 million for firms that did not receive government contracts.

The results indicate the importance of government contracts on small business performance.

Regression Analysis

All of the explanatory variables described were included in the regression equations. For each industry we have the following set of variables in Figure 3.

Figure 3

Structure of Regression Analysis

Dependent Variable	Explanatory Variables
Average Revenue (2004-2006)	Number of Employees
	Legal Form of Organization (4 categories)
	Age of Business
	Government Contract (Binary indicator)

This leads to two versions of the same equation:

Legal Form = { Corporation, S-Corp or LLC, Partnership, Proprietorship }

Gov Contract = { No Government Contract, Government Contract }

Equation 1: (For Other Small Business Concerns, i.e. Non-Minority/Non-SDB firms)

$$\text{Avg Rev}_{\text{Non-SDB}} = \beta_0 + \beta_1^{*}(\text{Number of Employees}_{\text{Non-SDB}}) + \beta_2^{*}(\text{Legal Form}_{\text{Non-SDB}}) + \beta_3^{*}(\text{Age of Biz}_{\text{Non-SDB}}) + \beta_4^{*}(\text{Gov Contract}_{\text{Non-SDB}})$$

Equation 2: (For Active-SDB firms)

$$\text{Avg Rev}_{\text{Act-SDB}} = \beta_0 + \beta_1(\text{Number of Employees}_{\text{Act-SDB}}) + \beta_2(\text{Legal Form}_{\text{Act-SDB}}) + \beta_3(\text{Age of Biz}_{\text{Act-SDB}}) + \beta_4(\text{Gov Contract}_{\text{Act-SDB}})$$

A final equation predicting SDB revenue, using coefficients of OSBC:

Equation 3: (For Active-SDB firms)

$$\text{Avg Rev}_{\text{Act-SDB}} = \beta_0 + \beta_1^{*}(\text{Number of Employees}_{\text{Act-SDB}}) + \beta_2^{*}(\text{Legal Form}_{\text{Act-SDB}}) + \beta_3^{*}(\text{Age of Biz}_{\text{Act-SDB}}) + \beta_4^{*}(\text{Gov Contract}_{\text{Act-SDB}})$$

Table 22a gives the overall average revenue predicted for each industry The Table shows that SDB weighted average revenue before removing the effects of discrimination was $3.39 million. Adjusting for the effects of discrimination yields a SDB revenue of $4.31 million, which is a 27% increase over the unadjusted average. In summary, the average revenue we would expect SDB to have in a non-discriminatory market place is $4.31 million.

Table 22b provides the same information showing the weighted averages for each of the three industry groups. The current average capacity of Construction industry firms is $3,373,283. Estimated capacity but for discrimination is $4,096,613. Current average capacity of Manufacturing industry firms is $4,829,245. Estimated capacity but for discrimination is $6,075,465. Finally current estimated capacity for firms in the IT industry and Professional and Scientific services is $1,868,793. Capacity but for discrimination is $2,588,477.

Table 22a

Regression Equation for Adjusting the Net Worth Limitation

Industry	Equation 1 Estimated Revenue for OSBC	Equation 2 Estimated Revenue for SDB (unadjusted reg. coefficient)	Equation3 Estimated Revenue for SDB if equally compensated (adjusted reg. coefficient)	Observations	Weights	Unadjusted SDB Weighted Average Revenue	Adjusted SDB Weighted Average Revenue
Construction of Buildings	$4,386,229	$4,527,025	$5,418,646	4,101	0.134	$604,339	$723,439
Heavy Construction	$3,723,151	$3,511,359	$4,442,770	1,399	0.046	$159,924	$202,345
Specialty Trades Contracting	$2,259,319	$1,877,789	$2,303,133	3,293	0.107	$201,307	$246,906
Textile and Leather Manufacturing	$7,349,291	$2,816,689	$6,221,612	722	0.024	$66,206	$146,238
Paper, Printing and Related Manufacturing	$6,625,686	$2,010,830	$2,194,476	737	0.024	$48,246	$52,653
Primary Metal and Machinery Manufacturing	$6,706,953	$4,655,826	$6,272,618	4,207	0.137	$637,662	$859,098
Computer and Electronic Manufacturing	$6,651,858	$7,365,581	$7,947,379	2,887	0.094	$692,269	$746,951
Wholesale Trade (Durable and Non-Durable)	$7,222,252	$4,061,850	$5,049,229	1,897	0.062	$250,849	$311,827
Publishing, Except Internet	$2,391,387	$2,994,944	$4,326,501	876	0.029	$85,411	$123,385
Internet Publishing, Telecommunications and ISP	$4,273,641	$3,781,569	$4,934,376	1,131	0.037	$139,237	$181,684
Professional, Scientific and Technical Services	$1,683,093	$1,640,279	$2,308,218	9,467	0.308	$505,535	$711,394
SDB Average				**30,717**	**1.000**	**$3,391,047**	**$4,305,919**

Total increase in SDB average revenue without discrimination = $4,305,919 - $3,391,047 = **$914,873**
Percentage change in SDB average revenue = **27%**

Table 22b

Estimated SDB Capacity (i.e. 3 year Average Revenue) But for Discrimination

Industry	Mean Revenue of Non-SDBs after controlling for business Attributes	Mean Revenue of SDBs after controlling for business attributes	Estimated Mean Revenue of SDBs but for discrimination	Number of Observations	Observation Weights	Current Revenue of SDBs	Estimated Revenue of SDBs but for Discrimination
Construction of Buildings	$4,386,229	$4,527,025	$5,418,646	4,101	0.466	$2,111,376	$2,527,222
Heavy Construction	$3,723,151	$3,511,359	$4,442,770	1,399	0.159	$558,670	$706,861
Specialty Trades Contracting	$2,259,319	$1,877,789	$2,303,133	3,293	0.375	$703,236	$862,528
Total Construction Industries				8,793	100%	**$3,373,283**	**$4,096,613**
Textile and Leather Manufacturing	$7,349,291	$2,816,689	$6,221,612	722	0.064	$179,555	$396,609
Paper, Printing and Related Manufacturing	$6,625,686	$2,010,830	$2,194,476	737	0.065	$130,847	$142,797
Primary Metal and Machinery Manufacturing	$6,706,953	$4,655,826	$6,272,618	4,207	0.371	$1,729,389	$2,329,940
Computer and Electronic Manufacturing	$6,651,858	$7,365,581	$7,947,379	2,887	0.255	$1,877,488	$2,025,788
Wholesale Trade (Durable and Non-Durable)	$7,222,252	$4,061,850	$5,049,229	1,897	0.167	$680,322	$845,699
Publishing, Except Internet	$2,391,387	$2,994,944	$4,326,501	876	0.077	$231,641	$334,629
Total Manufacturing Industries				11,326	100%	**$4,829,244**	**$6,075,465**
Internet Publishing, Telecommunications and ISP	$4,273,641	$3,781,569	$4,934,376	1,131	0.107	$403,562	$526,587
Professional, Scientific and Technical Services	$1,683,093	$1,640,279	$2,308,218	9,467	0.893	$1,465,231	$2,061,889
Total Professional, Scientific & IT services				10,598	100%	**$1,868,793**	**$2,588,476**

11

Determining the Relationship between SDB Capacity and the New Personal Net Worth

This section of the report examines the relationship between firm capacity and personal net worth (PNW). More specifically, a regression equation is used to predict the influence of firm capacity on PNW. We found that the elasticity or responsiveness of personal net worth to changes in firm capacity is 40%. This means that when the capacity (or average revenue) of a firm increases by 10%, personal net worth of the owner increases by 4%. We determined in the last section that average SDB capacity but for discrimination is 27% higher than the unadjusted capacity. Capacity in Construction Industries would be 21% higher but for discrimination, 26% higher in Manufacturing Industries and 39% higher in Professional, Scientific and IT services. Therefore, we need to determine the level of PNW that is consistent with the higher levels of capacity.

Data

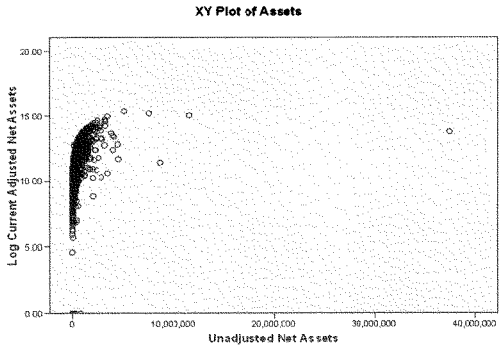
The purpose of this section is to investigate the relationship between the adjusted net worth of a firm's owner/s and the firm's average revenue over a three-year period, a proxy for firm capacity. These data come from firms that were certified in the 8(a) program from 1995 to 1997. This period is convenient because the $750,000 PNW was not yet implemented.

Methodology

A Weighted Linear Least Squares Regression was used to adjust personal net worth for the fact that the variation between unadjusted net worth and adjusted net worth increases at higher levels of firm revenue. The following chart gives the logarithm of adjusted net worth on the Y-axis and unadjusted net worth on the X-axis. It demonstrates that as unadjusted net worth increases, so does the variation in the log of adjusted net worth. Weighted Least Squares Regression adjusts for this variation, by decreasing the importance of observations with high net assets and implicitly, high variation.

Figure 4

Plot of Net Worth



Exploratory Data Analysis

Adjusted Net Worth

Adjusted net worth is the value of net worth after removing the value of net worth after removing the value of the owner's primary residence and the value of the business.

To account for the heavily right-skewed nature of adjusted net worth, the natural logarithmic transformation was applied to this variable. After applying the natural log, the distribution becomes more normal. Any observations that had untransformed values equal to or below zero were dropped from this analysis, a total of 65 observations. Figure 5 illustrates that partnerships had the highest adjusted net worth, followed by corporations, and proprietorships.

Average Revenue

This report uses the average annual revenue of firms over a three-year period from 1995 to 1997. Again, the heavily right-skewed distribution of this variable suggests the use of a natural logarithmic transformation.

Figure 5

Boxplot of Organization Type on Log Average Total Revenue

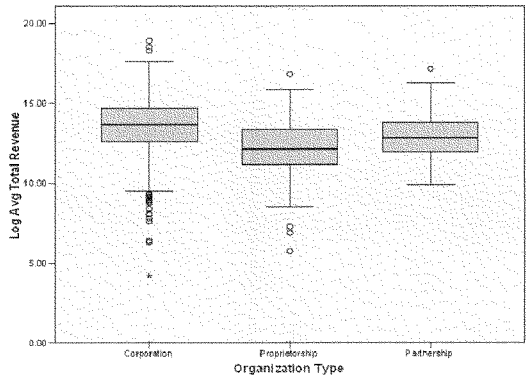


Table 23

Firm Count and Average Revenue by Industry, 1995-97 (Industry Variables used in the Regression)

Industry	Count	Average Revenue
Computer and Electronic Equipment Manufacturing	38	$2,617,180
Construction of Buildings and Heavy Engineering Construction	69	$7,187,009
Internet Publishing	52	$2,421,519
Light Manufacturing	39	$4,552,931
Primary Metal and Machinery Manufacturing	70	$2,556,568
Professional, Scientific and Technical Services	1,454	$1,736,343
Publishing (non Internet)	599	$2,463,513
Specialty Trade Contractors	430	$1,738,203
Wholesale Trade	79	$1,994,897

Other Explanatory Variables

Industry Categories

Table 23 gives counts of businesses in a particular industry as well as gives the mean value of average revenue for that industry. The Table also shows that businesses in the Computer and Electronic Manufacturing industry have the highest average revenue over the years 1995 to 1997. Conversely, the category with the smallest average revenue is the Professional, Scientific and Technical services industry. This industry also contains the greatest number of 8(a) firms. [41]

Age of Business

Proprietorships, with a value of 10.02 years, had the highest average age of business. Corporations had the second highest average age followed by partnerships, at 9.4 and 8.3 years respectively.

Regression Results

Table 24 presents the results of the weighted least squares regression which includes all of the variables discussed above. The coefficient for log average revenue (0.395) represents the impact of a 100% increase in average revenue on the adjusted net worth of a firms owner. Specifically, a 100% increase in average revenue implies an estimated 39.5% increase in adjusted personal net worth). Since the log of adjusted PNW is evaluated against the log of revenue, the resulting coefficient expresses the elasticity of responsiveness.

[41] Note that we considered using an employment variable in the regression. However, it was dropped as an explanatory variable in the final equation because it introduced multi-collinearity.

Table 24

Regression Equation: The Influence of Three-Year Average Revenue on Net Worth is Estimated Controlling for Attributes of SDBs of Firms in 8(a) Program, 1995 to 1997[42]

Dependent Variable = logarithm of adjusted SDB Net Worth, 1998

Explanatory Variables	Unstandardized Coefficients	Std. Error	t-Statistic	Significance Level
	B			
Constant	1.235396	0.300830	4.106000	0.001000
Age of Business in 1998	-0.038682	0.006352	2.643000	0.001000
Legal Form of Business Organization				
Corporation: Reference Category				
Proprietorship	-3.624141	0.073175	-49.527000	0.001000
Partnership	4.073837	1.374708	2.963000	0.003070
Industry				
Specialty Trades Contracting= Reference Category				
Construction: Heavy, Buildings, Civil Engineering	-6.030172	0.122738	-49.131000	0.001000
Manufacturing: Computer and Electronics	-1.042354	2.016023	-0.696000	0.486740
Manufacturing: Primary Metals and Machinery	4.040937	4.268144	0.947000	0.343850
Manufacturing: Light	4.410867	6.668735	0.661000	0.508400
Wholesale Trade	2.859084	1.081763	2.704000	0.006904
Publishing	1.886179	2.907062	0.649000	0.516510
Internet Publishing	3.191651	3.713439	0.859000	0.390160
Professional, Scientific & Technical	-1.666426	0.124722	-13.361000	0.001000
Log of Average Revenue 1995 - 1997	0.394871	0.022593	17.478000	0.001000
Degrees of Freedom	2484			
Adjusted R-Square	0.9296			

[42] We have the following linear regression equation:

$\ln(\text{Adj Net Worth}) = \beta_0 + \beta_1 * \ln(\text{Avg Tot Revenue}) + \beta_2 * (\text{Industry}) + \beta_3 * (\text{Age of Biz}) + \beta_4 * (\text{Legal Organization}) + \beta_5 * (\text{Employment})$

With this categorical variable:

Industry = Specialty Trade Contracting
Computer and Electronic Manufacturing
...

Where the coefficient estimates minimize the sum of residuals in this equation:

$S = \sum_{i=1}^{n} w_i (y_i - x_i \beta)$

$w_i = 1/(\text{Net Worth}_i)^2$ $y_i = \ln(\text{Adj Net Worth})$

$x_i = [1\ x_{i1}\ x_{i2}\ x_{i3}\ x_{i4}\ x_{i5}]$

Using this information, the report derives the new recommended level of PNW for three industry groups. If an inflationary adjustment is made to the PNW, the value would have been $916,294 in 2006. Our empirical results have shown that in a non-discriminatory environment, SDB capacity would be 21%, 26%, and 39% higher in Construction, Manufacturing and Professional, Scientific and IT services respectively.

Table 25 outlines the method used to derive the new PNW ceiling for each industry group. This ceiling is $979,000 in Construction, $1,043,000 in Manufacturing, and $1,026,000 in Professional, Scientific and IT services.

Table 25

Recommended Industry Specific PNW Ceiling

	Construction	Manufacturing	Professional Svc.
Estimated Revenue of SDBs but for Discrimination	$4,096,613	$6,075,465	$2,588,477
Current Revenue of SDBs	$3,373,283	$4,829,245	$1,868,794
Disparity in SDB Revenue (Estimated – Current)	$723,330	$1,246,220	$719,683
Percent by which Current Revenue of SDBs must increase to eliminate Disparity	21%	26%	39%
Estimated Percentage Relationship between PNW and SDB Revenue (i.e. Elasticity)	40%	40%	40%
Current PNW ceiling (Established by Regulation in 1998)	$750,000	$750,000	$750,000
PNW ceiling if adjusted for inflation between 1998 and 2006	$916,294	$916,294	$916,294
Method for calculating the increase in PNE ceiling required to eliminate Disparity	(0.4*0.21*723,330)	(0.4*0.26*1,246,220)	(0.4*0.26*1,246,220)
Amount by which PNW ceiling must increase so that Disparity may be Eliminated	61,266	127,030	109,476
PNW ceiling with Inflation Adjustment and Disparity Adjustment	977,560	1,043,324	1,026,000
Recommended Industry Specific PNW ceiling	**$979,000**	**$1,043,000**	**$1,026,000**

12

The Economic Impact of the Small Disadvantaged Business (SDB) Program

A casual observation reveals that the capacity of minority-owned and disadvantaged businesses is increased significantly by participating in the SDB program. For example, records show that the average revenue of SDBs is twice that of minority-owned firms that are registered with CCR, but have never participated in the SDB Program. Similarly, the average revenue of graduates of the SDB program (that are still registered with CCR) is more than twice that of SDBs. But, how much of the difference in revenue is due to the SDB Program itself and how does this difference affect national output and employment? Answering these questions is the primary objective of this section.

While the objective of the SDB program is to use federal procurement to overcome the effects of discrimination, it is important from a policy standpoint to know how this program affects national well-being. For example, in 2006 minority-owned small business concerns that were not SDBs had total receipts of $10.2 billion. In comparison, total receipts of active SDB were $19.3 billion while receipts of graduated SDBs were $14.0 billion. The challenge however is to determine how much of the net difference in receipts is caused by their participation in the SDB program.

Several steps are required to measure the total impact of the SDB program on national output and employment. First, we measured the difference in average revenue between minority firms that have never participated in the SDB Program and those that have participated. Second, we measured the average difference in firm revenue between SDBs and firms that have graduated from the SDB program. Finally, we applied industry-specific multipliers to the differences in average revenue to determine the impact of the average gained in revenue on final demand and final employment in the U.S. economy. The multipliers were obtained from the Bureau of Economic Analysis (BEA) Regional Input-Output Modeling System (RIMS II). The logic behind the multiplier approach is well-known. The model replicates how spending in one industry sector of the economy is linked to spending in all other sectors. The model replicates how additional revenue that a company receives and then pays to workers, households and other businesses, ripples through the economy in subsequent rounds of spending creating even more income, jobs and economic activity. The multiplier expresses the cumulative impact of all rounds of spending on final demand and final employment in the economy.[43] For example, a final demand output multiplier of 3.1 indicates that for every one dollar of additional revenue spent by a company, $3.10 of final demand is generated in the economy. Likewise, a final demand employment multiplier of 26.7 indicates that approximately 27 jobs are created for every $1.0 million in new final demand. But to apply the multipliers, we first had to isolate the amount of the change in revenue that was attributable to the SDB Program. To do so we used the following steps. First, we determined the difference in revenue between firms in the SDB Program and minority firms that were not SDBs. To do this we used a multivariate propensity score matching procedure. This procedure allowed us to match minority firms and SDBs that were identical on a variety of firm attributes.[44] We then measured the difference in revenue between identically matched firms that participated in the SDB program and those that did not participate in the program. The matching procedure paired firms that had identical characteristics, thereby controlling for difference in management characteristics. We generated pairs by matching firms on the following business attributes: age of business, employment size,

[43] See U.S. Department of Commerce, 1997. Regional Multipliers: A User's Handbook for Regional Input – Output Modeling Systems (RIMS II).

[44] R version 2.5 software with the additional matching program was used. The matching algorithm was developed by Jasjeet Sekhon.

industry of operation, legal form of business organization, and whether or not they had been awarded a government contract.[45]

After matching firms, we measured the difference in average revenue between minority firms that were not SDBs and those that were active SDBs. Likewise; we also generated pairs to measure the difference in revenue between active SDBs and firms that have graduated from the SDB Program. This procedure isolated the impact on revenue of a minority firm participating in the SDB Program and graduating from the SDB program in comparison to firms that did not.

To determine the total impact of the SDB Program on the revenue of firms in each industry, we multiplied average estimated revenue (derived in the procedure above) by the number of firms in the industry. A similar procedure was followed to derive the impact on total industry revenue associated with firms that graduated from the SDB program.

Finally, to determine the total effect on final demand and employment in the economy, we used the final-demand multipliers for industry output and final-demand multipliers for industry employment.[46]

Tables 26 to 29 show that the SDB program has a significant impact on national output and employment. In 2006, the SDB program caused $5.5 billion to be added to final demand; $3.7 billion was added by active SDBs (See Table 26) and $1.8 billion was added by SDB graduates (See Table 27). Additionally, the SDB program added over 124,000 jobs that would not have existed in its absence (see Tables 28 and 29).

Table 26

Impact on Industry Final Demand of Minority Firms Participating in the SDB Program

Industry	Number of Active SDBs	Estimated Revenue Increase per firm	Final Demand Output Multiplier	Total Output
Construction of buildings	1,678	460,404	3.1748	$2,452,716,859
Specialty Trades Contractors	487	53,506	3.1748	$82,727,103
Textile and Leather Manufacturing	53	671,594	3.2719	$116,461,586
Paper, Printing and Related Manufacturing	487	170,043	3.1422	$260,208,539
Chemical, Non-metallic minerals Manufacturing	43	587,242*	2.9216	$73,774,508
Primary Metals and Machinery Manufacturing	278	915,962	2.7375	$697,069,981
Computer and Electronic Manufacturing	355	147,431	3.1725	$166,042,321
Wholesale Trade In Durable / Non-durable Goods	218	-97,838	2.5796	($55,019,473)
Internet Publishing, Telecommunication and ISP	310	-156,335	2.924	($141,708,297)
Total Impact on Final Demand				**$3,652,273,126**

* The Average Treatment Effect was used to calculate the revenue increase.

[45] Statistical output from the matching procedure is available upon request.

[46] These multipliers released by the U.S. Department of Commerce's Bureau of Economic Analysis account for inter industry relationships in the whole economy. Regional Multipliers derived using the Regional Input-Output Modeling System (RIMS II) are based on 2004 national annual input-output data.

Table 27

Impact on Industry Final Demand of Firms Graduating from the SDB Program

Industry	Number of Graduated SDBs	Estimated Revenue Increase per firm	Final Demand Output Multiplier	Total Output
Construction of buildings	253	$2,458,057	3.1748	$1,974,371,359
Heavy and Civil Engineering Construction	56	$1,425,492	3.1748	$253,436,512
Specialty Trades Contractors	97	$170,284*	3.1748	$52,439,911
Paper, Printing and Related Manufacturing	97	$191,173	3.1422	$58,268,269
Primary Metals and Machinery Manufacturing	162	$-1,018,280*	2.7375	($451,581,723)
Computer and Electronic Manufacturing	127	$-402,377*	3.1725	($162,120,711)
Publishing except internet	30	$1,207,835*	2.9777	$107,897,108
Professional, Scientific and Technical Services	460	-$180,325	3.0383	($252,025,466)
Total Impact on Final Demand				**$1,832,710,725**

* The Average Treatment Effect was used to calculate the revenue increase.

Table 28

Impact on Industry Jobs of Minority Firms Participating in the SDB Program

Industry	Total Revenue Effect of Participation	Final Demand Employment Multiplier (=no. jobs per $1.0 million in final demand)	Total employment (jobs)
Construction of buildings	$2,452,716,859	26.7564	65,626
Specialty Trades Contractors	$82,727,103	26.7564	2,213
Textile and Leather Manufacturing	$116,461,586	21.6294	2,519
Paper, Printing and Related Manufacturing	$260,208,539	18.4304	4,796
Chemical, Non-metallic minerals Manufacturing	$73,774,508	14.7532	1,088
Primary Metals and Machinery Manufacturing	$697,069,981	14.9916	10,450
Computer and Electronic Manufacturing	$166,042,321	19.4322	3,227
Wholesale Trade in Durable / Non-durable Goods	-$55,019,473	18.6324	(1,025)
Internet Publishing, Telecommunication and ISP	-$141,708,297	20.1571	(2,856)
Total Jobs			**86,038**

Table 29

Impact on Industry Jobs of Firms Graduating from the SDB Program

Industry	Total Revenue Effect of Graduation	Final Demand Employment Multiplier (=no. jobs per $1.0 million in final demand)	Total employment (jobs)
Construction of buildings	$1,974,371,359	26.7564	52,827
Heavy and Civil Engineering Construction	$253,436,512	26.7564	6,781
Specialty Trades Contractors	$52,439,911	26.7564	1,403
Paper, Printing and Related Manufacturing	$58,268,269	18.4304	1,074
Primary Metals and Machinery Manufacturing	-$451,581,723	14.9916	(6,770)
Computer and Electronic Manufacturing	-$162,120,711	19.4322	(3150)
Publishing except internet	$107,897,108	19.7584	2,132
Professional, Scientific and Technical Services	-$252,025,466	24.643	(6,211)
Total Jobs			**48,086**

13

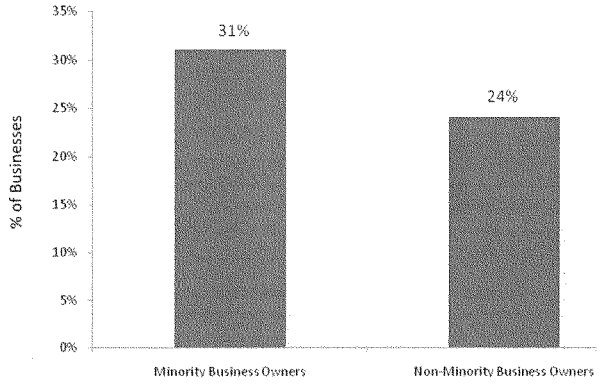
Spatial Impact of Minority-Owned Firms

In major central cities, minorities are more likely than non-minorities to locate their businesses in high poverty areas. This creates the potential for enhancing economic opportunity and revitalization of some of the nation's most distressed urban communities.

Paul Ong and Anastasia Loukaitou-Sideris observed that globalization and economic restructuring have placed minority communities in a vicious circle of concentrated poverty and inequality. They note that spatial restructuring has been accompanied by an increasing geographic separation of people from jobs. "Caught in a vicious circle, disadvantaged communities concentrate poverty and accentuate inequality as they segregate and isolate poor people of color. Their location often denies residents access to employment and business opportunities and may hinder civic and political participation." (*Jobs and Economic Development in Minority Communities* (Philadelphia: Temple Univ: 1). However, the authors also note that minority-owned businesses are counterweights to this tendency.

Figure 6

Percent of Businesses in High Poverty Areas



Number of Minority Businesses examined = 3,832

Number of Non-Minority Businesses examined = 3,011

In the final section of the report, we selected fourteen central city locations and examined the location pattern of CCR firms in these cities. Our results document the validity of Ong's observation. Figure 6 indicates that 31% of minority businesses listed in CCR are located in high poverty areas of large central cities. High poverty areas

are defined as census tracts where 20% or greater of the 2000 population lived in poverty. In contrast, only 24% of the businesses owned by non-minority persons were located in high poverty areas.

Table 30 shows that the percent of minority-owned businesses in high poverty areas of central cities varies significantly. The concentration is highest in Baltimore (69%) and Philadelphia (60%) and lowest in Chicago (17%) and Atlanta (18%).

Table 30

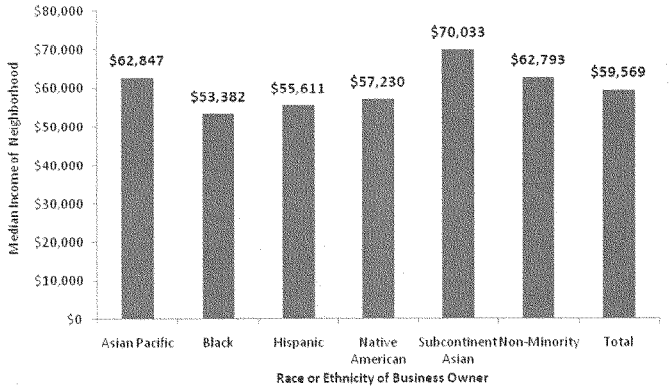
Number and Percent of Minority-Owned Businesses in High and Low Poverty Areas† of Central Cities

City	High Poverty Area		Low Poverty Area		Total Number
	Number	Percent	Number	Percent	
Atlanta	65	17.6%	304	82.4%	369
Baltimore	78	69.0%	35	31.0%	113
Boston	15	48.4%	16	51.6%	31
Chicago	71	17.4%	338	82.6%	409
Cleveland	47	40.9%	68	59.1%	115
Dallas + Houston	190	23.3%	624	76.7%	814
Detroit	77	50.3%	76	49.7%	153
District of Columbia	174	41.7%	243	58.3%	417
Miami	66	25.1%	197	74.9%	263
New York City	109	38.0%	178	62.0%	287
Philadelphia	49	59.8%	33	40.2%	82
San Francisco+ Los Angeles	242	31.1%	537	68.9%	779
Group Total	**1,183**	**30.9%**	**2,649**	**69.1%**	**3,832**

† High Poverty Area = Poverty Rate of 20% or Higher, Low Poverty Area = Poverty Rate less than 20%.

Figure 7

Median Income of Neighborhoods by Race and Ethnicity, 1999

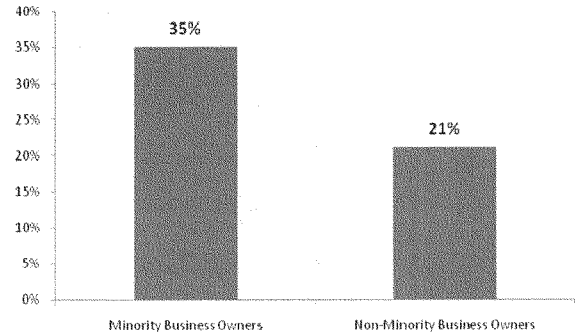


Among all racial and ethnic groups, Black-owned businesses are located in central city neighborhoods with the lowest median family income. Subcontinent Asians locate their businesses in the highest income neighborhoods.

While minorities are more likely than non-minorities to locate low skilled businesses in high poverty areas, they are even more likely to locate high skilled businesses (such as Information Technology, Professional, Scientific and Technical Businesses) in High Poverty areas. Both types of businesses are critical for stimulating economic development in distressed areas. Numerous studies have documented a spatial mismatch (or significant geographic imbalance) between where minorities lives and where jobs are located; both low skilled and high skilled jobs.

Figure 8

Percent of High Skilled Businesses in High Poverty Neighborhoods



This report found that in central cities, minorities are more likely than non-minorities to locate low skilled businesses (such as construction and wholesale) in high poverty areas. This has the potential for creating jobs for local residents. Figures 8 and 9 show that 35% and 37%, of high and low skilled businesses, owned by minorities, are located in high poverty areas. In contrast, 21% and 27% of high skilled and low skilled businesses owned by non-minorities are located in these areas respectively.

On an average, Black-owned businesses are located in Central City areas where the population is 44% Black. Hispanic-owned businesses locate in neighborhoods that are 37% Hispanic (See Figure 10).

Figure 9

Percent of Low Skilled Businesses in High Poverty Neighborhoods

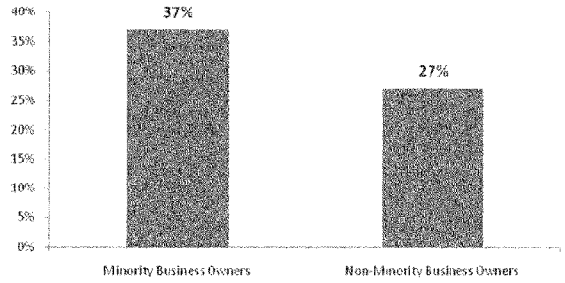
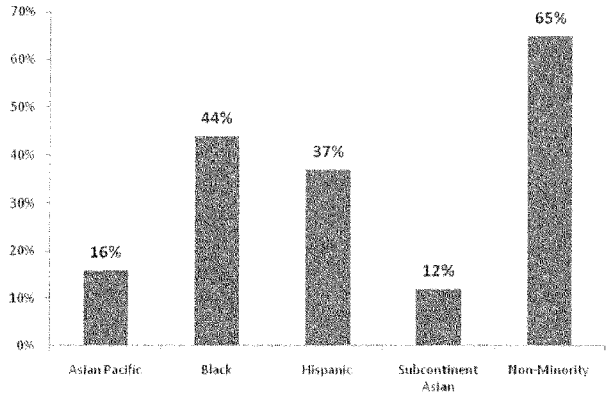


Figure 10

Race/Ethnic Composition of Central City Areas where Businesses are Located

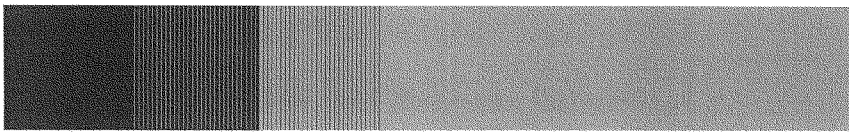


Overall, the spatial analysis indicates that minority-owned businesses registered with CCR have the potential to make a significant economic impact in distressed central city areas. Not only are minority business owners more likely to locate both high skilled and low skill businesses in high poverty areas, Blacks and Hispanic business owners tend to locate their business in neighborhoods where there are higher concentrations of their own ethnic group. Given the disproportionate unemployment and poverty among Blacks and Hispanics, these businesses represent a valuable resource to the nation's well-being.

March 7, 2006

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

Prepared for the Maryland Department of Transportation



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This Study would not have been possible without the active assistance of State of Maryland officials, employees, and others far too numerous to mention here. We would be remiss, however, if we did not thank specifically, Maryland Department of Transportation (MDOT) Deputy Director of Audits Larry Kinard and his staff, MDOT Project Manager Trent Rawley, MDOT Secretary Robert Flanagan, MDOT Deputy Secretary Jim Ports, MDOT Assistant Secretary Debra Carter, Director, MDOT Office of Minority Business Enterprises (OMBE) Katie Knowlin, Governor's Office of Minority Affairs (GOMA) Executive Director Sharon Pinder, GOMA Deputy Director Herb Jordan, GOMA Assistant Secretary John Petty, Assistant Attorney General John Bell, Assistant Attorney General Zenita Wickham Hurley, Attorney William Kahn (retired), MDOT Assistant Director, Office of Finance Steven P. Watson, MDOT Chief Procurement Officer Mark Pemberton, and University of Maryland Professor Paul Smith.

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About the Project Team—NERA Economic Consulting

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

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

NERA's employment and labor experts advise clients on a wide range of issues both inside and outside the courtroom. We have provided expert testimony on statistical issues both at the class certification phase (on issues of commonality and typicality) and at the liability phase (for class or pattern-and-practice cases). Our experts have extensive experience examining issues of statistical liability in discrimination and other wrongful termination claims. We also provide detailed statistical analyses of workforce composition to identify potential disparities in hiring, layoffs, promotions, pay, and performance assessments and have conducted studies on labor union issues and on affirmative action programs for historically disadvantaged business enterprises.

The NERA project team for this Study was led by NERA Vice President Dr. Jon Wainwright. Dr. Wainwright is a nationally recognized expert on business discrimination and affirmative action and has testified in state and federal court on these issues. He is the author of one book, a National Bureau of Economic Research Working Paper, and numerous research studies on the subject. At NERA, Dr. Wainwright directs and conducts economic and statistical studies of discrimination for attorneys, corporations, governments, and non-profit organizations. He also directs and conducts research and provides clients with advice on adverse impact and economic damage matters arising from their hiring, performance assessment, compensation, promotion, termination, or contracting activities.

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About the Project Team—NERA Research Partners

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

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

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

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

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

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

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

J&D Data Services (JDDS) is a small business enterprise owned by Mr. Joe Deegan and based in Plano, Texas. After a long career with ScanTron, Mr. Deegan started his own business to offer a solid and proven alternative to the time consuming and expensive job of key data entry long associated with mail surveys. JDDS helps its clients conserve their surveying resources by designing and delivering survey instruments that can be electronically and automatically scanned upon return and sent directly to electronic format. JDDS has conducted numerous surveys of MBEs and non-MBEs for NERA over the past six years. On this assignment JDDS provided printing, postage, mail-out and mail-back service for two large scale mail surveys and one large scale mailing of business owner interview invitations.

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I. Introduction and Executive Summary

A. Introduction

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1. Legal Standards for Government Affirmative Action Contracting Programs

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

2. Defining the Relevant Markets

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

This Chapter next describes how the relevant geographic and product markets were defined for this Study. A large and statistically representative sample of records of public contracts and associated subcontracts gathered from the State and its prime contractors, consultants, and vendors was analyzed to determine the geographic radius around the State that accounts for at least 75 percent of aggregate contract and subcontract spending over the last five years. These records were also analyzed to determine approximately 70 detailed industry categories collectively account for at least 75 percent of contract and subcontract spending over the last five years in the relevant procurement categories. The relevant geographic and product markets were then used to focus and frame the quantitative and qualitative analyses in the remainder of the Study.

The State's relevant geographic market was determined to consist of the State of Maryland, the State of Delaware, and the Washington, DC Metropolitan Statistical Area (including the District of Columbia, the State of Maryland, and parts of Virginia and West Virginia).

B. Statistical Evidence

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

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

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

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

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

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

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

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

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

Table A. Overall Availability—All Procurement Categories Combined

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

Source: See Table 4.23.

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

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

[3] Typically, for a given disparity statistic to be considered "statistically significant" there must be a substantial probability that the value of that statistic is unlikely to be due to random chance alone. See also *fn.* **Error! Bookmark not defined.**.

suggests that minorities and women are substantially and significantly less likely to own their own businesses as the result of market place discrimination than would be expected based upon their observable characteristics, including age, education, geographic location, and industry. We find that these groups also suffer substantial and significant earnings disadvantages relative to comparable White males, whether they work as employees or entrepreneurs.

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

Using the PUMS and the CPS we found:

That annual average wages for Blacks (both sexes) in 2000, both economy-wide and nationwide, were almost 30 percent lower than for White males who were otherwise similar in terms of geographic location, industry, age, and education. These differences are large and statistically significant. Large, negative, and statistically significant wage disparities were also observed for Hispanics, Asians, Native Americans, and White women. These disparities are consistent with the presence of market-wide discrimination. Observed disparities for these groups ranged from a low of -17 percent for Hispanics to a high of -36 percent for White women. Similar results were observed when the analysis was restricted to construction and A&E. That is, large, negative, and statistically significant wage disparities were observed for all minority groups and for White women. All wage and salary disparity analyses were then repeated using interaction terms designed to test whether observed disparities in Maryland were different enough from elsewhere in the country or the economy to alter any of the basic conclusions regarding wage and salary disparity. They were not.

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

Next, we analyzed race and sex disparities in business owner earnings. We observed large, negative, and statistically significant business owner earnings disparities for Blacks, Hispanics, Asians, Native Americans, and White women consistent with the presence of discrimination in these markets. Large, negative, and statistically significant business owner earnings disparities were observed in the PUMS data for construction and A&E sector, as well for all groups but Asians. The CPS construction and A&E data showed large, negative and statistically significant business owner earnings disparities for Blacks, Hispanics, and White females. Coefficients for Asians and Native Americans in the CPS data were typically large and negative but not always statistically significant. As with the wage and salary disparity analysis, we enhanced our basic statistical model to test whether minority and female business owners in the Maryland region differed significantly enough from business owners elsewhere in the U.S. economy to alter any of our basic conclusions regarding disparity. They did not.

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

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

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

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

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

3. Statistical Disparities in Capital Markets

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

The results are as follows:

- Minority-owned firms were particularly likely to report that they did not apply for a loan over the preceding three years because they feared the loan would be denied.
- When minority-owned firms did apply for a loan, their requests were substantially more likely to be denied than other groups, even after accounting for differences in factors like size and credit history.
- When minority-owned firms did receive a loan, they paid higher interest rates than comparable White-owned firms.
- Far more minority-owned firms report that credit market conditions are a serious concern than is the case for White-owned firms.
- A greater share of minority-owned firms believe that the availability of credit is the most important issue likely to confront the firm in the next 12 months.
- Judging from the analysis done using data from the NSSBF, there is no reason to believe that evidence of discrimination in the market for credit is different in Maryland than in the nation as a whole.

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

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

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

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

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

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

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

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

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

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

Source: See Table 7.1

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

Table C. Overall Disparity Results—FY2000-FY2004

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

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

Source: See Table 7.9.

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

C. Anecdotal Evidence

1. Anecdotal Evidence of Disparities in Maryland's Marketplace

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

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

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

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

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

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

2. MBE Program Analysis and Feedback Interviews

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

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

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

- Program eligibility

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

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

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

- The MBE certification process

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

- MBE contract goal setting

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

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

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

- Bid evaluation and good faith efforts to meet goals

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

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

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

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

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

- MBEs' efforts to seek work on private sector contracts

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

- Contract performance and MBE Program enforcement

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

- Support services for MBEs

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

- Payment

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

- Discrimination complaint procedures

Few MBEs had filed complaints, fearing retaliation.

- MBE Liaisons' roles and responsibilities

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

- Maryland's race- and gender-neutral programs

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

D. Recommendations

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

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

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

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Availability of Financing to Small Firms Using the Survey of Small Business Finances

by

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Raleigh, NC

for

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Purpose

The small business sector is of interest to policymakers not only because of the important role it plays in the U.S. economy, but also because of the avenue to advancement small business ownership represents, in particular for ethnic minorities and women. Critical to small businesses' success is the availability of financing for both capital acquisition and working capital purposes. Much of this financing takes the form of credit extended by commercial banks and nonbank lenders.

This study investigates possible restricted access to credit for minority- and women-owned businesses by focusing on two types of credit—"relationship loans" (lines of credit) and "transaction loans" (commercial mortgages, motor vehicle loans, equipment loans, capital leases, and other loans)—from two types of creditors: commercial banks and nonbank lenders. The disaggregated approach is feasible because of a rich new data set, the 1998 Survey of Small Business Finances

Overall Findings

The results imply that minority small business owners face some restrictions in access to credit. These restrictions do not appear to be uniform across loan or lender type.

Highlights

• By disaggregating outstanding loans by loan type and lender type, the research finds that ethnic minority firm owners are more likely to have transaction loans from nonbanks and less likely to have bank loans of any kind.

• Consistent with past studies, researchers found that African-American and Hispanic firm owners face significantly greater loan denial probabilities than white male firm owners on both relationship bank loans and transaction bank loans. New evidence in this study hints that discrimination may be specific to particular segments of the loan market rather than a general problem.

• Researchers found that lenders do not artificially restrict the credit-market access of female and Asian firm owners.

• This study breaks new ground by suggesting that preferential lending practices characterize the granting of transaction loans to a significantly greater degree than the granting of relationship loans.

Methodology

The researchers postulated that evidence of preferential lending practices, if any, may be discernible in the patterns of outstanding loans and of loan application denials; and in the average characteristics of firm owners whose loan applications are approved. Econometric models used by previous researchers were adapted to study patterns in outstanding loans and loan application denials and to investigate the possibility of preferential lending practices in the granting of relationship and transaction loans by commercial bank and nonbank lenders. The researchers developed five testable hypotheses for outstanding loans and four for loan application denials.

To test the possibility that preferential lending may take the form of lenders requiring women and minority firm owners to meet a higher standard to

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obtain a loan, they developed a testable hypothesis concerning the average characteristics of white male, women, and minority firm owners whose loan applications lenders had accepted.

Data from the 1998 Survey of Small Business Finances were used. The researchers examined the raw data on outstanding loans, loan applications, and loan denials for evidence of preferential lending. They identified variables to use in estimating the econometric models and examined the characteristics of these data.

They estimated probit models of the probability that a firm owner has an outstanding loan as well as models of the probability of having a loan application denied. Because firm owners must apply for loans before they can be approved or denied, they also presented loan denial models estimated jointly with loan application models, so as to reduce the possibility of "selection bias." They used both the probit and jointly estimated loan denial models to develop predicted loan denial probabilities for firm owners with given characteristics.

Finally, they used t-tests to compare the average characteristics of white male and minority firm owners whose loan applications were approved.

The final report was peer reviewed consistent with the Office of Advocacy's data quality guidelines. More information on this process can be obtained by contacting the director of economic research at advocacy@sba.gov or (202) 205-6533.

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Executive Summary

This research adds to the literature on discriminatory lending practices by banks and nonbanks in their lending to small US businesses. Although the existing research hints at discriminatory practices along ethnic and gender lines, shortcomings in the data have prevented researchers from drawing definite conclusions. Data limitations have also prevented them from seeking evidence of discriminatory practices beneath the aggregate level. This research seeks to overcome some of these limitations by using the relatively little-studied 1998 Survey of Small Business Finances (SSBF), a data set with more extensive coverage of ethnic minority and female small business owners than available to past researchers.

In this study we put all small business lenders into one of two groups – banks (commercial banks) and "nonbanks" (finance companies, mortgage banks, factors, other businesses, government agencies, family and friends) -- and put all small business loans into one of two categories: "relationship loans" (line-of-credit loans) and "transaction loans" (motor vehicle loans, mortgages, equipment loans, capital leases, and other loans). Many researchers regard line-of-credit loans as quintessential relationship loans. A lender that grants a credit line makes an up-front commitment to lend a pre-set maximum sum over a time horizon at dates selected by the borrower. Because such open-ended commitments expose lenders to additional risks, many researchers speculate that lenders will not grant credit lines to small business owners without prior, close relationships that enable lenders to learn "soft" information about owners and their firms. In contrast, "transaction loans" are one-shot injections of cash made shortly after loan approval and used to acquire tangible assets that can serve as loan collateral. Because transaction loans subject lenders to less risk than relationship loans, many researchers speculate that lenders require little or no soft information about owner-borrowers that relationships can provide.

We used the categorizations described above to test 10 hypotheses about lending practices on data from the 1998 SSBF. Hypotheses H1 – H5 test whether data on outstanding loans show evidence of discriminatory lending along ethnic and gender lines. We tested for evidence of discrimination in all outstanding loans and in outstanding loans of both types (relationship and transaction) from lenders of both types (banks and nonbanks). Hypotheses H 6 – H 9 test whether data pertaining to loan denial decisions by banks and nonbanks on applications for relationship and transaction loans show evidence of discriminatory lending along ethnic and gender lines. Investigating loan denial decisions required us to recognize that some small firm owners who need loans may nevertheless not apply for fear of having their applications denied, behavior that could potentially bias the statistical evidence. We adopted appropriate econometric techniques to address this potential "selection bias." Finally, we examined the subset of approved loan applications for evidence that lenders required owners of female- and ethnic minority-led firms to have attributes superior to those of white male-led firms in order to secure a loan. We formalized this test as hypothesis H10.

Our results show the merits of disaggregating loans by lender type and loan type when investigating possible discrimination in lending: we found that aggregate data could mask behavior that a disaggregated approach revealed. We found that for ethnic minorities as a group,

evidence of discriminatory lending exists in outstanding transaction loans from banks and nonbanks and in outstanding transaction loans from banks. We also uncovered evidence from all outstanding loans and from outstanding bank transaction loans that African-American and Hispanic firm owners are less preferred borrowers. We found no evidence in the pattern of outstanding loans that female- or Asian-led firms were less preferred borrowers.

Initially, we found from the pattern of loan denial decisions that African-American firm owners faced significantly higher loan denial probabilities than otherwise identical white male firm owners for transaction and relationship loans from banks; we found the same to be true for Hispanic firm owners and also found that Hispanic firm owners faced significantly higher loan denial probabilities for transaction loans from nonbanks. These findings were produced by estimating a loan denial model alone. However, it is well-known that if firm owners who did not apply for loans differ systematically from credit-seeking firm owners, the estimated loan denial probabilities are biased, and to remove the bias a loan application model must be estimated jointly with the loan denial model. Whether single or joint estimation is required is purely an empirical matter. When we recomputed loan denial probabilities based on a loan denial model jointly estimated with a loan application model, we found a somewhat different pattern: we found that both African-American and Hispanic firm owners faced significantly higher loan denial probabilities for transaction loans from both banks and nonbanks, but not relationship loans from either type of lender. Further investigation showed that this econometric evidence of discrimination is likely to be highly economically significant as well. Further, we found no evidence suggesting that female- or Asian-led firms faced loan denial probabilities different from those of firms led by white males.

When we examined whether lenders exercise preferential lending by requiring less preferred borrowers to have characteristics more desirable than otherwise identical preferred borrowers to be induced to lend, we found little evidence of this behavior in the data.

I. Introduction

This report addresses whether small firms' access to different types of loans and lenders is related to the ethnicity or gender of the firms' principal owners. Previous research has uncovered evidence consistent with discriminatory lending against ethnic minority-owned small firms (e.g., Cavalluzzo and Cavalluzzo (1998), Cavalluzzo, Cavalluzzo and Wolken (2002), Cavalluzzo and Wolken (2002), Blanchflower et al. (2003)). But prior research has been conducted at a high level of aggregation and, thus, overlooked heterogeneity among lenders and loan types, which has been an area of growing research interest (e.g., Petersen and Rajan (1994), Berger and Udell (1995, 2002), Boot and Thakor (2000), Cole, Goldberg and White (2004)). This paper reexamines the issue of differential credit market access by female and ethnic minority firm owners at a lower level of aggregation by addressing two research questions:

- Do lenders appear to deny loan applications of all kinds from female- and ethnic minority-owned small firms at greater rates than applications from otherwise identical firms owned by white males, or are elevated denial rates limited to certain types of loans?
- Do all lenders appear to deny loan applications from female- and ethnic minority-owned small firms at greater rates than applications from otherwise identical firms owned by white males, or are elevated denial rates limited to certain types of lenders?

This study uses the 1998 Survey of Small Business Finances to investigate ten hypotheses related to these two research questions. The rest of the paper is organized as follows. Section II presents a selected literature review. Section III presents the hypotheses to be tested and the models to test them. Section IV discusses the data. Section V presents the empirical results. Section VI summarizes and concludes the report.

II. Literature Review

Until the 1988-1989 National Survey of Small Business Finances (NSSBF) became available the question of whether racial, ethnic, and gender discrimination pervades the market for small business loans was largely unstudied by research economists. Since the 1988-1989 NSSBF and with the help of the 1993 NSSBF and the 1998 Survey of Small Business Finances (SSBF) researchers have made good progress in adducing evidence on the extent and degree of credit market discrimination.

Cavalluzzo and Cavalluzzo (1998) used the 1988-1989 NSSBF to investigate whether lenders appear to discriminate along ethnic and gender lines in lending to small businesses. They proposed an econometric model relating a dependent variable (probability of having a loan, probability of loan denial, interest rate charged) to a set of explanatory variables relevant to lenders plus a set of indicator variables representing firm owner gender and ethnicity. Cavalluzzo and Cavalluzzo observed that statistically significant estimated coefficients on the indicator variables could be evidence of prejudicial discrimination; however, significant coefficients could also be evidence of statistical discrimination, an association between the indicator and dependent variables resulting from omitted factors. To help distinguish between statistical and prejudicial discrimination, Cavalluzzo and Cavalluzzo turned to a theoretical work by Becker (1957), who hypothesized that prejudicial discrimination by some lenders creates an exploitable opportunity that should quickly disappear in competitive markets but that might linger in concentrated markets, where lenders have a degree of market power. Cavalluzzo and Cavalluzzo incorporated Becker's observation into their work by augmenting their econometric model. Specifically, they interacted each gender/ethnicity indicator with the Hirschman-Herfindal index for banking

market concentration.[1] Cavalluzzo and Cavalluzzo reasoned that if lenders practice prejudicial discrimination, the estimated coefficients of the interaction terms should be positive and statistically significant: lenders successfully discriminate in markets where they have market power. When Cavalluzzo and Cavalluzzo estimated their model they found some evidence consistent with both types of discrimination. Specifically they found that in comparison to white firm owners, African-American firm owners had less total debt outstanding and were more likely to have had their most recent loan application denied; both effects were unrelated to the degree of banking market concentration. In addition, Cavalluzzo and Cavalluzzo found that Hispanic firm owners were less likely to have an outstanding loan, more likely to have had their most recent loan application denied, and more likely to have paid an interest rate premium compared with identical white firm owners. The first and last effects were related to the degree of banking market concentration. Cavalluzzo and Cavalluzzo also found that Asian firm owners paid interest rate premiums related to banking market concentration. Although their results were consistent with discriminatory behavior by lenders, Cavalluzzo and Cavalluzzo did not claim their results proved discrimination because they lacked the data with which to control fully for differences in wealth and creditworthiness between white and minority firm owners.

Cavalluzzo, Cavalluzzo and Wolken (2002) re-estimated the models of Cavalluzzo and Cavalluzzo (1998) using the 1993 NSSBF together with supplementary data from the Federal Reserve System. They found evidence consistent with statistical and prejudicial discrimination against Hispanic firm owners in interest rates charged on credit lines. In addition, they found some evidence consistent with statistical and prejudicial discrimination against African-

[1] The Herfindahl-Hirschman index is a measure of the degree of market concentration and, thus, a measure of the power producers have. The index is computed by squaring producers' percentage market shares and summing. Thus a market with a single producer has a Herfindahl-Hirschman index of (100^2 =) 10,000 whereas a market with 100 equal-sized producers has an index of (100 x 1^2 =) 100.

American and Asian firm owners in the denial of loan applications. But as was true in the earlier study, the authors again tempered their conclusions and did not claim evidence of discrimination owing to a lack of data with which to control for wealth differences among firm owners.

Cavalluzzo and Wolken (2002) re-estimated the models of Cavalluzzo and Cavalluzzo (1998) using the 1998 SSBF, which includes variables on the wealth of small business owners. The estimated models show some evidence consistent with prejudicial discrimination against ethnic minority firm owners. Specifically, in models of loan denials, the estimated coefficient of the interaction between the African-American indicator variable and the Herfindahl-Hirschman index is positive and statistically significant at the 10 percent level, suggesting that the probability of an African-American firm owner being denied a loan is greater in markets where lenders have greater market power, consistent with Becker's theory (1957). Estimated coefficients of the Hispanic indicator variable and the Hispanic Herfindahl-Hirschman index interaction are also statistically significant, but with algebraic signs suggesting discrimination that decreases with the market power of the lender, contrary to Becker. Cavalluzzo and Wolken used their most complete model to investigate whether lenders denied loan applications from ethnic minority small business owners at greater rates due to poorer wealth endowments rather than prejudicial discrimination. They used their estimated loan denial model for white males to predict loan denial rates for firm owners with minority demographic characteristics. Cavalluzzo and Wolken concluded that endowment effects explain about one-fourth to one-third of the difference in loan denial rates between whites and ethnic minorities; this leaves three-fourths to two-thirds of the difference unexplained and potentially due to prejudicial discrimination.

Other researchers have used different approaches with the 1988-1989 NSSBF, the 1993 NSSBF, and the 1998 SSBF to find evidence on discrimination. Cohn and Coleman (2001)

investigated discriminatory behavior by commercial banks using the 1993 NSSBF. They found that banks were more likely to deny African-American firm owners' loans and require them to pay higher interest rates. Bostic and Lampani (1999) examined whether demographic and economic characteristics of a firm owner's locale affect the probability that the owner obtains a loan. The authors augmented the 1993 NSSBF data with Census data on local demographic and economic characteristics of the area in which a small business is headquartered. They found that when local demographic and economic variables are controlled for, differences in loan denial rates between Hispanic and white male business owners disappear. However, African-American business owners still face significantly greater chances of business loan denial. Blanchflower, Levine, and Zimmerman (2003) estimated loan denial models using data from both the 1993 NSSBF and the 1998 SSBF and concluded that African-American business-owners were overwhelmingly more likely to have unmet credit needs, suffer loan turndowns and pay higher interest rates. Coleman (2002, 2003) estimated loan denial models for African-American and Hispanic firm owners using the 1998 SSBF and found they are more likely to be denied loans by all types of lenders, but especially commercial banks.

While researchers in credit market discrimination have made admirable use of econometric tools to address equity issues, their approaches have been little influenced by the literature on the microeconomics of lending decisions, especially lending to small businesses. This latter literature focuses on how lenders cope with the opaque information related to small business borrowers to fashion loan contracts that overcome asymmetric information, moral hazard, agency problems, and other capital market imperfections and frictions. By bringing insights from the small business lending literature to bear on the investigation of discriminatory lending practices, we hope to uncover new evidence on preferential lending.

With few exceptions, researchers in the discrimination literature have aggregated together small business loans of all types made by all lenders. But as Berger and Udell (2002) observe, banks and nonbank intermediaries use at least four different lending technologies: financial statement lending, asset-based lending, credit scoring, and relationship lending. The first three technologies are perhaps most similar, being made chiefly on the basis of "hard" information and often for the purpose of financing specific transactions; hence these three technologies are sometimes referred to collectively as "transaction lending." Of the four technologies, financial statement lending is likely irrelevant to a discussion of small business lending because lenders use it chiefly for firms with audited financial statements and access to public capital markets. The remaining three technologies are relevant to smaller firms. With asset-based lending, creditors lend on the basis of collateral (usually accounts receivable or inventory) which they subsequently monitor closely. Credit scoring, which has been applied to small business loans under $100,000 only since the mid-1990s (Mester 1997), uses historical data about a business owner's credit history and wealth to generate a score that reflects the borrower's default probability. Relationship lending is lending chiefly on the basis of proprietary information an intermediary gathers over time about the firm and its owner.

Boot (2000) provides one description of how relationship lending might work.[2] Initially an intermediary denies a firm credit because the intermediary cannot overcome the firm's informational opacity and still lend at an interest rate that gives the intermediary a fair return. In time the intermediary gains proprietary information about the firm through repeated interactions as the intermediary sells the firm nonloan services. Eventually the intermediary goes from denying the firm credit to making a "relationship loan" at an interest rate less than the rate justified by all costs and risks. The intermediary offers a below-cost loan because the

[2] Greenbaum et al. (1989) and Sharp (1990) offer similar, alternative theories of relationship lending.

intermediary hopes to set the interest rate on the next loan at a premium, exploiting the intermediary's superior knowledge about the borrower; only gradually over time does the intermediary reduce the interest rate on new loans to the borrower, thus compensating the intermediary for its up-front risk exposure.

Although researchers generally agree that lenders grant small business loans using different lending technologies, questions remain about the relative use of the technologies. Several studies have investigated the importance of relationship lending (see Elyasiani and Goldberg (2004) for a more complete review). Petersen and Rajan (1994) analyzed data on small business loans of all types from bank and nonbank lenders drawn from the 1988-1989 NSSBF; they found that longer-standing relationships between lenders and borrowers increased the availability of credit, but did not decrease the interest rate on loans. Berger and Udell (1995) estimated models of the interest rate and collateral requirements on data for bank lines of credit from the 1988-1989 NSSBF data; they found that longer-standing relationships reduced interest rates and collateral requirements for small firm owners with assets exceeding $500,000 but not for smaller firms. Cole (1998) estimated models of loan denial using data on all loan types and lender types from the 1993 NSSBF; he found that simply having a pre-existing relationship with a lender significantly reduced the probability of loan application denial. Cole, Goldberg and White (1999) used the 1993 NSSBF to investigate whether small and large banks employ different lending technologies. They stratified data on bank loan applications of all kinds into subsamples of loans made by banks having assets of more than $1 billion and $1 billion or less. Then they estimated separate probit models of the probability of loan approval for small and large banks and compared the estimated models for evidence of differences in the determinants of loan approvals. Cole, Goldberg and White concluded that small banks appear to put greater

weight on pre-existing relationships in approving loan applications, whereas large banks give greater weight to the purely financial characteristics of borrowers.

Most of the studies cited above focus either on bank loans or on total loans; however nonbank lenders are also an important source of funds for small business firms. Cole, Wolken and Woodburn (1996) documented the growing importance of finance companies as a source of funds to small businesses. A study by Haynes and Watts (1996) using the 1988-1989 NSSBF addressed differences in the attributes of small business customers of banks and finance companies and whether finance companies lend at competitive rates; they found no differences in customer attributes and competitive rates offered by finance companies. In a study of corporate firms, Carey, Post and Sharpe (1998) found significant differences between commercial banks and finance companies, both in clients and lending behaviors. They found that while banks and finance companies were similar in the extent to which they were asymmetrically informed about their customers, customers of finance companies were riskier. Carey, Post and Sharpe also speculated that finance companies deal with their customers differently than banks.

Empirical researchers have tended to regard lenders as making either relationship loans or transaction loans; however theoretical researchers recognize that the same lenders may use both technologies. Boot and Thakor (2000) regard relationship lending as a niche form of lending that requires the acquisition of sector-specific knowledge, whereas transaction lending resembles arm's length lending of the type that occurs in bond markets.[3] They suggest that lenders make a strategic choice about the relative amounts of relationship and transaction lending to perform based on the differing costs of producing each loan type, the bank's competitive advantage in

[3] The terms "transaction lending" and "transaction loans" are subtly different as used by Berger and Udell (2002) as compared with Boot and Thakor (2000). Boot and Thakor envision transaction loans as standardized products, similar to mortgages and motor vehicle loans, whereas Berger and Udell's use of the term is broader, sometimes seeming to imply the ready existence of collateral.

lending, and the differing competitive conditions in the markets for both loans types. Boot and Thakor develop a theoretical model to analyze how lenders alter the mix of relationship versus transaction lending as competition among lenders increases. They argue that increasing competition could encourage banks to shift from cheaper-to-produce transaction lending toward relationship lending, whose costs of knowledge acquisition create barriers to entry that are less easily competed away. However, they find that the effect of increased competition on the relative amounts of relationship and transaction lending produced by the banking sector depends on whether the initial increase in competition comes from the market for relationship loans or transaction loans. Boot and Thakor show that banks with market power make only transaction loans, and that increasing inter-bank competition leads banks to insulate themselves from price competition by substituting away from transaction loans towards relationship loans.

The literature on the microeconomics of lending provides interesting insights that inform investigations of prejudicial lending. A key problem for researchers investigating prejudicial lending is distinguishing statistical discrimination, which reflects measurement problems, from prejudicial discrimination, which reflects unjust lending practices. Following Becker's (1957) suggestion that prejudicial discrimination is inconsistent with fully competitive markets, Cavalluzzo and Cavalluzzo (1998) used the Herfindahl-Hirschman index, which measures the degree of banking market competition, to help distinguish prejudicial from statistical discrimination. To do this, i.e., to distinguish prejudicial from statistical discrimination, we propose following Boot and Thakor's (2000) observations about lenders being producers of relationship and transaction loans and about differing degrees of competition in the markets for relationship and transaction loans. Specifically, we propose using loan type and lender type

indicators in much the same way Cavalluzzo and Cavalluzo used the Herfindahl-Hirschman index to distinguish statistical and discriminatory lending.

III. Models, Hypotheses and Methodology

Prejudicial lending to small business owners may take different forms. It may take the form of creditors charging different interest rates to owners with identical firms and credit records but with different personal characteristics unrelated to creditworthiness. If prejudicial lending takes this form, direct evidence of discrimination could potentially be discerned using interest rate data.

Indirect evidence of interest rate discrimination could also potentially be discerned from data on outstanding loans, on loan default probabilities, and on the characteristics of less preferred borrowers whose loan applications were approved. Charging higher interest rates to less preferred borrowers should tend to reduce the number of wealth-enhancing projects they undertake and, over time, reduce their share of outstanding loans relative to more preferred borrowers. For interest rate discrimination to have this effect, the practice would have to be widespread and investment opportunities of more and less preferred borrowers similar. Interest rate discrimination could also produce lower default rates on loans to less preferred borrowers, as only higher quality projects could be justified at the higher interest rates, raising the average loan quality. For interest rate discrimination to produce lower default rates, the investment opportunities of all borrowers would have to be similar. Finally, since lower default rates are by-products of superior project quality, indirect evidence of discrimination could be manifested in superior characteristics of less preferred borrowers who obtain loans. For interest rate discrimination to lead to successful borrowers from the less preferred group with superior

characteristics, the distributions of characteristics among more and less preferred borrowers would need to be similar.

If, as is often suggested, creditors lack the flexibility in setting interest rates or have other reasons for not adjusting rates (cf. Stiglitz and Weiss (1981)), prejudicial lending may take the form of nonprice rationing, whereby a lender accepts a loan application from one firm owner but denies an application from another who differs from the first only in personal characteristics irrelevant to creditworthiness. For the lender to be induced to lend to a firm owner from the less preferred group, the lender requires the owner to exhibit characteristics that would cause the owner to be classified as intramarginal were it not for group affiliation. If prejudicial lending takes the form of nonprice rationing, direct evidence could potentially be discerned from data on loan application denials.

If prejudicial lending takes the form of nonprice rationing, indirect evidence of rationing is again potentially discernible from data on outstanding loans, loan default probabilities, and the characteristics of less preferred borrowers whose loan applications are approved. Requiring less preferred borrowers to meet a higher standard should mean that fewer borrowers meet the standard, reducing over time the stock of outstanding loans to less preferred borrowers. For rationing to reduce outstanding loans, the practice would have to be widespread and borrowers of all types would have to have similar investment opportunities. Requiring less preferred borrowers to meet a higher standard should also produce lower default rates on loans made to them, since lenders would be financing projects of higher average quality. For rationing to produce lower default rates, all borrowers would have to face similar investment opportunities. Finally, if lenders require borrowers to meet a higher standard, indirect evidence of this could potentially be manifested in superior characteristics of less preferred borrowers who obtain

loans. For this effect to be discernible statistically, the overall distributions of characteristics among all borrowers would have to be similar.

We take the approach of looking for evidence of discriminatory lending practices by investigating possible nonprice rationing rather than interest rate discrimination. While we recognize that discriminatory lending practices may take either form, we are convinced by the equilibrium credit-rationing arguments of Stigliz and Weiss (1981), which suggest that interest rates may not be fully flexible. In addition to looking for direct evidence of discriminatory lending using data on loan denial decisions, we look for indirect evidence in the pattern of outstanding loans and in the characteristics of firm owners whose loan applications are accepted. We do not attempt to investigate differentials in default rates due both to data considerations and to the likelihood that loan defaults, which come after the lending decision (often long after), may be influenced by extraneous and unforeseen events, causing the signal-to-noise ratio to be low.

To produce evidence on preferential lending we begin with the basic model of Cavalluzzo and Cavalluzo (1998):

$$Y_i = \alpha + \gamma' D_i + \beta' X_i + \varepsilon_i \qquad (1)$$

where Y_i is the probability that the i^{th} firm either has an outstanding loan or is denied a loan, D_i is a vector of indicator variables for ethnicity and gender, X_i is a vector of additional explanatory variables, ε_i is a random disturbance term, and γ and β are coefficient vectors.

To adduce indirect evidence of discriminatory lending, we estimate probit versions of (1) in which the dependent variable, Y_i, is defined as the probability that the i^{th} firm has an outstanding loan. Initially we estimate (1) using data on all outstanding small business loans. Then we stratify the data, categorizing loans as to loan type – either relationship loan or transaction loan – and lender type – either commercial bank or nonbank lender. We re-estimate

(1) on each of the four subsamples: transaction loans from nonbanks, relationship loans from nonbanks, transaction loans from banks, and line-of-credit loans from banks. Finally, we use the estimated coefficients of the ethnicity/gender indicator variables from the five estimated models to test the following five hypotheses regarding discriminatory lending:

H 1: All else equal, the probability of having at least one outstanding loan is identical for ethnic/gender minority-owned firms and firms owned by white males.

H 2: All else equal, the probability of having at least one outstanding transaction loan from a nonbank lender is identical for ethnic/gender minority-owned firms and firms owned by white males.

H 3: All else equal, the probability of having at least one outstanding relationship loan from a nonbank lender is identical for ethnic/gender minority-owned firms and firms owned by white males.

H 4: All else equal, the probability of having at least one outstanding transaction loan from a bank lender is identical for ethnic/gender minority-owned firms and firms owned by white males.

H 5: All else equal, the probability of having at least one outstanding relationship loan from a bank lender is identical for ethnic/gender minority-owned firms and firms owned by white males.

Provided the vector of explanatory variables, X, includes proxies for all the criteria on which lending decisions may legally be based, the finding of any statistically significant elements of γ in any of the estimated models constitutes evidence consistent with discriminatory lending.

To produce direct evidence of possible discrimination in the pattern of loan denials we modify equation (1) as follows:[4]

$$Y_i = \alpha + \delta\, LOC_i + \zeta\, BANK_i + \gamma'\, D_i + \eta'\,(D_i * LOC_i) + \theta'\,(D_i * BANK_i) + \beta'\, X_i + \varepsilon_i$$

[4] We might have employed the strategy of estimating equation (1) with the dependent variable defined as the probability that the loan application of the i^{th} firm is denied on subsamples of applications for transaction loans to nonbanks, relationship loans to nonbanks, transaction loans to banks, and relationship loans to banks. However we rejected this approach because only a fraction of the firms in the 1998 SSBF applied for new loans in the five years preceding the survey, making our sample of loan applications substantially smaller than our sample of outstanding loans. To conserve degrees of freedom and maintain the power of our statistical tests we instead follow the approach described above.

(2)

where Y_i is the probability that a lender denies the loan application of the i^{th} firm, LOC_i is an indicator variable for a relationship loan, $BANK_i$ is an indicator variable for a bank loan, and δ and ζ are coefficients and η and θ are vectors of coefficients. Coefficient estimates of equation (2) permit us to test for evidence of discrimination in the loan approval process. In particular for each ethnic or gender group represented by an indicator in the D vector we test the following four hypotheses (illustrated below for the j^{th} ethnic or gender group):

H 6: All else equal, nonbank lenders deny transaction loan applications at identical rates for ethnic/gender minority-owned firms and firms owned by white males.
$\gamma_j = 0$

H 7: All else equal, nonbank lenders deny relationship loan applications at identical rates for ethnic/gender minority-owned firms and firms owned by white males.
$\gamma_j + \eta_j = 0$

H 8: All else equal, bank lenders deny transaction loan applications at identical rates for ethnic/gender minority-owned firms owned by white males.
$\gamma_j + \theta_j = 0$

H 9: All else equal, bank lenders deny relationship loan applications at identical rates for ethnic/gender minority-owned firms and firms owned by white males.
$\gamma_j + \eta_j + \theta_j = 0$

Provided the vector X includes proxies for all the criteria on which lending decisions may legally be based, the finding that any of the elements of γ, η and θ are statistically significant constitutes evidence consistent with discriminatory lending decisions.

As is well-known by researchers in the credit-market discrimination and relationship lending literatures, estimating equation (2) as a single equation on a data sample of firm owners who applied for loans treats the firm owners' decisions to apply for loans as given. In this situation, hypothesis tests using coefficient estimates from (2) reveal unbiased evidence on discriminatory lending provided that firm owners who did not apply for loans are in every other

respect identical to those who did. However if nonapplicant firm owners are systematically different from credit-seeking firm owners – and whether this is so is purely an empirical matter – then estimating equation (2) alone on data for credit-seeking firms introduces omitted variable bias which potentially understates the degree of discriminatory lending. This problem, known as the sample selection problem, may be overcome by estimating the loan denial model, equation (2), jointly with a model of a firm owner's decision to apply for a loan:

$$S_i = \alpha + \gamma' D_i + \kappa' Z_i + \xi_i \qquad (3)$$

where S_i is the probability that the i^{th} firm owner applies for a loan, Z_i is a vector of additional explanatory variables, ξ_i is a random disturbance term, and γ and κ are coefficient vectors. By assuming that the error terms ε and ξ share a joint distribution, estimating (2) and (3) jointly permits the properties of the error terms to be exploited so as to correct the omitted variable bias introduced by estimating equation (2) alone. Again, whether joint estimation of (2) and (3) is necessary or if estimation of (2) alone is appropriate is purely an empirical matter. In Section V we present estimates of equation (2) produced by both estimation techniques.

To discern indirect evidence of discriminatory lending in the characteristics of less preferred borrowers who received loans, we proceed as follows. We take data on the approved loan applications and stratify them by loan type and lender type; we further stratify the approved applications by ethnicity and gender of the applicants. Then for each subgroup we compute the group means of the proxies that appear in the X vector in equation (2), the variables that represent the criteria on which lending decisions may legally be made. Finally, for each of the proxies in the X vector we test the following hypothesis:

H 10: Lenders require ethnic/gender minority loan applicants to have characteristics no more preferred than white males to be induced to accept their applications.

Hypothesis H 10 is supported by the finding that for characteristics in the X vector, t-tests fail to reject the null hypothesis of identical group means for white male firm owners and for owners affiliated with less preferred ethnic and gender groups; evidence against the hypothesis takes the form of t-tests that reject the null of identical group means.

IV. Data and Descriptive Statistics

Data

To test the hypotheses presented in Section III. we use data drawn from the 1998 Survey of Small Business Finances (SSBF). This survey, conducted at five-year intervals for the Federal Reserve, collects extensive financial and nonfinancial information on the surveyed firms. The 1998 survey was conducted during 1999 and 2000 and queried a nationally representative sample of small businesses in operation during December 1998. The survey defines a small business as a nonfarm, nonfinancial business having fewer than 500 full-time employees. The 1998 sample surveyed 3,561 firms representative of the 5.3 million small businesses then operating nationwide. Of these 3,561 firms, 962 applied for loans sometime between 1996 and 2000; owners of these firms answered a more extensive set of questions about their firms' most recent borrowing experiences.[5]

Data considerations led us to winnow the sample slightly. Of the 3,561 firms surveyed, 76 firms were excluded from further analysis because they appeared to be unviable, having zero or negative assets; this left 3,485 firms, of which 952 applied for loans. Data on the 3,485 viable firms were used to estimate equation (1) and to test hypotheses H 1 – H 5. To estimate equation

[5] The 1998 SSBF deliberately oversampled certain types of firms that have been underrepresented in other data bases, including firms headed by African-American, Asian and Hispanic owners. Oversampling causes summary statistics such as means and medians to be biased with respect to the population. By weighting all observations by weights from the 1998 SSBF we are able to make population inferences.

(2) we used data on firms that applied for loans. Of the 952 viable firms that applied, 64 firms lacked data on the type of loan applied for or the type of lender applied to, and another 18 firms reported applying for credit and having the application both denied and approved. We excluded these observations from the analysis of loan denials, leaving 870 firms that applied for loans.

The samples used to estimate equations (1) and (2) are both dominated by firms owned by white males. Of the 3,485 firms used to estimate equation (1), 2,579 were male-owned and 906 were female-owned. Male- and female-owned firms account for 662 and 208, respectively, of the 870 firms initially selected to estimate equation (2). The 1998 SSBF also identifies whether a sampled firm's principal owners are African-American, Asian, Hispanic, or some other ethnic minority. Of the 3,485 firms used to estimate equation (1) the numbers owned by African Americans, Asians, Hispanic, "Other," and white males are 259, 199, 260, 41 and 2,751, respectively. These numbers sum to more than 3,485 due to joint ownership of a few firms by individuals in different ethnic groups. Firms owned by African Americans, Asians, Hispanic, "Other," and white males in the 870-firm sample of loan applications number 68, 43, 70, 7 and 688, respectively. As before, these numbers sum to more than 870 because some firms have owners in different ethnic categories. Due to the small size of the "Other" category – only 7 loan applications – these observations were dropped when estimating equation (2). This left 863 firms on which to estimate equation (2) and to test hypotheses H 6 – H 10.[6]

[6] Below is a tabulation of the racial composition of the 3,485 firms used to compute equation (1) and the 863 firms used to compute equation (2).

DATA SUMMARY – ETHNIC COMPOSITON OF FIRM OWNERSHIP
FULL SAMPLE OF 3,485 OBSERVATIONS

Like the 1988-1989 and 1993 NSSBFs, the 1998 SSBF collects detailed data on types of loans outstanding and applied for as well as types of lenders who made loans. The 1998 SSBF identifies six types of small business loans: lines of credit, commercial mortgages, motor vehicle loans, equipments loans, capital leases and other loans. Following Berger and Udell (1995) we categorize credit lines as relationship loans, and categorize the remaining loans as transaction loans. The 1998 SSBF also classifies small business lenders into 21 different categories which include commercial banks, a variety of nonbank financial intermediaries, and nonfinancial intermediary lenders.[7] We group small business lenders into two categories: banks, which are commercial bank lenders, and nonbanks, which are all other lenders. We justify this grouping on

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	AFROAM	ASIAN	HISPANIC	OTHER	WHITE
AFROAM	250	0	9	0	0
ASIAN	0	189	6	0	4
HISPANIC	9	6	241	2	2
OTHER	0	0	2	37	2
WHITE	0	4	2	2	2743
	259	199	260	41	2751

DATA SUMMARY – ETHNIC COMPOSITON OF FIRM OWNERSHIP
APPROVED+DENIED LOAN APPLICATIONS: 870 OBSERVATIONS

	AFROAM	ASIAN	HISPANIC	OTHER	WHITE
AFROAM	65	0	3	0	0
ASIAN	0	40	1	0	2
HISPANIC	3	1	66	0	0
OTHER	0	0	0	7	0
WHITE	0	2	0	0	686
	68	43	70	7	688

[7] Lenders who are financial intermediaries include savings banks, S&Ls, credit unions, finance companies, insurance companies, mutual funds, leasing companies, mortgage companies, factors, and venture capital firms. Lenders who are not financial intermediaries include the firm owners themselves, their firms' retirement funds, other individuals, suppliers, unrelated nonfinancial businesses, check-clearing companies, credit-card processing companies, governments, and two additional categories of miscellaneous lenders. Loans from lenders who are financial intermediaries dwarf loans from lenders who are not financial intermediaries.

grounds that commercial banks differ qualitatively from other lenders in being much more highly regulated.

Descriptive Statistics

Before testing our 10 hypotheses we look at the data. Data on outstanding loans, loan applications and loan denials are summarized in the three panels of Table 1. In addition to showing aggregate data, Table 1 shows loan data disaggregated by loan type and lender type and by the demographic affiliation of the main owner(s) of each sampled firm. Asterisks and daggers denote statistics for ethnic minority and female firm owners whose statistics differ significantly from those of white male and male firm owners.

Panel A shows proportions of firms in the 3,485-firm sample having at least one outstanding loan. Over half of all firms (56 percent) have at least one loan outstanding and about one quarter of all firms have outstanding at least one bank credit line, at least one transaction loan from a bank, and at least one transaction loan from a nonbank lender (25 percent, 25 percent and 29 percent, respectively). About 5 percent of all firms have an outstanding line of credit from a nonbank lender. Disaggregating the data by owner ethnicity shows a different picture: compared with white male--owned firms, a significantly smaller proportion of minority-owned firms have outstanding at least one loan (51 percent vs. 57 percent), at least one bank line of credit (18 percent vs. 26 percent), or at least one transaction loan from a bank (16 percent vs. 27 percent), but a significantly larger proportion of minority-owned firms have outstanding at least one transaction loan from a nonbank lender (33 percent vs. 28 percent). This same basic pattern holds for firms owned by African Americans and Hispanics but not for firms owned by Asians or members of other ethnic groups: the prevalence and composition of their outstanding loans is

more similar to that of white male firm owners. Disaggregating the data by firm-owner gender shows a different picture again: compared with male-owned firms, a significantly smaller proportion of female-owned firms have outstanding at least one loan of any kind (51 percent vs. 58 percent), at least one bank line of credit (18 percent vs. 27 percent), at least one transaction loan from a bank (20 percent vs. 27 percent), or at least one transaction loan from a nonbank lender (26 percent vs. 30 percent). We conclude from Panel A that smaller proportions of ethnic minority- and female-owned firms have at least one outstanding loan, smaller proportions of firms owned by African Americans and Hispanics have at least one bank loan of any kind, but larger proportions of African-American- and Hispanic-owned firms have transaction loans from nonbanks.

Panel B shows proportions of firms in the 3,485-firm sample that applied for new loans between 1996 and 2000 and for which complete data on the most recent loan application are available (870 firms). About 22 percent of firms applied for a loan, with the modal application being for a transaction loan from a bank (9 percent); nearly equal proportions of firms applied for bank lines of credit and for transaction loans from nonbanks (6 percent and 5 percent respectively) while the remaining firms applied for credit lines from nonbanks (2 percent).[8] Essentially this same pattern describes the proportions of loan applications both of firms owned both by ethnic minorities and firms owned by white males, except that a significantly larger proportion of minority firm owners applied for bank lines of credit (8 percent vs 6 percent). This difference is due entirely to the behavior of African-American firm owners, for whom applications for bank credit lines composed nearly half of all loan applications. The proportions

[8] Table 1 Panel B shows that 22 percent of all sample firms applied for loans even though the numbers of observations in the 3,485- and 870-firm samples suggest that (870/3,485 =) 25 percent of sample firms applied for loans. As noted earlier, the 1998 SSBF oversamples certain types of firms but provides weights that can be applied to the observations so that inferences about the population of small firms may be drawn. In all the empirical work we present, the observations have been weighted.

of male- and female-owned firms that applied for loans and the distribution of applications among loan and lender types essentially mimics that of all firms. We conclude from Panel B that the credit-seeking behavior of small firm owners is quite homogeneous except for a larger propensity of African-American firm owners to apply for bank lines of credit.

Panel C shows proportions of firms denied loans in the 870-firm sample of loan applications. Lenders denied about 21 percent of all loan applications. Not surprisingly, lenders denied larger proportions of credit line applications than transaction loan applications (banks and nonbanks denied 36 percent and 32 percent of credit line applications, respectively, compared with 14 percent and 13 percent of transaction loan applications, respectively). Disaggregating the data by firm-owner ethnicity produces a substantially different picture. Lenders denied 17 percent of all loan applications from white male firm owners compared with 47 percent of all applications from minority firm owners. Whereas bank and nonbank lenders denied less than one-third of credit-line applications from white male firm owners (32 percent and 30 percent, respectively), these lenders denied over 50 percent of such applications from minority firm owners (52 percent and 56 percent, respectively). More surprising is lenders' behavior towards transaction loan applications: whereas banks and other lenders denied only about 10 percent of such applications from firms owned by white males (9 percent and 11 percent, respectively), they denied substantially higher proportions of transaction loan applications from minority-owned firms (52 percent and 25 percent, respectively). Lenders denied applications from African-American-owned firms in about the same proportions that they denied applications from all minority-owned firms. African-American- and Hispanic-owned firms had about half of all loan applications denied (53 percent and 47 percent, respectively) and about 60 percent of transaction loan applications to banks denied (56 percent and 63 percent, respectively). Disaggregating the

data by firm-owner gender produces a different picture again: lenders denied more than one-quarter of all loan applications from female-owned firms compared with one-fifth of all applications from male-owned firms. The higher proportion of denials for female-owned firms is due entirely to bank denials of credit line applications. We conclude from Panel C that lenders denied higher proportions of applications from firms owned by ethnic minorities and females; bank lenders denied transaction loan applications from African-American and Hispanic-owned firms at rates 6 to 7 times greater than for firms owned by white males, and denied credit-line applications from female-owned firms at rates nearly 1.5 times greater than for male-owned firms.

The descriptive statistics in Table 1 point towards several conclusions. First, in all three panels disaggregating the data by loan type and lender type reveals significant patterns not apparent from the aggregate data. Second, the statistics in Panels A and C present a broadly consistent picture: Panel C implies that some lenders deny relatively more of some types of loan applications from minority- and female-led firms, and Panel A hints that these loan denial decisions may be pervasive enough to yield fewer outstanding loans for minority- and female-led firms. Finally, the statistics in Panel B suggest that lower levels of outstanding loans at minority- and female-led firms are not chiefly a reflection of lower proclivities to apply for new loans: white male-, minority-, male- and female-led firms applied for new loans in roughly the same proportions. However, the Table 1 descriptive statistics cannot be said to prove the existence of discriminatory lending practices since the characteristics of the borrowing firms and firm owners are not controlled; this must be accomplished with econometric modeling.

Table 2 defines the variables used in the operational counterparts of equations (1) through (3). The first five variables, in turn, define the dependent variable in equation (1). Each is a

binary variable coded 1 if a surveyed firm has at least one outstanding loan of a given type, and zero otherwise. The types are any loan (HAVELOAN), a transaction loan from a nonbank lender (HAVEOLOAN_OLENDER), a line of credit from a nonbank lender (HAVELOC_OLENDER), a transaction loan from a bank (HAVEOLOAN_BANK), and a bank line of credit (HAVELOC_BANK). The variable DENIED, which defines the dependent variable in equation (2), is a binary variable coded 1 if a firm's loan application was denied and zero otherwise. Initially we estimate equation (2) alone using probit estimation; but to control for possible sample selection problems we subsequently re-estimate equation (2) jointly with equation (3) using APPLIED to define the dependent variable, which is coded 1 if a firm applied for a loan and zero otherwise. The remaining variables in Table 2 appear as explanatory variables in the operational counterparts of equations (1), (2) and (3). They include binary variables controlling for the intensity of competition in banking markets (HHI_MED and HHI_HI), binary variables indicating ethnicity and gender (MINORITY, AFROAM, ASIAN, HISPANIC, OTHER and FEMALE), measures of owner characteristics, measures of firm characteristics, and controls for region, industry, and year of loan application.

Table 3 presents mean values of the independent variables presented in Table 2 for firm owners in different ethnic and gender categories. Table 3 shows that minority- and female-owned firms differ from their white male- and male-owned counterparts in many respects. Compared with white male firm owners, minority firm owners more often conduct business in urban settings, have less business experience, and run smaller, younger businesses with attributes of "lifestyle" entities (more family controlled businesses, less diffuse ownership, fewer C-corporations, less owner net worth). Minority firm owners are less creditworthy than their white male counterparts (more recent bankruptcies, judgments against owners, owners who pay late,

low credit ratings and trade credit denials) but in absolute terms the differences in creditworthiness are small. Minority firm owners also have weaker financial relationships with other business entities and with lenders (shorter average relationships with their oldest financing sources and with their primary financial institutions, lesser use of trade credit and business credit cards, shorter average relationships with the lenders applied to for loans, and greater incidence of no prior relationship with this lender).

African-American and Hispanic firm owners exhibit most of the characteristics of minority firm owners, but Asian firm owners are strikingly different. Asian firm owners are better educated than white male firm owners, have a lower incidence of negative equity, and own a higher fraction of firms with a national scope. Other characteristics of Asian-owned firms do not differ statistically from those of white male-owned firms except that Asian firm owners, like other ethnic minorities, own younger businesses having shorter financial relationships with other institutions, including their primary financial institutions.

Many of the differences between white male and minority firm owners also exist between male and female firm owners. Compared with male firm owners, female firm owners are less educated and have less business experience; they also control smaller shares in their own businesses, which are smaller, younger and more often family-owned. Female-owned businesses have substantially weaker financial relationships with financial service providers and funding sources, although female-owned businesses do not differ significantly from male-owned firms in their relationships to the loan sources they applied to for loans.

V. Results

Outstanding Loans: Hypotheses H1 – H5

Table 4 reports probit estimates of equation (1) and tests of hypotheses H1 – H5. In all, 10 estimated models appear in Panel A, two for each of the five dependent variables used to estimate equation (1). The estimated models represent the probabilities of a firm having outstanding, respectively, a loan of any kind (equations 4.1 and 4.2), a transaction loan from a nonbank lender (equations 4.3 and 4.4), a line-of-credit loan from a nonbank lender (equations 4.5 and 4.6), a transaction loan from a bank (equations 4.7 and 4.8), and a line-of-credit loan from a bank (equations 4.9 and 4.10). In each pair of estimated models the first model uses the binary variable MINORITY to distinguish minority-owned firms while the second model uses the binary variables AFROAM, ASIAN, HISPANIC and OTHER. Panel B reports results of tests of hypotheses H1 – H5.

Before addressing the evidence on discriminatory lending it should be noted that the nonethnicity, nongender explanatory variables in all 10 estimated models generally have the anticipated signs and magnitudes. Firms are more likely to have an outstanding loan the larger their asset bases, the greater their returns on assets, the more business relationships they have with financial institutions, and the longer lived these relationships. Firms are generally less likely to have outstanding loans the longer the relationships with their primary financial institutions. Also, firms that use business credit cards are more likely to have a loan of some kind, and firms that use trade credit are more likely to have bank lines of credit but less likely to have transaction loans from nonbank lenders.

The econometric evidence fails to reject the hypothesis that female-led firms do not differ from otherwise identical male-led firms in their likelihood of having an outstanding loan. In Panel A, none of the 10 estimated coefficients of FEMALE differ statistically from zero; nor do

any of the estimated coefficients of the interactive terms FEMALE * HHI_MED and FEMALE * HHI_HIGH. Thus the econometric evidence rejects hypotheses H1 – H5 for female-led firms.

Though the econometric evidence disputes claims of discriminatory lending against female firm owners, evidence of discrimination against minority firm owners is more compelling. The estimated coefficient of MINORITY is statistically insignificant in the model for the probability of having an outstanding loan of any kind (equation (4.1)), but in the four disaggregated models the estimated coefficient of MINORITY is statistically significant in three of the four cases. Interestingly, the estimated coefficient of MINORITY is significantly *positive* in the model for the probability of having a transaction loan from a nonbank (equation (4.3)) but significantly *negative* in the models for the probability of having a transaction bank loan and a bank line of credit (equations (4.7) and (4.9), respectively). Thus minority firm owners are more likely than white male firm owners to have at least one transaction loan from a nonbank but less likely to have a bank loan of any kind. These results hold regardless of the degree of banking market concentration (the coefficients of MINORITY * HHI_MED and MINORITY * HHI_HIGH are all statistically insignificant).

Use of MINORITY to indicate firm-owner ethnicity restricts loan probabilities of all minority ethnic groups to be equal in each model; but replacing MINORITY with the separate ethnicity indicators AFROAM, ASIAN, HISPANIC and OTHER allows loan probabilities to differ. The estimated coefficients of the ethnicity indicators show evidence of differing loan probabilities for African-American and Hispanic firm owners compared with Asian firm owners. In the model for the probability of having at least one loan outstanding (equation (4.2)) the estimated coefficients of AFROAM and HISPANIC are both negative and significant, whereas the estimated coefficient of ASIAN is insignificant. A similar pattern appears in the models for

the probability of having a transaction bank loan and a bank credit line (equations (4.8) and (4.10), respectively), although in the latter equation the estimated coefficients of AFROAM and HISPANIC are statistically insignificant. In the remaining two equations the estimated coefficients of AFROAM, ASIAN, and HISPANIC are all statistically insignificant, but only in the equation for the probability of having a transaction loan from a nonbank lender do the estimated coefficients of AFROAM, ASIAN, and HISPANIC have the same algebraic sign and magnitude (equation (4.4)).

Further evidence of differences in credit-market access for African-American and Hispanic firm owners compared with Asian firm owners comes from the estimated coefficients of the interactions between the ethnicity and banking market concentration variables. In the model for the probability of having an outstanding loan (equation (4.2)) African-American and Hispanic firm owners are more likely to have outstanding loans in markets with moderate concentration, whereas Asian firm owners are less likely to have outstanding loans, the greater the degree of banking market concentration. For Hispanic firm owners this pattern appears to derive chiefly from transaction loans from banks, whereas for Asian firm owners it derives from transaction loans from nonbank lenders (equations (4.8) and (4.4), respectively).

Panel B of Table 4 reports test statistics for hypotheses H1 – H5 for firms owned by females and ethnic minorities. Using MINORITY to indicate firm-owner ethnicity, t-statistics fail to reject hypothesis H1, that the probability of having an outstanding loan is identical for minority and white male firm owners; but t-statistics do reject hypotheses H2 – H5, that the probability of having a nonbank transaction loan, a nonbank credit line, a bank transaction loan, or a bank credit line is identical between minority and white-male-owned firms. The failure to reject H1 coupled with the rejection of H2 – H5 attests to the importance of disaggregating by

loan type and lender type. In addition, using AFROAM, ASIAN, HISPANIC and OTHER to indicate firm-owner ethnicity leads to the rejection of hypotheses H1 and H4 for African-American and Hispanic firm owners and the rejection of H2 for owners in the OTHER ethnic category. We conclude that the empirical evidence on outstanding loans hints at discriminatory lending practices against African-American, Hispanic, and other ethnic minority firm owners which vary by loan type and lender type.

Loan Denials: Hypotheses H6 – H9

Tables 5 and 6 report estimates of equation (2) and tests of hypotheses H6 – H9 produced using different estimation techniques, which influence the interpretation of the estimated models. Table 5 reports estimates of equation (2) produced using probit estimation. Because a firm owner must apply for a loan before a lender can approve or deny the application, predicted loan denial probabilities from estimated loan denial models that ignore the application process must be interpreted as conditional estimates, conditional on a firm owner's decision to apply for a loan. This is the case for the estimated models reported in Table 5. Table 6 reports estimates of equation (2) generated by estimating equations (2) and (3) jointly using maximum likelihood estimation. The predicted loan denial probabilities from this latter model may be interpreted as unconditional estimates. The magnitude of the gain from joint estimation is purely an empirical matter; hence we estimate equation (2) using both techniques. Both Tables 5 and 6 report estimates of equation (2) in Panel A and report tests of hypotheses H6 – H9 in Panel B.

In the probit model estimates of equation (2) reported in Table 5, Panel A, the estimated coefficients for the nonethnicity, nongender independent variables accord well with intuition. The estimates imply that lenders are significantly more likely to deny loan applications when

they enjoy a measure of market power – in medium- and high-concentration banking markets – than when they have none – in low-concentration markets. Lenders are less likely to deny applications when lenders themselves are the applicants' primary financial institutions, and more likely to deny loans to applicants with whom they have no prior relationship. Prior relationships between lenders and applicants do not guarantee loans, however: lenders are more likely to deny an application the longer the relationship between lender and applicant, a result consistent with the information capture view of Greenbaum, et al. (1989) and Sharpe (1990). Not surprisingly, lenders are more likely to reject applications for credit lines than for transaction loans but, other things equal, banks are no more likely than nonbanks to reject a particular application. The estimated coefficients show that lenders are sensitive to agency problems and firm governance issues: lenders are less likely to deny applications from firm owners who manage their own firms and who own greater shares of their own businesses. Lenders are also highly sensitive to firm owners' creditworthiness: lenders are less likely to deny applications from owners with greater net worth, no recent bankruptcies, no judgments against them, no delinquencies on personal or business obligations, and no previous denials of trade credit.

Just as the evidence in Table 4 failed to show differences between otherwise identical female- and male-owned firms in the probabilities of having outstanding loans, the evidence in Table 5 fails to show differences between female- and male-owned firms in the probability of being denied loans. Only one of the 10 estimated coefficients of a variable that includes FEMALE achieves statistical significance at conventional levels: the estimated coefficient of FEMALE * BANK in equation (5.2), which is positively signed. This estimated coefficient implies that the *marginal effect* of being female when applying for any kind of bank loan is to raise the probability of loan denial. But the *total effect* of being female is found by combining the

estimated coefficient of FEMALE * BANK with other estimated coefficients; when this is done, the total effect of being female when applying for a transaction loan from a bank or bank credit line is zero; that is, H8 and H9 are not rejected (Table 5, Panel B). Indeed, none of the F-statistics in Panel B reject the hypothesis of identical loan denial probabilities for otherwise identical female- and male-owned firms.

Regarding discriminatory lending practices against ethnic minority firm owners, the evidence on outstanding loans and loan denials is consistent. When MINORITY is used to represent firm-owner ethnicity, four of the five estimated coefficients of variables that include MINORITY achieve statistical significance (equation (5.1)). Interestingly, the estimated coefficient of MINORITY * HHI_MED is statistically significant and negatively signed, suggesting that lenders in moderately concentrated banking markets are less likely to deny minority firm owners' loan applications than lenders in low-concentration markets, a counter-intuitive result. When the estimated coefficients of MINORITY, MINORITY * LOC and MINORITY * BANK are combined to estimate the total effect of minority ethnicity on denial decisions for the four loan type/lender type combinations, F-statistics reject the hypothesis of no ethnicity effect for nonbank transaction loans (hypothesis H6), bank transaction loans (H8) and bank lines of credit (H9), favoring instead the alternative hypothesis of greater denial probabilities for minority-owned firms.

A similar but more complex picture emerges when the ethnicity indicators AFROAM, ASIAN, and HISPANIC replace MINORITY (equation (5.2)). Only variables involving HISPANIC have statistically significant estimated coefficients; but when the estimated coefficients of variables with AFROAM, ASIAN, and HISPANIC are combined to estimate the total effects of firm-owner ethnicity on loan denial probabilities, F-statistics show some evidence

of discriminatory practices against African-American and Hispanic firm owners (Panel B). In particular, while nonbank lenders are no more likely to deny applications from African-American firm owners than from otherwise identical white male firm owners, bank lenders are more likely to deny African-American firm owners' applications for both transaction loans and lines of credit (i.e, H6 and H7 cannot be rejected but H8 and H9 can), with the evidence of discrimination being stronger for transaction loans than lines of credit. The F-statistics suggest, too, that bank lenders deny with greater probability any loan applications from Hispanic firm owners compared with otherwise identical firm-owner loan applicants who are white males, and that, in addition, nonbank lenders deny with greater probability transaction loan applications from Hispanic firm owners (i.e., H7 cannot be rejected but H6, H8 and H9 can). Only Asian firm owners face loan denial probabilities identical to those of white male firm owners on all four loan type/lender type combinations: F-statistics for Asian firm owners fail to reject H6 – H9.

The results in Table 5 are conditioned upon firm owners' decisions to apply for loans; but if fear of denial deters firm owners from applying to lenders, the evidence in Table 5 could understate or misrepresent the amount of discriminatory lending. To investigate this possibility we re-estimate our loan denial models (equation (2)) jointly with models of the decision to apply for loans (equation (3)). Table 6 reports the jointly estimated models and associated test statistics. Panel A reports both estimated loan application models (equations (6.1a) and (6.2a)) and loan denial models (equations (6.1b) and (6.2b)). F-statistics testing restrictions on the coefficients of the estimated loan denial models consistent with hypotheses H6 – H9 are reported in Panel B.

The estimated loan denial equations reported in Table 6, Panel A are qualitatively similar to those reported in Table 5, Panel A. The effect of joint estimation is to reduce slightly most

estimated coefficients' absolute values without changing their algebraic signs. The nongender, nonethnicity explanatory variables continue to influence loan denial probabilities as described earlier, with a few exceptions. Joint estimation causes the estimated relationship between asset size and loan denial probability to gain statistical significance, with larger firms being both more likely to apply for loans and less likely to be denied them. Joint estimation has a similar effect on the coefficient estimates of the relationship variables NUMRELATIONS and USEBUSCC: the coefficients now suggest that firm owners having more numerous financial relationships and using business credit cards are less likely to be denied loans. With joint estimation firms in metropolitan statistical areas are estimated to be less likely to apply for loans and more likely to be denied them. Joint estimation also reduces to statistical insignificance the estimated effect of firm age on loan denial, and reduces the significance of the estimated effect of several credit-quality proxies on loan denial, especially in equation (6.2b).

Joint estimation corroborates previous findings on discrimination against female firm owners. In both loan application equations the estimated coefficients of terms with FEMALE are statistically insignificant, implying equal probabilities of applying for loans by female and male firm owners identical in all other respects (equations (6.1a) and 6.2a)); analogous statements apply to the loan denial equations (equations (6.1b) and (6.2b)). As a result, F-statistics in Panel B fail to reject any of the hypotheses concerning equality of loan denial rates between female- and male-owned firms. Hence the data fail to reject hypotheses H6 – H9 for female firm owners.

When MINORITY proxies firm-owner ethnicity (equations (6.1a) and (6.1b)), the jointly estimated loan denial equation shows evidence of discriminatory lending that is weaker but qualitatively similar to the evidence shown by the singly estimated equation (equation (5.1)). In the estimated application model, the statistically insignificant estimated coefficients of terms

including MINORITY imply equal loan application probabilities by minority and white male firm owners of otherwise identical firms. In the estimated loan denial model, the estimated coefficients of terms with MINORITY are smaller in absolute value and less statistically significant than those reported for the singly estimated equation. Nevertheless, the F-statistics in Panel B show that minority firm owners are less likely than white male firm owners to get transaction loans from nonbanks or banks, or bank lines of credit (i.e., the F-statistics reject hypotheses H6, H8 and H9).

When AFROAM, ASIAN, and HISPANIC are used in place of MINORITY to indicate firm-owner ethnicity (equations (6.2a) & (6.2b)), the jointly estimated loan denial equation shows evidence of discriminatory lending practices against African-American and Hispanic firm owners but not Asian firm owners. In the loan application equation none of the estimated coefficients of terms with AFROAM, ASIAN or HISPANIC achieves statistical significance, implying no difference from white male firm owners in loan application probabilities. In the loan denial equation the estimated coefficients of terms with AFROAM, ASIAN, and HISPANIC are smaller in absolute value and generally less statistically significant than their counterparts in the singly estimated model. None of the estimated coefficients of terms with ASIAN are statistically significant, but the estimated coefficient of AFROAM achieves statistical significance at the 10 percent level, and four of the five estimated coefficients of terms with HISPANIC achieve significance at the 10 percent level or better. In tests of linear restrictions on the coefficient estimates (Panel B), F-statistics fail to reject the hypothesis of identical loan denial probabilities for Asian and white male firm owners for all four loan type and lender type combinations (i.e., the F-statistics fail to reject hypotheses H6 – H9). F-statistics also fail to reject the hypothesis of identical loan denial probabilities for Hispanic and white male firm owners applying for credit

lines from banks and nonbanks, but not for Hispanic and white male firm owners applying for transaction loans from banks and nonbanks (i.e., the F-statistics fail to reject hypotheses H7 and H9 but do reject hypotheses H6 and H8). Analogous statements apply to African-American firm owners, although admittedly the F-statistics reject the restrictions at lower significance levels for African-American firm owners compared with Hispanic firm owners. We conclude that the jointly estimated loan denial equation points towards discriminatory lending practices by bank and nonbank lenders against African-American and Hispanic firm owners in granting transaction loans but not line-of-credit loans. In addition, we find no evidence of discriminatory lending practices against Asian firm owners.

While both singly and jointly estimated loan denial models with individual ethnicity indicators show evidence of discriminatory lending practices against African-American and Hispanic firm owners, the pattern is slightly different. The estimated coefficients of the terms involving AFROAM and HISPANIC from single-equation estimation (equation (5.2)) produce test statistics yielding little evidence of discriminatory lending practices by nonbank lenders towards African-American firm owners or towards Hispanic firm owners seeking line-of-credit loans, but some evidence of such practices by nonbank lenders toward Hispanic firm owners seeking transaction loans as well as by banks towards both African-American and Hispanic firm owners seeking loans of any kind. In contrast, the estimated coefficients of the AFROAM and HISPANIC terms from the jointly estimated loan denial model produce test statistics yielding little evidence of discriminatory lending practices by banks or nonbanks towards African-American or Hispanic firm owners seeking credit lines but some evidence of such practices by banks and nonbanks towards African-American and Hispanic firm owners seeking transaction loans. In other words, whereas the singly estimated loan denial model implies that the main

source of loan-market discrimination towards African-American and Hispanic firm owners is banks in their lending decisions about transaction and line-of-credit loans (with a secondary culprit being nonbank lenders in lending decisions to Hispanic firm owners seeking transaction loans), the jointly estimated loan denial model finds the main source of loan-market discrimination to be both bank and nonbank lenders in their lending decisions about transaction loans. It should be noted, too, that the singly and jointly estimated loan denial equations both produce evidence that banks reject transaction loan applications from African-American and Hispanic firm owners at greater rates than otherwise identical white male firm owners.

Economic Significance of Loan Denial Probabilities

The econometric evidence presented in Tables 5 and 6 points towards statistically greater loan denial probabilities for African-American and Hispanic firm owners; but the nonlinear nature of the loan denial model obscures how much loan denial probabilities increase due to ethnic affiliation and, with it, any sense of the economic significance of discrimination. To assess the economic impact of firm-owner ethnicity on loan denial probabilities we use the estimated models reported as equations (5.2) in Table 5 and (6.2b) in Table 6 to predict the probability of loan denial for different combinations of owner and firm characteristics.

Using estimated models to predict loan denial probabilities by ethnic affiliation requires us to select values for all the remaining independent variables. We set the continuous independent variables equal to their medians for the subsample of firms that applied for loans, and do likewise for the binary variables, with the exceptions of the loan application terms LOC and BANK, the banking market concentration variables HHI_MED and HHI_HIGH, and the credit record indicators BANKRUPT, JUDGMENT and BUSPAYLATE. By setting LOC and

BANK to zero or one we can predict the denial probability of an application for a transaction loan (LOC =0) or line-of-credit loan (LOC=1) made to a bank (BANK=1) or a nonbank (BANK=0). We examine the degree of banking market concentration because of the attention this variable has received in previous theoretical and empirical research. Setting both HHI_MED and HHI_HIGH to zero allows us to predict loan denial probabilities for markets with the lowest degree of banking market concentration, while setting to one, in turn, HHI_MED and HHI_HIGH allows us to predict denial probabilities in markets having either medium or high concentration. We study the impact on loan denial probabilities of firm or principal owner bankruptcy within the past seven years (BANKRUPT =1), judgments against the principal owner within the past three years (JUDGMENT =1), and late payments on business accounts, including trade credit (BUSPAYLATE = 1), because preliminary investigations indicated these variables had disproportionately large impacts on the predicted loan denial probabilities.

Table 7 presents predicted loan denial probabilities for firms with different combinations of owner characteristics. Panel A shows predicted probabilities based on equation (5.2), the estimated loan denial equation produced by single-equation estimation; Panel B reports analogous information based on equation (6.2b), the estimated denial equation produced by joint estimation. Both panels show in bold type the predicted loan denial probabilities for African-American and Hispanic firm owners statistically different from the probabilities for white male firm owners, as determined by F-statistics in Tables 5 and 6. Both panels in Table 7 show four sets of predicted probabilities, denoted as Cases 1- 4. Most firm owners of all ethnicities fit the characteristics of Case 1: no recent prior legal judgments against them, no delinquencies on business payments, and no recent prior filings for bankruptcy. Predicted loan denial probabilities are shown for white male, African-American, and Hispanic firm owners applying for transaction

and line-of-credit loans to banks and nonbanks in markets having low, medium and high market concentration. Predicted denial probabilities are also shown for firm owners having a recent prior legal judgment against them (Case 2), owners whose firms have been delinquent on one or more business payments (Case 3), and owners who have filed for bankruptcy in the recent past (Case 4).

The loan denial probabilities reported in Panel A are generally small, except in instances where a firm owner has had a recent prior bankruptcy. The probabilities reported for Case 1, the case that describes the vast majority of firms, suggest that discrimination may have minimal economic impacts. For majority firm owners the predicted loan denial probabilities are miniscule – less than 1 percent – on applications for any loan type to any lender type. African-American firm owners face higher loan denial probabilities on bank loans than white male firm owners, but the highest computed denial probability – the denial probability for bank lines of credit in high-concentration banking markets – is still less than 14 percent. Compared with African-American firm owners, Hispanic firm owners face predicted loan denial probabilities higher in some instances and lower in others, but at worst less than 12 percent.

African-American and Hispanic firm owners with prior judgments against them (Case 2) and delinquent business payments (Case 3) may suffer some significant impacts of discrimination, judging from the predicted loan denial probabilities. Judgments and delinquencies scarcely increase the predicted loan denial probabilities for white male firm owners (the greatest predicted denial probability is still less than 7 percent), and the same is often true for African-American and Hispanic firm owners. But for African-American firm owners in high-concentration banking markets, judgments and delinquencies push predicted denial probabilities on bank loan applications to between 27 percent and 41 percent. And for Hispanic

firm owners seeking transaction loans from banks in low- or high-concentration banking markets, judgments and delinquencies push predicted denial probabilities from 11 percent or 12 percent to between 31 percent and 37 percent.

The loan denial probabilities suggest that prior bankruptcies (Case 4) by white male firm owners raise loan denial probabilities on line-of-credit loans relative to transaction loans, and raise loan denial probabilities in medium- and high-concentration banking markets relative to low-concentration markets. For a white male firm owner applying for a transaction loan in a low-concentration market, a prior bankruptcy raises from 0 percent to around 9 percent the predicted denial probability; this compares with an increase from 0 percent to between 30 percent and 33 percent in a medium- or high-concentration market. For a white male firm owner applying for a line-of-credit loan, a prior bankruptcy increases the predicted loan denial probability from less than 1 percent to a probability 2 to 3¼ times greater than for a transaction loan: to about 34 percent in low-concentration banking markets and between 66 percent and 69 percent in medium- and high-concentration markets.

The predicted loan denial probabilities imply that for African-American firm owners with prior bankruptcies, discrimination takes the form of making bank loans essentially unavailable. In low- and medium-concentration banking markets the predicted loan denial probabilities for an African-American firm owner range from 68 percent to 79 percent, compared with a range of 9 percent to 66 percent for an otherwise identical white male firm owner. The discrepancy is worse in high-concentration banking markets: predicted loan denial probabilities range from 94 percent to 96 percent for an African-American firm owner compared with a range of 31 percent to 67 percent for an otherwise identical white male majority firm owner. Thus for African-American

firm owners with a recent prior bankruptcy, the predicted loan denial probabilities suggest economically severe discrimination.

For Hispanic firm owners with a prior recent bankruptcy, the predicted loan denial probabilities imply discrimination having negative and generally severe economic effects. The most severe effects are felt by Hispanic firm owners seeking transaction bank loans in low- and high-concentration banking markets, where the predicted loan denial probabilities of about 95 percent are 64 to 86 percentage points more than for otherwise identical white male firm owners. Slightly less severe are the effects on Hispanic firm owners seeking transaction loans from nonbanks and credit lines from banks in low- and high-concentration markets: the predicted loan denial probabilities of about 58 percent (transaction loans from nonbanks) and 73 percent (bank lines of credit) are from 26 to 48 percentage points more and from 7 to 40 percentage points more, respectively, than for otherwise identical white male firm owners. In medium-concentration banking markets a prior bankruptcy raises a Hispanic firm owner's predicted loan denial probability on a transaction loan from a bank to over 76 percent, 46 percentage points more than for an otherwise identical white male firm owner. However, for bank lines of credit and for transaction loans from nonbanks, a prior bankruptcy increases Hispanic firm owners' predicted loan denial probabilities but leaves them below the predicted denial probabilities for comparable white male firm owners.

The predicted loan denial probabilities reported in Panel B based on the jointly estimated loan denial model (equation (6.2b)) both corroborate and challenge the findings from Panel A. A comparison of the predicted probabilities in the two panels shows similarities as well as differences. In both panels predicted loan denial probabilities for white male firm owners with no prior judgments, delinquent payments, or bankruptcies (Case 1) are generally quite low: 0

percent to 23 percent. In both panels, adverse legal judgments and late payments by white male firm owners (Cases 2 and 3, respectively) raise but slightly the predicted denial probabilities. In both panels, too, the predicted denial probabilities tend to increase with the degree of banking market concentration, a tendency predicted by economic theory (e.g., Becker (1957)). The greatest difference between the two panels is the level of predicted denial probabilities: the predicted probabilities reported in Panel B are consistently higher than their counterparts in Panel A.

The predicted loan denial probabilities in Panel B consistently imply greater economic impacts from discrimination than the probabilities reported in Panel A. African-American firm owners with no judgments, delinquencies, or prior bankruptcies (Case 1) face predicted loan denial probabilities on transaction loans 16 to 49 percentage points greater than white male firm owners with identical characteristics. Prior negative judgments (Case 2) or delinquent payments (Case 3) widen this difference. A prior recent bankruptcy by an African-American firm owner raises the predicted loan denial probability on transaction loans to 93 percent or more regardless of market concentration; this compares with denial probabilities for majority firm owners of just over 50 percent in low-concentration banking markets and 75 percent to 78 percent in medium- and high-concentration markets.

For Hispanic firm owners, the predicted loan denial probabilities imply smaller economic consequences of discrimination by nonbank lenders than by bank lenders. Hispanic firm owners with no negative judgments, late payments, or bankruptcies (i.e., Case 1) who apply to nonbank lenders for transaction loans face predicted loan denial probabilities slightly higher or lower than otherwise identical white male firm owners, depending on banking market concentration. But when the same Hispanic firm owners apply to banks, the predicted probability of loan denial is

19 to 47 percentage points greater than for otherwise identical white male firm owners, depending upon banking market concentration. The predicted loan denial probabilities show similar disparities between banks and nonbanks for Hispanic firm owners with prior judgments (Case 2), late business payments (Case 3) and prior bankruptcies (Case 4): nonbank lenders are consistently less likely than banks to deny transaction loan applications in markets of similar concentration. The economic effects of nonbank discrimination are predicted to be lowest in medium-concentration banking markets -- where they are effectively nil -- and highest in low-concentration banking markets, where the predicted probability of a nonbank lender denying an application for a transaction loan from a Hispanic firm owner with a prior judgment, payment delinquencies, or past bankruptcies is 20 to 34 percentage points greater than for an otherwise identical white male firm owner. The economic effects of discrimination by banks are also predicted to be lowest in medium-concentration markets and greatest in low-concentration markets but are greater than for nonbanks: banks in medium-concentration markets are predicted to deny applications for transaction loans from Hispanic firm owners having judgments, payment delinquencies, or bankruptcies with probabilities 17 to 28 percentage points more than for white male firm owners, while banks in low-concentration markets deny such applications with probabilities 47 to 64 percentage points greater than for white male firm owners.

Higher Requirements: Hypothesis H 10

Table 8 reports the results of tests of hypothesis H10. To test the hypothesis we started with all sample firms whose loan applications were accepted; for these firms we assembled data on the explanatory variables that appeared in the regression models, defined in Table 2. We then grouped the observations by loan type applied for and lender type applied to. Within each loan-

type/lender-type category we stratified the observations by ethnic group affiliation of the firm owners. For each ethnic group we then found the group means of the explanatory variables. Finally, within each loan-type/lender-type category we compared the means of the explanatory variables for each ethnic group to the means for white male firm owners and computed t-statistics to test the hypothesis of no difference between the group means. Table 8 reports the outcome of this investigation for white-male-, African-American- and Hispanic-owned firms.[9] Table 8 reports group means of the explanatory variables for all white male-, African-American- and Hispanic firm owners whose loan applications were accepted; for owners whose applications for line-of-credit loans to banks and to other lenders were accepted, respectively; and for owners whose loan applications for transaction loans to banks and to other lenders were accepted, respectively. For each loan type and lender type combination, asterisks denote the African-American and Hispanic group means that differ significantly from the group means for white male-owned firms at the 1 percent, 5 percent and 10 percent significance levels, as judged by t-statistics.

The preponderance of evidence fails to reject hypothesis H10 for African-American and Hispanic firm owners. Very few of the group-mean characteristics for African-American and Hispanic firm owners differ statistically from the characteristics for white male firm owners at the 10 percent level or better: only 60 of the possible 306 group means, or 20 percent. Of these 60, only 14 group means represent characteristics that significantly reduce the probability of loan denial, as determined by the coefficient estimates in Tables 5 and 6; the remaining 46 group means represent characteristics that either have no statistically discernible effect on loan denial

[9] A similar investigation for Asian- and female-owned firms failed to reject hypothesis H 10.

probabilities or represent characteristics that increase the probability of loan denial.[10] Hence we fail to reject hypothesis H10 and conclude that lenders do not appear to require superior attributes from ethnic minority firm owners to be induced to lend.

VI. Summary and Conclusion

Researchers have long been concerned about potentially discriminatory lending practices in the market for small business loans. Previous researchers have sought to confirm or deny the existence of discriminatory practices by using econometric tools to analyze outstanding loans, interest rates on new loans, and loan denial decisions. Although researchers have generally found evidence consistent with statistical discrimination, they have been hesitant to declare this evidence consistent with prejudicial discrimination due to limitations in their data. Specifically, researchers have found evidence in the pattern of outstanding loans suggesting discrimination against African-American and Hispanic firm owners (Cavalluzzo and Cavalluzzo (1998)). Researchers have also found some evidence that African-American, Hispanic, and Asian firm owners pay higher interest rates on small business loans, although the evidence is conflicting (Cavalluzo and Cavalluzo (1998), Cavalluzo, Cavalluzo and Wolken (2002), and Blanchflower, Levine and Zimmerman (2003)). Moreover, researchers have found that lenders are less likely to

[10] Eight of these 14 group means represent superior characteristics exhibited by African-American firm owners: a greater ownership share among firms applying for bank lines of credit (OWNSHR); a lower fraction of family-owned businesses among firms applying for transaction loans from banks and credit lines from nonbank lenders (FAMILY); greater average use of business credit cards among firms applying for nonbank credit lines (USEBUSCC); and greater average return on equity (ROA) and numbers of financial relationship (NUMRELATIONS) among firms applying for both credit lines and transaction loans from nonbanks. The 6 superior characteristics of Hispanic firm owners include a lower fraction of delinquent business payments among all successful loan applicants and among applicants for transaction loans from banks (BUSPAYLATE); and significantly shorter-lived relationships with the lenders applied to for all loans, bank credit lines, transaction loans to banks, and transaction loans to nonbanks.

approve new loans to African-American firm owners, Hispanic firm owners and, sometimes, Asian firm owners.

This study has sought to contribute to the literature on discriminatory lending practices by proposing a different econometric approach. Specifically, we proposed models of the probability that small business owners have outstanding loans and have applications for new loans denied, disaggregated by loan type (relationship loan versus transaction loan) and by lender type (banks and nonbanks). Our approach is inspired by the literature on the microeconomics of lending decisions. We explore the possibility that testing for evidence of discrimination at the aggregate level may fail to provide useful information because loans are dissimilar, being subject to different degrees of competitive market forces, and the lenders themselves differ in their ability and willingness to produce loans of different types. We estimated our models on data from a newer, more powerful data set, the 1998 SSBF.

Our results point towards several conclusions.

First, our results show the merits of disaggregating by loan type and lender type. No previous researchers of which we are aware have disaggregated their data or introduced variables that provide insights beneath the aggregate level, due to small sample sizes.[11] When we estimate a model of the probability of having an outstanding loan on aggregate data and use MINORITY as our indicator of ethnicity, we find that its estimated coefficient is statistically insignificant; but when we disaggregate outstanding loans by loan type and lender type and re-estimate, we find that ethnic minority firm owners are *more* likely to have transaction loans from nonbanks and *less* likely to have bank loans of any kind (Table 4, Panel B). When we replace MINORITY with individual ethnicity indicators and estimate the model of outstanding loans on loans for each loan

[11] Cavalluzzo, Cavalluzzo and Wolken (2002) come closest to disaggregating the data: in investigating possibly higher interest rates charged to female- and minority firm owners they estimate interest rate models on data for line-of-credit loans.

type and lender type combination, we find that the evidence of discrimination is not uniform across loan type and lender type. Similar statements apply when we estimate models of loan denial but allow the coefficient estimates of the ethnicity indicators to vary with loan type and lender type: we find the evidence of discrimination is not uniform (Tables 5 and 6). While one could argue that the results from the models of loan denials are weak because they reflect small sample sizes, the samples involving outstanding loans are not particularly small, having 3,485 observations.

Second, our results show that for our loan denial models estimated on the 1998 SSBF, the sample selection problem is present; hence joint estimation of a loan denial model with a loan application model is warranted. Cavalluzzo, Cavalluzzo, and Wolken (2002) also estimated loan denial models singly and jointly, but did not find much difference between the estimated coefficients of the two models.[12] When we estimated our loan denial model singly, we found that African-American and Hispanic firm owners face significantly greater loan denial probabilities than white male firm owners on both kinds of bank loans, and that Hispanic firm owners face greater loan denial probabilities on transaction loans from nonbanks. But when we estimated the loan denial equation jointly with the loan application equation, we found greater loan denial probabilities for African-American and Hispanic firm owners on transaction loans from both types of lenders. We also found that the joint estimation procedure produced substantially higher estimates of the economic impacts of statistical discrimination than did the single equation procedure.

Third, the preponderance of our evidence suggests that lenders do not artificially restrict the credit-market access of female and Asian firm owners: we could not reject any of the

[12] Cavalluzzo and Cavalluzzo (1998) and Cavalluzzo and Wolken (2002) also estimate their loan denial models jointly.

hypotheses H1 through H10 for females or Asians. This result is consistent with the findings of past research, which found little evidence of discrimination against female firm owners and inconsistent, weak evidence of discrimination against Asian firm owners. Our results solidify the earlier conclusions by verifying that the lack of evidence of discrimination against female and Asian firm owners at the aggregate level is not masking offsetting effects of discrimination at the disaggregate level.

Fourth, the preponderance of our evidence is consistent with prejudicial discrimination against African-American and Hispanic firm owners. While virtually all past research has likewise found evidence consistent with discriminatory lending practices against African-American and Hispanic firm owners, our contribution is to hint that discrimination may be specific to particular segments of the loan market rather than a general problem. In the case of outstanding loans, we show that African-American firm owners are less likely to have an outstanding loan of any kind (that is, we reject hypothesis H1, as have other researchers), but we also reject hypothesis H4 (not tested by other researchers), indicating that African-American firm owners are less likely to have an outstanding transaction loan from a bank. Consistent with this finding, our estimated loan denial models reject hypothesis H8 for African-American firm owners, indicating that banks are more likely to deny applications for transaction loans from African-American firm owners. Analogous statements apply to Hispanic firm owners. In addition, we find that nonbank lenders are more likely to deny applications for transaction loans from both African-American and Hispanic firm owners, a result not found in previous research.

Fifth, we find little evidence to suggest that discriminatory lending takes the form of lenders requiring firm owners in less preferred borrowers groups to exhibit superior owner and firm characteristics to secure a loan; that is, we fail to reject hypothesis H 10, that ethnic

minority firm owners whose loans are accepted have characteristics no more preferred than those of white male applicants. Our failure to reject hypothesis H 10 may be interpreted as evidence refuting discriminatory lending practices. Alternatively, our tests could fail to reject hypothesis H10 even with discrimination in lending if the distribution of the characteristics of owner and firm characteristics in the general population differs between majority firm owners and ethnic minority firm owners.

Finally, our empirical results suggest that preferential lending practices characterize the granting of transaction loans – especially transaction loans by banks – to a significantly greater degree than the granting of relationship loans. This is a curious and potentially important result. The received wisdom is that lenders make transaction loans on the basis of objective information but make relationship loans on the basis of soft information about informationally opaque firms that can only be gleaned through lenders' repeated interactions with their clients. A priori reasoning suggests that lenders should make decisions about transaction loans more impartially than decisions about relationship loans, and that greater competition in the market for transaction loans should eliminate discriminatory practices; yet the empirical evidence suggests that exactly the reverse is true. This finding has an interesting policy implication: that the efforts of larger banking institutions to economize on the costs of small business lending by moving toward transaction lending that uses cheaper-to-produce "hard" information could potentially lead to greater discrimination in lending, not less.

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Table 1. Borrowing Experiences of the Surveyed Firms by Demographic Group

Panel A: Outstanding Loans

These tables show the prevelance of loans at firms classified by the owner(s')'s demographic group. In each table the number in the lower right-hand cell is the fraction of firms having at least one outstanding loan of some kind. Loans are dichotomized by loan type (line-of-credit loan or other loan) and by lender type (bank lender or other lender). Among all the surveyed firms, for example, 56% had at least one outstanding loan in 1998 and 25% had a line-of-credit loan from a bank. Because firms may have several loans outstanding the sum of the four numbers in the upper left-hand portion of each table exceeds the number in the lower right-hand corner.

	All Firms (3,485 firms)			**Majority-Owned** (2,751 firms)			**Minority-Owned** (742 firms)		
Loan Type: / Loan Source:	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total
Bank	25%	25%		26%	27%		18% ***	16% ***	
Other Lender	5%	29%		5%	28%		4%	33% **	
Total			56%			57%			51% ***

	African-American-Owned (259 firms)			**Asian-Owned** (199 firms)			**Hispanic-Owned** (260 firms)			**Other Firms** (41 firms)		
Loan Type: / Loan Source:	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total
Bank	16% ***	14% ***		21%	16% ***		18% **	14% ***		18%	35%	
Other Lender	6%	36% **		2% *	27%		5%	36% **		2%	27%	
Total			49% *			47% ***			54%			56%

	Male-Owned (2,579 firms)			**Female-Owned** (906 firms)		
Loan Type: / Loan Source:	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total
Bank	27%	27%		19% †††	20% †††	
Other Lender	5%	30%		4%	26% ††	
Total			58%			51% †††

*** Statistically different from the percentage at majority-owned firms at the 1% level.
** Statistically different from the percentage at majority-owned firms at the 5% level.
* Statistically different from the percentage at majority-owned firms at the 10% level.

††† Statistically different from the percentage at male-owned firms at the 1% level.
†† Statistically different from the percentage at male-owned firms at the 5% level.

Table 1. Borrowing Experiences by Demographic Group, continued

Panel B: Most Recent Loan Applications of the Surveyed Firms

These tables show credit-seeking behavior of the surveyed firms, classified by the firm owner(s')'s demographic group. In each table the lower right-hand cell shows the fraction of firms that applied for a loan in 1998 which was subseqently either approved or denied. The remaining cells show the type of loan applied for and the lender applied to in the most recent loan application. Loans are dichotomized by loan type (line-of-credit loan or other loan) and by lender type (bank lender or other lender). For all firms, for example, 22% applied for some kind of loan and 6% applied to a bank for a line-of-credit loan. Because each firm reported applying for just one loan the four percentages in the upper left-hand portion of each table sum to the percentage in the lower right-hand corner. (Numbers may not add exactly due to rounding.)

	All Firms (3,485 firms)			**Majority-Owned** (2,751 firms)			**Minority-Owned** (742 firms)		
Loan Type: / Loan Source:	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total
Bank	6%	9%		6%	9%		8% ***	8%	
Other Lender	2%	5%		2%	5%		1%	5%	
Total			22%			22%			22%

	African-American-Owned (259 firms)			**Asian-Owned** (199 firms)			**Hispanic-Owned** (260 firms)			**Other Firms** (41 firms)		
Loan Type: / Loan Source:	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total
Bank	11% ***	8%		8%	5% **		7%	12%		5%	7%	
Other Lender	2%	4%		1%	6%		0% **	6%		2%	0%	
Total			23%			19%			25%			14%

	Male-Owned (2,579 firms)			**Female-Owned** (906 firms)		
Loan Type: / Loan Source:	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total
Bank	6%	9%		7%	8%	
Other Lender	2%	5%		2%	4% †	
Total			22%			21%

*** Statistically different from the percentage at majority-owned firms at the 1% level.
** Statistically different from the percentage at majority-owned firms at the 5% level.

† Statistically different from the percentage at male-owned firms at the 10% level.

Table 1. Borrowing Experiences by Demographic Group, continued

Panel C: Loan Denial Rates of the Surveyed Firms

These tables show loan denial rates for surveyed firms that applied for credit in 1998, classified by the firm owner(s')'s demographic group. In each table the lower right-hand cell shows the fraction of all loan applications denied. The remaining cells show the fraction of denied loan applications in each category. For all firms, for example, 21% of all loan applications were denied and 36% of all applications to banks for line-of-credit loans were denied. Because each cell in a table represents a different number of approved and denied loans the four numbers in the upper left-hand portion of the table do not sum to the number in the lower right-hand corner.

	All Firms (870 firms)			Majority-Owned (688 firms)			Minority-Owned (184 firms)		
Loan Type: / Loan Source:	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total
Bank	36%	14%		32%	9%		52% ***	52% ***	
Other Lender	32%	13%		30%	11%		56% ***	25% **	
Total			21%			17%			47% ***

	African-American-Owned (68 firms)			Asian-Owned (43 firms)			Hispanic-Owned (70 firms)			Other Firms (7 firms)		
Loan Type: / Loan Source:	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total
Bank	48%	56% ***		61% **	10%		39%	63% ***		100% **	0%	
Other Lender	89% *	47% **		45%	14%		NA	24%		0%	NA	
Total			53% ***			36% ***			47% ***			36%

	Male-Owned (662 firms)			Female-Owned (208 firms)		
Loan Type: / Loan Source:	Line of Credit	Other Loan	Total	Line of Credit	Other Loan	Total
Bank	32%	13%		45% ††	17%	
Other Lender	32%	15%		33%	4% †	
Total			20%			26% †

*** Statistically different from the percentage at majority-owned firms at the 1% level.
** Statistically different from the percentage at majority-owned firms at the 5% level.
* Statistically different from the percentage at majority-owned firms at the 10% level.

†† Statistically different from the percentage at male-owned firms at the 5% le
† Statistically different from the percentage at male-owned firms at the 10% le

Table 2. Variable Definitions

This table defines the variables shown in Tables 3-8. All the independent variables listed were used to estimate the regressions models reported in Tables 4-6 except for LOC, BANK, LNLENGTH, NORELATION, PRIMARY, and APPLY_N, which appear in the models having DENIED as the dependent variable.

Variable Type	Variable Name	Variable description
DEPENDENT VARIABLES	HAVELOAN	= 1 if firm has an outstanding loan
	HAVEOLOAN_OLENDER	= 1 if firm has a non-line-of-credit loan from a non-bank lender
	HAVELOC_OLENDER	= 1 if firm has a line-of-credit loan from a non-bank lender
	HAVEOLOAN_BANK	= 1 if firm has a non-line-of-credit loan from a bank lender
	HAVELOC_BANK	= 1 if firm has a line-of-credit loan from a bank lender
	APPLIED	= 1 if firm applied for a loan
	DENIED	= 1 if firm's most recent loan application was denied
INDEPENDENT VARIABLES		
Market Characteristics	HHI_MED	= 1 if the bank + S&L Herfindahl index for the firm's location ranges from 1000 to1799
	HHI_HIGH	= 1 if the bank + S&L Herfindahl index for the firm's location is 1800 or more
Owner Characteristics		
Race / Gender	MINORITY	= 1 if AFROAM, ASIAN, HISPANIC or OTHER =1
	AFROAM	= 1 if firm is at least 50% owned by African-Americans
	ASIAN	= 1 if firm is at least 50% owned by Asian-Americans
	HISPANIC	= 1 if firm is at least 50% owned by Hispanic-Americans
	OTHER	= 1 if firm is at least 50% owned by native Hawaiians, Alaskans, or Americans
	FEMALE	= 1 if firm is at least 50% owned by females
Education / Experience	POST_HS	= 1 if principal owner received some education beyond high school
	COLLEGE	= 1 if principal owner holds a college degree
	LNEXPER	= log of 1 + principal owner's years of business experience
Control / Wealth	OWNSHR	= percent of firm owned by principal owner
	OWNMGR	= 1 if principal owner manages the firm
	LNNETW	= log of principal owner's net worth
	FAMILY	= 1 if firm is more than 50% owned by a single family
Firm Characteristics		
Financial	LNASSETS	= log of firm's 1998 total assets
	LNSALES	= log of firm's 1998 sales revenue
	ROA	= firm's 1998 pre-tax profits / firm's 1998 total assets
	LNEQUITY	= log of firm's 1998 equity
	NEGEQ	= 1 if firm's 1998 equity is negative
Credit Record	BANKRUPT	= 1 if firm or principal owner declared bankruptcy in the last 7 years
	JUDGMENT	= 1 if legal judgement was made against principal owner in the last 3 years
	OWNPAYLATE	= 1 if principal owner of a proprietorship or partnership was delinquent on a financial obligation
	BUSPAYLATE	= 1 if firm was delinquent on a financial obligation, including trade credit
	HIGHRISK	= 1 if firm's Dun & Bradstreet credit rating is 4 or 5, the riskiest categories
	DENIEDTRCR	= 1 if firm was ever denied trade credit
Relationships	NUMRELATIONS	= number of sources of financial services used by firm
	LNLONGESTREL	= log of 1 + number of months in the firm's longest lived relationship with a financial institution
	LNPRIMARYREL	= log of 1 + number of months in the firm's relationship with its primary financial institution
	USETRCR	= 1 if firm used trade credit during fiscal year 1998
	USEOWNCC	= 1 if firm used owners' personal credit card for businesses expenses in 1998
	USEBUSCC	= 1 if firm used business or corporate credit cards for businesses expenses in 1998
Non-Financial	LNAGE	= log of 1 + firm's age, in years
	LNEMPLOYEES	= log of number of employees, including working owners
	LNLOCATIONS	= log of number of firm's locations
	CCORP	= 1 if firm is a C-corporation
	SCORP	= 1 if firm is an S-corporation
	NATIONAL	= 1 if firm's market is national or international
	MSA	= 1 if firm is located in a metropolitan area
Loan Application	LOC	= 1 if firm's most recent loan application was for a line-of-credit loan
	BANK	= 1 if firm's most recent loan application was to a commercial bank
	LNLENGTH	= log of 1 + number of months firm has had a relationship with the loan source applied to
	NORELATION	= 1 if the firm had no relationship with the loan source prior to the loan application
	PRIMARY	= 1 if loan source applied to is the firm's primary financial institution
Control Variables	APPLY_N	= 1 if loan was applied for in year N; N = 97, 98, 99 or 00
	REGION_N	= 1 if firm is headquartered in geographical region N; N = 1-9
	INDUSTRY_N	= 1 if firm is in industry N, based on its 2-digit SIC code; N = 1-9

Table 3. Univariate Statistics and T tests

This table presents mean values of the independent variables defined in Table 2 and used in the analyses reported in Tat 4 - 8. Means are reported for the entire sample and for firms classified by the owners(s')'s demographic group. Means were computed after first weighting the observations to correct for over-sampling of firms with selected characteristics in the 1998 SSBF. Asterisks and bold type denote means that differ from the means for majority-owned firms or male-owned firms at the 5% level or better as determined by t-tests.

Firms, by Owner Type:	All	Majority	Minority [1]	Afroam [1]	Asian [1]	Hispanic [1]	Other [1]	Male	Female [2]
Independent Variables:									
Market Characteristics									
HHI_MED	0.47	0.47	**0.43 ***	0.46	**0.36 ***	0.48	0.33	0.48	0.44
HHI_HI	0.35	0.36	**0.29 ***	0.34	**0.24 ***	**0.25 ***	0.49	0.34	0.38
Owner Characteristics									
Education / Experience									
POST_HS	0.28	0.28	0.28	**0.34 ***	**0.16 ***	0.28	**0.52 ***	0.27	**0.31 ***
COLLEGE	0.49	0.49	0.48	0.44	**0.69 ***	**0.39 ***	**0.30 ***	0.50	**0.44 ***
EXPER	18.21	18.76	**15.02 ***	**14.86 ***	**13.65 ***	**15.80 ***	18.60	19.37	**15.17 ***
Control / Wealth									
OWNSHR [3]	0.85	0.84	**0.88 ***	**0.94 ***	0.83	0.86	0.86	0.86	**0.81 ***
OWNMGR	0.92	0.92	0.94	0.94	0.91	0.94	1.00	0.92	0.93
NETW [4]	6.14	6.62	**3.33 ***	**2.37 ***	4.51	**2.60 ***	4.60	6.29	5.73
FAMILY	0.89	0.88	**0.91 ***	**0.93 ***	0.86	**0.94 ***	0.97	0.88	**0.91 ***
Firm Characteristics									
Financial									
ASSETS [4]	4.25	4.63	**2.01 ***	**1.19 ***	3.19	**1.69 ***	2.08	4.68	**2.60 ***
SALES [4]	10.06	10.95	**4.85 ***	2.94	7.20	4.34	5.24	11.51	**6.23 ***
ROA	46.38	52.32	11.47	2.82	2.62	24.05	8.67	57.24	17.74
EQUITY [4]	1.72	1.92	**0.54 ***	0.38	0.98	0.30	0.31	1.98	1.03
NEGEQ	0.22	0.22	0.21	0.23	**0.16 ***	0.23	0.21	0.22	0.23
Credit Record									
BANKRUPT	0.02	0.02	**0.04 ***	**0.06 ***	0.01	**0.05 ***	0.04	0.02	0.03
JUDGMENT	0.04	0.03	**0.06 ***	**0.09 ***	0.03	0.05	**0.14 ***	0.04	0.03
OWNPAYLATE	0.08	0.07	**0.13 ***	**0.21 ***	0.08	**0.12 ***	0.10	0.08	0.08
BUSPAYLATE	0.31	0.31	0.32	**0.38 ***	0.28	0.30	0.35	0.32	0.29
HIGHRISK	0.29	0.27	**0.37 ***	**0.44 ***	0.31	**0.38 ***	0.33	0.29	0.30
DENIEDTRCR	0.05	0.05	**0.08 ***	**0.11 ***	0.04	0.08	**0.12 ***	0.05	0.06
Relationships									
NUMRELATIONS	2.06	2.08	2.00	2.06	2.06	1.96	1.87	2.11	**1.96 ***
LONGESTREL [5]	9.29	9.58	**7.59 ***	**7.75 ***	**7.52 ***	**7.46 ***	8.24	9.78	**7.98 ***
PRIMARYREL [5]	7.64	7.89	**6.19 ***	**5.84 ***	**6.44 ***	**5.96 ***	7.59	7.99	**6.73 ***
USETRCR	0.63	0.65	**0.54 ***	**0.49 ***	0.59	**0.49 ***	0.72	0.65	**0.57 ***
USEOWNCC	0.46	0.46	0.46	0.45	0.52	0.43	0.48	0.46	0.48
USEBUSCC	0.34	0.35	**0.30 ***	0.30	0.31	0.30	0.19	0.36	**0.31 ***
Non-Financial									
AGE [5]	13.39	13.85	**10.77 ***	**11.20 ***	**9.83 ***	**11.05 ***	11.05	14.17	**11.34 ***
EMPLOYEES	8.72	9.15	**6.20 ***	**5.22 ***	6.94	6.22	8.60	9.49	**6.88 ***
LOCATIONS	1.38	1.41	1.21	1.30	1.22	1.13	1.25	1.46	1.17
CCORP	0.20	0.21	**0.15 ***	**0.13 ***	0.17	**0.16 ***	0.09	0.20	0.19
SCORP	0.24	0.24	0.23	0.24	0.24	0.21	0.30	0.25	0.24
NATIONAL	0.14	0.14	0.16	0.13	**0.21 ***	0.14	0.16	0.14	0.13
MSA	0.80	0.78	**0.89 ***	**0.88 ***	**0.93 ***	**0.92 ***	**0.85 ***	0.80	0.80
Loan Application									
LENGTH [6]	5.24	5.53	**3.53 ***	5.06	3.64	**2.50 ***	3.85	5.40	4.81
NORELATION	0.27	0.25	**0.35 ***	0.33	0.34	**0.38 ***	0.00	0.26	0.29
PRIMARY	0.51	0.52	0.46	0.51	0.45	0.43	0.65	0.51	0.51
Number of Observations									
Characteristics	3485	2751	742	259	199	260	41	2579	906
Loan Application	870	688	184	68	43	70	7	662	208

Notes:

[1] Asterisk denotes a mean statistically different from the mean for majority-owned firms at the 5% level or better.

[2] Asterisk denotes a mean statistically different from the mean for all male-owned firms at the 5% level or better.

[3] Percent, in decmial form.

[4] Expressed in hundreds of thousands of dollars.

[5] Expressed in years.

Table 4. Probability of Having an Outstanding Loa

This table presents econometric evidence on the probability that a firm-owner has an outstanding loan. Panel A presents estimated probit models. In all ten estimated models are presented. The dependent variables are the probability that a firm-owner has any kind of loan outstanding (equations 4.1 and 4.2), has a traditional loan from a non-bank lender (equations 4.3 and 4.4), has a line of credit from a non-bank lender (equations 4.5 and 4.6), has a traditional loan from a bank (equations 4.7 and 4.8), and has a line of credit from a bank (equations 4.9 and 4.10). The independent variables are defined in Table 2. Estimated coefficients are presented along with standard errors, which appear in parentheses beneath the coefficient estimates. In addition to the independent variables listed below both models include 8 binary variables to control for the geographical location of a firm's headquarters and 8 binary variables to control for the firm's industry grouping. Panel B presents F tests of restrictions on the estimated coefficients in Panel A.

Panel A: Regression Model Estimates

DEPENDENT VARIABLE	Probability (HAVELOAN = 1)		Probability (HAVEOLOAN_OLENDER = 1)		Probability (HAVELOC_OLENDER = 1)	
(Equation number)	(4.1)	(4.2)	(4.3)	(4.4)	(4.5)	(4.6)
INDEPENDENT VARIABLES						
Market Characteristics						
HHI_MED	0.069 (0.116)	0.064 (0.116)	0.256 ** (0.118)	0.245 ** (0.118)	0.050 (0.124)	0.060 (0.124)
HHI_HIGH	-0.059 (0.125)	-0.066 (0.126)	0.067 (0.131)	0.051 (0.130)	0.048 (0.138)	0.053 (0.139)
Owner Characteristics						
Race / Gender						
FEMALE	-0.128 (0.178)	-0.128 (0.180)	-0.165 (0.167)	-0.160 (0.167)	0.066 (0.211)	0.066 (0.213)
FEMALE * HHI_MED	-0.110 (0.209)	-0.119 (0.211)	0.080 (0.220)	0.060 (0.220)	-0.379 (0.254)	-0.376 (0.256)
FEMALE * HHI_HIGH	0.124 (0.211)	0.122 (0.213)	0.001 (0.226)	0.004 (0.227)	-0.250 (0.256)	-0.222 (0.257)
MINORITY	-0.044 (0.156)		0.415 ** (0.165)		-0.097 (0.174)	
MINORITY * HHI_MED	0.127 (0.190)		-0.296 (0.196)		0.142 (0.210)	
MINORITY * HHI_HIGH	-0.079 (0.200)		-0.165 (0.211)		-0.023 (0.241)	
AFROAM		-0.629 ** (0.287)		0.497 (0.253)		0.172 (0.276)
AFROAM * HHI_MED		0.945 *** (0.350)		-0.157 (0.302)		-0.249 (0.332)
AFROAM * HHI_HIGH		0.457 (0.335)		-0.044 (0.313)		-0.321 (0.363)
ASIAN		0.331 (0.223)		0.414 (0.264)		-0.306 (0.248)
ASIAN * HHI_MED		-1.174 *** (0.296)		-0.759 ** (0.325)		0.160 (0.317)
ASIAN * HHI_HIGH		-0.806 ** (0.353)		-0.575 * (0.348)		0.182 (0.365)
HISPANIC		-0.313 * (0.180)		0.318 (0.245)		0.082 (0.258)
HISPANIC * HHI_MED		0.594 ** (0.242)		-0.157 (0.286)		0.089 (0.310)
HISPANIC * HHI_HIGH		0.506 * (0.276)		0.228 (0.306)		-0.016 (0.376)
OTHER		0.213 (0.650)		-1.156 ** (0.579)		-0.481 (0.496)
OTHER * HHI_MED		0.801 (0.800)		1.754 ** (0.710)		0.975 (0.649)
OTHER * HHI_HIGH		-0.286 (0.712)		1.093 (0.777)		0.132 (0.753)
Education / Experience						
POST_HS	-0.001 (0.087)	-0.001 (0.088)	-0.110 (0.091)	-0.113 (0.091)	0.002 (0.105)	0.000 (0.105)
COLLEGE	-0.162 * (0.085)	-0.158 * (0.086)	-0.277 *** (0.091)	-0.270 *** (0.092)	-0.137 (0.099)	-0.126 (0.100)
UNEXPER	-0.043 (0.050)	-0.049 (0.050)	0.066 (0.059)	0.066 (0.059)	-0.058 (0.068)	-0.060 (0.068)
Control / Wealth						
OWNSHR	-0.003 (0.002)	-0.003 (0.002)	0.000 (0.002)	0.000 (0.002)	-0.002 (0.002)	-0.002 (0.002)
OWNMGR	-0.087 (0.126)	-0.091 (0.125)	0.196 (0.126)	0.197 (0.127)	0.177 (0.117)	0.180 (0.117)
UNNETW	0.002 (0.015)	0.000 (0.015)	-0.039 *** (0.015)	-0.040 *** (0.015)	0.024 (0.016)	0.025 (0.016)
FAMILY	0.138 (0.130)	0.132 (0.132)	0.201 * (0.118)	0.193 (0.119)	0.178 (0.119)	0.170 (0.120)

Table 4. Probability of Having an Outstanding Loan, continue

Panel A: Regression Model Estimates, continued

DEPENDENT VARIABLE	Probability (HAVE_LOAN = 1)		Probability (HAVE_OLOAN_OLENDER = 1)		Probability (HAVE_LOC_OLENDER = 1)	
(Equation number)	(4.1)	(4.2)	(4.3)	(4.4)	(4.5)	(4.6)
INDEPENDENT VARIABLES						
Firm Characteristics						
Financial						
LNASSETS	0.232 ***	0.238 ***	0.097 ***	0.102 ***	0.121 ***	0.123 ***
	(0.038)	(0.039)	(0.031)	(0.031)	(0.040)	(0.040)
LNSALES	0.012	0.015	-0.031 *	-0.029	-0.033	-0.034
	(0.020)	(0.020)	(0.018)	(0.018)	(0.023)	(0.024)
ROA	0.000	0.000 **	0.000 ***	0.000 ***	0.000 ***	0.000 ***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LNEQUITY	-0.099 ***	-0.106 ***	-0.021	-0.026	-0.063 *	-0.063 *
	(0.037)	(0.038)	(0.030)	(0.030)	(0.035)	(0.035)
NEGEQ	-0.144	-0.216	0.275	0.205	-0.604	-0.606
	(0.365)	(0.372)	(0.307)	(0.310)	(0.387)	(0.389)
Credit Record						
BANKRUPT	-0.326	-0.362 *	-0.039	-0.076	-1.000 ***	-1.028 ***
	(0.205)	(0.210)	(0.230)	(0.230)	(0.336)	(0.326)
JUDGMENT	-0.232	-0.246	-0.329 *	-0.339 *	-0.031	-0.033
	(0.171)	(0.172)	(0.194)	(0.195)	(0.191)	(0.192)
OWNPAYLATE	0.089	0.082	0.009	0.007	-0.029	-0.030
	(0.131)	(0.132)	(0.128)	(0.129)	(0.165)	(0.166)
BUSPAYLATE	-0.086	-0.092	-0.022	-0.029	0.074	0.071
	(0.080)	(0.081)	(0.078)	(0.078)	(0.083)	(0.083)
HIGHRISK	0.098	0.090	0.108	0.098	0.044	0.039
	(0.072)	(0.072)	(0.073)	(0.073)	(0.079)	(0.079)
DENIEDTRCR	0.019	0.025	0.225	0.240 *	0.136	0.142
	(0.148)	(0.150)	(0.142)	(0.143)	(0.149)	(0.150)
Relationships						
NUMRELATIONS	0.740 ***	0.750 ***	0.759 ***	0.759 ***	0.352 ***	0.353 ***
	(0.046)	(0.047)	(0.037)	(0.037)	(0.033)	(0.033)
LNLONGESTREL	0.237 ***	0.225 ***	0.204 ***	0.202 ***	0.118 *	0.118 *
	(0.058)	(0.058)	(0.065)	(0.065)	(0.061)	(0.061)
LNPRIMARYREL	-0.191 ***	-0.178 ***	-0.125 **	-0.119 **	-0.085 *	-0.085 *
	(0.062)	(0.062)	(0.058)	(0.058)	(0.051)	(0.051)
USETRCR	0.090	0.086	-0.138 *	-0.139 *	0.129	0.135
	(0.076)	(0.077)	(0.081)	(0.081)	(0.095)	(0.095)
USEOWNCC	-0.013	-0.007	0.080	0.081	0.029	0.031
	(0.068)	(0.068)	(0.068)	(0.068)	(0.077)	(0.077)
USEBUSCC	0.312 ***	0.325 ***	0.200 ***	0.199 ***	0.356 ***	0.353 ***
	(0.074)	(0.074)	(0.072)	(0.072)	(0.074)	(0.074)
Non-Financial						
LNAGE	-0.064	-0.062	-0.250 ***	-0.257 ***	-0.020	-0.022
	(0.050)	(0.050)	(0.050)	(0.050)	(0.057)	(0.057)
LNEMPLOYEES	0.149 ***	0.155 ***	0.048	0.048	0.125 ***	0.124 ***
	(0.040)	(0.041)	(0.040)	(0.040)	(0.042)	(0.043)
LNLOCATIONS	-0.158	-0.163	-0.163 *	-0.159 *	-0.240 ***	-0.238 ***
	(0.105)	(0.106)	(0.093)	(0.093)	(0.089)	(0.089)
CCORP	-0.358 ***	-0.368 ***	-0.103	-0.100	-0.245 **	-0.244 **
	(0.103)	(0.103)	(0.100)	(0.100)	(0.102)	(0.102)
SCORP	-0.227 **	-0.241 ***	-0.096	-0.098	-0.026	-0.027
	(0.091)	(0.092)	(0.091)	(0.092)	(0.098)	(0.098)
NATIONAL	-0.034	-0.040	-0.147	-0.151	-0.007	-0.005
	(0.099)	(0.100)	(0.096)	(0.096)	(0.111)	(0.111)
MSA	-0.241 ***	-0.242 ***	0.019	0.015	-0.095	-0.096
	(0.086)	(0.086)	(0.092)	(0.092)	(0.102)	(0.102)
CONSTANT	-2.953 ***	-2.925 ***	-2.608 ***	-2.584 ***	-2.797 ***	-2.840 ***
	(0.420)	(0.423)	(0.390)	(0.391)	(0.424)	(0.426)
Number of observations	3485	3485	3485	3485	3485	3485

*** Statistically different from zero at the 1% level for a two-tailed test.
** Statistically different from zero at the 5% level for a two-tailed test.
* Statistically different from zero at the 10% level for a two-tailed test.

Table 4. Probability of Having an Outstanding Loan, continuec

Panel A: Regression Model Estimates, continued

DEPENDENT VARIABLE	Probability (HAVEOLOAN_BANK = 1)		Probability (HAVELOC_BANK = 1)	
(Equation number)	(4.7)	(4.8)	(4.9)	(4.10)
INDEPENDENT VARIABLES				
Market Characteristics				
HHI_MED	-0.127 (0.104)	-0.127 (0.104)	0.053 (0.102)	0.058 (0.102)
HHI_HIGH	-0.131 (0.116)	-0.129 (0.116)	-0.069 (0.115)	-0.066 (0.115)
Owner Characteristics				
Race / Gender				
FEMALE	-0.304 (0.192)	-0.303 (0.193)	-0.240 (0.168)	-0.241 (0.168)
FEMALE * HHI_MED	0.090 (0.220)	0.090 (0.221)	-0.061 (0.204)	-0.058 (0.204)
FEMALE * HHI_HIGH	0.266 (0.224)	0.281 (0.226)	0.098 (0.204)	0.101 (0.204)
MINORITY	-0.281 * (0.162)		-0.244 * (0.147)	
MINORITY * HHI_MED	0.276 (0.194)		0.229 (0.184)	
MINORITY * HHI_HIGH	0.116 (0.208)		0.088 (0.197)	
AFROAM		-0.597 ** (0.291)		-0.300 (0.273)
AFROAM * HHI_MED		0.310 (0.334)		0.369 (0.338)
AFROAM * HHI_HIGH		0.100 (0.358)		0.004 (0.352)
ASIAN		-0.041 (0.217)		-0.071 (0.210)
ASIAN * HHI_MED		-0.238 (0.293)		-0.211 (0.284)
ASIAN * HHI_HIGH		0.061 (0.328)		0.094 (0.312)
HISPANIC		-0.549 ** (0.245)		-0.311 (0.229)
HISPANIC * HHI_MED		0.677 ** (0.287)		0.371 (0.277)
HISPANIC * HHI_HIGH		0.399 (0.330)		0.223 (0.313)
OTHER		0.467 (0.642)		-0.378 (0.457)
OTHER * HHI_MED		0.541 (0.816)		0.400 (0.610)
OTHER * HHI_HIGH		-0.228 (0.707)		0.166 (0.560)
Education / Experience				
POST_HS	-0.094 (0.086)	-0.100 (0.087)	0.139 (0.080)	0.140 (0.080)
COLLEGE	-0.215 ** (0.084)	-0.219 ** (0.085)	-0.054 (0.065)	-0.053 (0.066)
LNEXPER	-0.044 (0.058)	-0.049 (0.058)	-0.117 ** (0.058)	-0.116 ** (0.058)
Control / Wealth				
OWNSHR	-0.002 (0.002)	-0.002 (0.002)	-0.001 (0.002)	-0.001 (0.002)
OWNMGR	-0.072 (0.110)	-0.079 (0.111)	0.117 (0.107)	0.114 (0.107)
LNNETW	0.002 (0.014)	0.003 (0.014)	0.062 *** (0.017)	0.062 *** (0.017)
FAMILY	-0.053 (0.110)	-0.054 (0.110)	0.119 (0.109)	0.111 (0.110)

Table 4. Probability of Having an Outstanding Loan, continuec

Panel A: Regression Model Estimates, continued

DEPENDENT VARIABLE	Probability (HAVE_OLOAN_BANK = 1)		Probability (HAVE_LOC_BANK = 1)	
(Equation number)	(4.7)	(4.8)	(4.9)	(4.10)
INDEPENDENT VARIABLES				
Firm Characteristics				
Financial				
LNASSETS	0.286 ***	0.290 ***	0.178 ***	0.179 ***
	(0.041)	(0.041)	(0.036)	(0.036)
LNSALES	0.025	0.024	0.049 *	0.049 *
	(0.022)	(0.022)	(0.028)	(0.027)
ROA	0.000 **	0.000 **	0.000 ***	0.000 ***
	(0.000)	(0.000)	(0.000)	(0.000)
LNEQUITY	-0.139 ***	-0.141 ***	-0.072 **	-0.072 **
	(0.035)	(0.035)	(0.032)	(0.032)
NEGEQ	-0.934 **	-0.956 ***	-0.464	-0.485
	(0.373)	(0.371)	(0.349)	(0.349)
Credit Record				
BANKRUPT	-0.332	-0.351	-0.776 ***	-0.784 ***
	(0.224)	(0.231)	(0.277)	(0.277)
JUDGMENT	-0.153	-0.175	0.203	0.208
	(0.162)	(0.160)	(0.160)	(0.161)
OWNPAYLATE	0.022	0.025	-0.051	-0.054
	(0.133)	(0.124)	(0.143)	(0.144)
BUSPAYLATE	0.155 **	0.159 ***	-0.004	-0.006
	(0.073)	(0.073)	(0.072)	(0.072)
HIGHRISK	0.080	0.082	-0.014	-0.015
	(0.068)	(0.068)	(0.069)	(0.069)
DENIEDTRCR	-0.074	-0.071	0.039	0.034
	(0.132)	(0.133)	(0.132)	(0.133)
Financial				
NUMRELATIONS	0.308 ***	0.311 ***	0.055 **	0.056 **
	(0.029)	(0.029)	(0.024)	(0.025)
LNLONGESTREL	0.105 *	0.106 *	0.174 ***	0.171 ***
	(0.057)	(0.058)	(0.056)	(0.056)
LNPRIMARYREL	-0.053	-0.053	-0.099 **	-0.095 **
	(0.049)	(0.049)	(0.047)	(0.047)
USETRCR	0.124	0.111	0.208 ***	0.211 ***
	(0.077)	(0.077)	(0.076)	(0.076)
USEOWNCC	-0.066	-0.068	0.095	0.097
	(0.063)	(0.063)	(0.064)	(0.064)
USEBUSCC	0.108	0.111 *	0.373 ***	0.370 ***
	(0.066)	(0.067)	(0.066)	(0.066)
Non-Financial				
LNAGE	-0.008	-0.006	0.057	0.056
	(0.045)	(0.045)	(0.047)	(0.047)
LNEMPLOYEES	0.050	0.054	0.126 ***	0.127 ***
	(0.038)	(0.038)	(0.039)	(0.039)
LNLOCATIONS	-0.221 ***	-0.221 ***	-0.105	-0.105
	(0.083)	(0.083)	(0.079)	(0.079)
CCORP	-0.259 ***	-0.253 ***	0.017	0.017
	(0.090)	(0.090)	(0.093)	(0.093)
SCORP	-0.144 *	-0.146 *	0.020	0.019
	(0.085)	(0.085)	(0.087)	(0.087)
NATIONAL	-0.124	-0.134	0.086	0.081
	(0.092)	(0.092)	(0.091)	(0.091)
MBA	-0.336 ***	-0.336 ***	-0.023	-0.024
	(0.082)	(0.083)	(0.086)	(0.086)
CONSTANT	-2.971 ***	-2.984 ***	-4.188 ***	-4.199 ***
	(0.369)	(0.380)	(0.429)	(0.429)
Number of observations	3485	3485	3485	3485

*** Statistically different from zero at the 1% level for a two-tailed test.
** Statistically different from zero at the 5% level for a two-tailed test.
* Statistically different from zero at the 10% level for a two-tailed test.

Table 4. Probability of Having an Outstanding Loan, continued

Panel B: Hypothesis Tests

	T STATISTIC t (1, 3484)									
(Equation number)	(4.1)	(4.2)	(4.3)	(4.4)	(4.5)	(4.6)	(4.7)	(4.8)	(4.9)	(4.10)
HYPOTHESIS :	H 1: All else equal, the probability of having at least one outstanding loan is identical for race/gender minority-owned firms and majority-owned firms.		H 2: All else equal, the probability of having an outstanding non-line-of-credit loan from a non-bank lender is identical for race/gender minority-owned firms and majority-owned firms.		H 3: All else equal, the probability of having an outstanding line-of-credit loan from a non-bank lender is identical for race/gender minority-owned firms and majority-owned firms.		H 4: All else equal, the probability of having an outstanding non-line-of-credit loan from a bank lender is identical for race/gender minority-owned firms and majority-owned firms.		H 5: All else equal, the probability of having an outstanding line-of-credit loan from a bank lender is identical for race/gender minority-owned firms and majority-owned firms.	
FEMALE = 0	-0.72	-0.71	-0.88	-0.85	0.42	0.40	-1.58	-1.57	-1.43	-1.43
MINORITY = 0	-0.28		2.52 **		-0.56		-1.74 *		-1.66 *	
AFROAM = 0		-2.19 **		1.60		0.62		-2.08 **		-1.10
ASIAN = 0		1.48		1.63		-1.23		-0.19		-0.34
HISPANIC = 0		-1.65 *		1.30		0.32		-2.24 **		-1.36
OTHER = 0		0.33		-2.00 **		-0.97		0.73		-0.83

*** The t-statistic rejects the restriction at the 1% level.
** The t-statistic rejects the retsriction at the 5% level.
* The t-statistic rejects the restriction at the 10% level.

Table 5. Probability of Loan Denial Given Loan Application

This table presents econometric evidence on the probability that a firm-owner is denied a loan given that the owner applied for a loan. Panel A presents estimated probit models. The dependent variable is the probability the loan is denied. The independent variables are defined in Table 2. Estimated coefficients are presented along with standard errors, which appear in parentheses beneath the coefficient estimates. In addition to the independent variables listed below both models include 4 binary variables to control for the year in which the business owner applied, 8 binary variables to control for the geographical location of a firm's headquarters, and 8 binary variables to control for the firm's industry grouping. Panel B presents F tests of restrictions on the estimated coefficients in Panel A.

Panel A: Regression Model Estimates

DEPENDENT VARIABLE		Probability (Denied = 1)	
	(Equation number)	(5.1)	(5.2)
INDEPENDENT VARIABLES			
Market Characteristics			
	HHI_MED	0.880 ***	0.850 ***
		(0.284)	(0.284)
	HHI_HIGH	0.876 ***	0.867 ***
		(0.297)	(0.296)
Loan Application			
	LNLENGTH	0.327 ***	0.306 ***
		(0.084)	(0.087)
	NORELATION	1.275 ***	1.204 ***
		(0.350)	(0.360)
	PRIMARY	-0.723 ***	-0.717 ***
		(0.199)	(0.204)
	LOC	0.940 ***	0.934 ***
		(0.192)	(0.195)
	BANK	-0.022	-0.046
		(0.245)	(0.250)
Owner Characteristics			
Race / Gender			
	FEMALE	-0.377	-0.817
		(0.539)	(0.538)
	FEMALE * HHI_MED	-0.489	-0.262
		(0.522)	(0.545)
	FEMALE * HHI_HIGH	-0.146	0.068
		(0.482)	(0.495)
	FEMALE * LOC	0.431	0.455
		(0.358)	(0.362)
	FEMALE * BANK	0.497	0.802 **
		(0.405)	(0.401)
	MINORITY	0.864 **	
		(0.428)	
	MINORITY * HHI_MED	-0.767 *	
		(0.430)	
	MINORITY * HHI_HIGH	0.177	
		(0.430)	
	MINORITY * LOC	-1.214 ***	
		(0.336)	
	MINORITY * BANK	1.281 ***	
		(0.404)	
	AFROAM		1.704
			(1.061)
	AFROAM * HHI_MED		-0.957
			(0.791)
	AFROAM * HHI_HIGH		0.108
			(0.864)
	AFROAM * LOC		-0.703
			(0.620)
	AFROAM * BANK		0.225
			(0.828)
	ASIAN		-0.101
			(0.662)
	ASIAN * HHI_MED		1.149
			(0.959)
	ASIAN * HHI_HIGH		0.675
			(0.672)
	ASIAN * LOC		0.333
			(0.581)
	ASIAN * BANK		-0.328
			(0.829)
	HISPANIC		1.516 ***
			(0.508)
	HISPANIC * HHI_MED		-1.787 ***
			(0.503)
	HISPANIC * HHI_HIGH		-0.841
			(0.583)
	HISPANIC * LOC		-1.963 ***
			(0.503)
	HISPANIC * BANK		1.494 ***
			(0.554)

Table 5. Probability of Loan Denial Given Loan Application, continued

Panel A: Regression Model Estimates, continued

DEPENDENT VARIABLE	Probability (Denied = 1)	
(Equation number)	(1)	(2)
INDEPENDENT VARIABLES		
Education / Experience		
POST_HS	-0.232 (0.206)	-0.253 (0.210)
COLLEGE	-0.151 (0.202)	-0.146 (0.209)
LNEXPER	0.024 (0.154)	0.121 (0.159)
Control / Wealth		
OWNSHR	-0.007 (0.004)	-0.008 * (0.004)
OWNMGR	-0.555 ** (0.243)	-0.638 *** (0.247)
LNNETW	-0.110 *** (0.036)	-0.106 *** (0.036)
FAMILY	0.728 ** (0.287)	0.885 *** (0.319)
Firm Characteristics		
Financial		
LNASSETS	-0.070 (0.076)	-0.093 (0.080)
LNSALES	-0.002 (0.044)	-0.007 (0.047)
ROA	-0.030 *** (0.011)	-0.030 *** (0.010)
LNEQUITY	0.006 (0.074)	0.021 (0.077)
NEGEQ	0.085 (0.770)	0.190 (0.793)
Credit Record		
BANKRUPT	2.841 *** (0.417)	2.859 *** (0.436)
JUDGMENT	0.736 ** (0.319)	0.718 ** (0.324)
OWNPAYLATE	1.449 *** (0.252)	1.495 *** (0.262)
BUSPAYLATE	0.811 *** (0.179)	0.858 *** (0.188)
HIGHRISK	-0.028 (0.167)	-0.036 (0.170)
DENIEDTRCR	0.637 *** (0.234)	0.637 *** (0.241)
Relationships		
NUMRELATIONS	-0.069 (0.063)	-0.086 (0.066)
LNLONGESTREL	-0.145 (0.119)	-0.143 (0.121)
LNPRIMARYREL	0.054 (0.095)	0.053 (0.098)
USETRCR	-0.212 (0.196)	-0.174 (0.200)
USEOWNCC	0.132 (0.161)	0.133 (0.165)
USEBUSCC	-0.307 * (0.169)	-0.331 * (0.172)
Non-Financial		
LNAGE	-0.249 ** (0.113)	-0.302 ** (0.116)
LNEMPLOYEES	0.059 (0.102)	0.054 (0.104)
LNLOCATIONS	0.138 (0.191)	0.191 (0.193)
CCORP	-0.124 (0.240)	-0.166 (0.252)
SCORP	0.084 (0.202)	0.042 (0.210)
NATIONAL	0.456 ** (0.210)	0.470 ** (0.211)
MSA	0.326 (0.210)	0.352 (0.215)
CONSTANT	-0.355 (1.182)	0.205 (1.200)
Number of observations	863	863

*** Statistically different from zero at the 1% level for a two-tailed test.
** Statistically different from zero at the 5% level for a two-tailed test.
* Statistically different from zero at the 10% level for a two-tailed test.

Table 5. Probability of Loan Denial Given Loan Application, continued

Panel B: Hypothesis Tests

HYPOTHESIS (Equation number)	F STATISTIC F (1, 862) (5.1)	(5.2)
H 6: All else equal, non-bank lenders deny non-line-of-credit loan applications at identical rates for race/gender minority-owned firms and majority-owned		
FEMALE = 0	0.49	2.31
MINORITY = 0	4.08 **	
AFROAM = 0		2.58
ASIAN = 0		0.02
HISPANIC = 0		8.91 ***
H 7: All else equal, non-bank lenders deny line-of-credit loan applications at identical rates for race/gender minority-owned firms and majority-owned		
FEMALE + FEMALE * LOC = 0	0.01	0.44
MINORITY+ MINORITY * LOC = 0	0.60	
AFROAM + AFROAM * LOC = 0		1.14
ASIAN + ASIAN * LOC = 0		0.12
HISPANIC + HISPANIC * LOC = 0		0.45
H 8: All else equal, bank lenders deny non-line-of-credit loan applications at identical rates for race/gender minority-owned firms and majority-owned		
FEMALE + FEMALE * BANK = 0	0.06	0.00
MINORITY+ MINORITY * BANK = 0	26.71 ***	
AFROAM + AFROAM * BANK = 0		4.45 **
ASIAN + ASIAN * BANK = 0		0.30
HISPANIC + HISPANIC * BANK = 0		36.82 ***
H 9: All else equal, bank lenders deny line-of-credit loan applications at identical rates for race/gender minority-owned firms and majority-owned firms.		
FEMALE + FEMALE * LOC + FEMALE * BANK = 0	1.32	0.81
MINORITY+ MINORITY * LOC + MINORITY * BANK = 0	6.70 ***	
AFROAM + AFROAM * LOC + AFROAM * BANK = 0		3.82 *
ASIAN + ASIAN * LOC + ASIAN * BANK = 0		0.02
HISPANIC + HISPANIC * LOC + HISPANIC * BANK = 0		5.28 **

*** The F-statistic rejects the restriction at the 1% level.
** The F-statistic rejects the restriction at the 5% level.
* The F-statistic rejects the restriction at the 10% level.

Table 6. Probability of Loan Application and Loan Denial

This table presents econometric evidence on the probability that a firm-owner applies for a loan and is denied a loan. Panel A presents two pairs of estimated probit models. For both pairs the dependent variable of the first equation (6.1a and 6.2a) is the probability that a firm-owner applies for a loan. The residuals from this equation were used in estimating the second equation (6.1b and 6.2b), whose dependent variable is the probability that the lender denies the loan. The independent variables are defined in Table 2. Estimated coefficients are presented along with standard errors, which appear in parentheses beneath the coefficient estimates. In addition to the independent variables listed all the models estimated include 8 binary variables to control for the geographical location of a firm's headquarters and 8 binary variables to control for the firm's industry grouping; the loan denial models also include 4 binary variables to control for the year in which the business owner applied for a loan. Panel B presents F tests of restrictions on estimated coefficients in the loan denial equations in Panel A.

Panel A: Regression Model Estimates

	DEPENDENT VARIABLE	Probability (Applied =1)	Probability (Denied =1)	Probability (Applied =1)	Probability (Denied =1)
	(Equation number)	(6.1a)	(6.1b)	(6.2a)	(6.2b)
INDEPENDENT VARIABLES					
Market Characteristics					
	HHI_MED	-0.124	0.760 ***	-0.138	0.716 ***
		(0.111)	(0.247)	(0.110)	(0.246)
	HHI_HIGH	0.045	0.698 ***	0.027	0.641 **
		(0.120)	(0.260)	(0.119)	(0.265)
Loan Application					
	LNLENGTH		0.264 ***		0.226 ***
			(0.082)		(0.087)
	NORELATION		1.030 ***		0.887 **
			(0.335)		(0.360)
	PRIMARY		-0.549 ***		-0.493 *
			(0.203)		(0.231)
	LOC		0.751 ***		0.679 ***
			(0.204)		(0.238)
	BANK		-0.016		-0.030
			(0.193)		(0.178)
Owner Characteristics					
Race / Gender					
	FEMALE	0.006	-0.233	0.007	-0.528
		(0.173)	(0.446)	(0.173)	(0.459)
	FEMALE * HHI_MED	-0.009	-0.430	-0.010	-0.235
		(0.201)	(0.428)	(0.200)	(0.404)
	FEMALE * HHI_HIGH	-0.101	-0.118	-0.098	0.038
		(0.207)	(0.396)	(0.207)	(0.387)
	FEMALE * LOC		0.311		0.288
			(0.308)		(0.305)
	FEMALE * BANK		0.395		0.600 *
			(0.327)		(0.317)
	MINORITY	0.131	0.658 *		
		(0.147)	(0.351)		
	MINORITY * HHI_MED	-0.114	-0.531		
		(0.182)	(0.371)		
	MINORITY * HHI_HIGH	-0.127	0.208		
		(0.191)	(0.352)		
	MINORITY * LOC		-1.002 ***		
			(0.300)		
	MINORITY * BANK		1.001 **		
			(0.403)		
	AFROAM			0.157	1.471 *
				(0.218)	(0.755)
	AFROAM * HHI_MED			-0.059	-0.709
				(0.265)	(0.880)
	AFROAM * HHI_HIGH			-0.202	0.169
				(0.282)	(0.625)
	AFROAM * LOC				-0.606
					(0.428)
	AFROAM * BANK				-0.043
					(0.654)
	ASIAN			0.005	-0.037
				(0.219)	(0.501)
	ASIAN * HHI_MED			-0.313	1.058
				(0.315)	(0.868)
	ASIAN * HHI_HIGH			-0.103	0.536
				(0.318)	(0.521)
	ASIAN * LOC				0.218
					(0.430)
	ASIAN * BANK				-0.288
					(0.569)
	HISPANIC			0.096	1.055 **
				(0.217)	(0.498)
	HISPANIC * HHI_MED			0.032	-1.303 *
				(0.267)	(0.507)
	HISPANIC * HHI_HIGH			0.095	-0.635
				(0.289)	(0.478)
	HISPANIC * LOC				-1.444 ***
					(0.511)
	HISPANIC * BANK				1.076 **
					(0.491)

Table 6. Probability of Loan Application and Loan Denial, continued

Panel A: Regression Model Estimates, continued

DEPENDENT VARIABLE	Probability (Applied =1)	Probability (Denied =1)	Probability (Applied =1)	Probability (Denied =1)
(Equation number)	(1a)	(1b)	(2a)	(2b)
INDEPENDENT VARIABLES				
Education / Experience				
POST_HS	-0.175 **	-0.089	-0.176 **	-0.081
	(0.085)	(0.186)	(0.085)	(0.182)
COLLEGE	-0.244 ***	-0.003	-0.235 ***	0.022
	(0.081)	(0.184)	(0.082)	(0.183)
LNEXPER	-0.035	0.033	-0.038	0.104
	(0.056)	(0.125)	(0.056)	(0.122)
Control / Wealth				
OWNSHR	0.001	-0.006	0.001	-0.006 *
	(0.002)	(0.004)	(0.002)	(0.004)
OWNMGR	0.080	-0.458 **	0.082	-0.471 *
	(0.113)	(0.224)	(0.112)	(0.252)
LNNETW	-0.008	-0.085 **	-0.008	-0.075 **
	(0.014)	(0.035)	(0.014)	(0.035)
FAMILY	-0.281 **	0.724 ***	-0.291 ***	0.787 ***
	(0.114)	(0.241)	(0.114)	(0.284)
Firm Characteristics				
Financial				
LNASSETS	0.121 ***	-0.114 *	0.123 ***	-0.133 **
	(0.032)	(0.063)	(0.032)	(0.062)
LNSALES	0.017	-0.013	0.017	-0.018
	(0.019)	(0.038)	(0.019)	(0.037)
ROA	0.000 ***	-0.024 **	0.000 ***	-0.021 **
	(0.000)	(0.010)	(0.000)	(0.010)
LNEQUITY	-0.088 ***	0.042	-0.089 ***	0.058
	(0.030)	(0.060)	(0.030)	(0.057)
NEGEQ	-0.744 **	0.388	-0.758 **	0.502
	(0.316)	(0.628)	(0.318)	(0.598)
Credit Record				
BANKRUPT	-0.080	2.349 ***	-0.094	2.204 ***
	(0.197)	(0.478)	(0.198)	(0.577)
JUDGMENT	0.180	0.494 *	0.179	0.419
	(0.160)	(0.300)	(0.160)	(0.310)
OWNPAYLATE	0.271 **	1.016 ***	0.270 **	0.925 **
	(0.120)	(0.329)	(0.121)	(0.409)
BUSPAYLATE	0.116	0.577 ***	0.114	0.543 *
	(0.073)	(0.217)	(0.073)	(0.275)
HIGHRISK	-0.002	-0.014	-0.008	-0.026
	(0.067)	(0.138)	(0.067)	(0.131)
DENIEDTRCR	0.139	0.442 **	0.134	0.397 *
	(0.136)	(0.218)	(0.135)	(0.233)
Relationships				
NUMRELATIONS	0.270 ***	-0.173 ***	0.270 ***	-0.200 ***
	(0.027)	(0.057)	(0.027)	(0.056)
LNLONGESTREL	0.000	-0.122	-0.002	-0.108
	(0.059)	(0.102)	(0.059)	(0.098)
LNPRIMARYREL	-0.048	0.071	-0.045	0.069
	(0.052)	(0.081)	(0.052)	(0.079)
USETRCR	0.039	-0.151	0.044	-0.144
	(0.075)	(0.164)	(0.075)	(0.163)
USEOWNCC	0.080	0.071	0.081	0.053
	(0.064)	(0.133)	(0.064)	(0.127)
USEBUSCC	0.141 **	-0.307 **	0.138 **	-0.317 **
	(0.067)	(0.140)	(0.067)	(0.141)
Non-Financial				
LNAGE	-0.119 ***	-0.138	-0.119 ***	-0.146
	(0.045)	(0.111)	(0.045)	(0.130)
LNEMPLOYEES	0.013	0.045	0.013	0.038
	(0.038)	(0.083)	(0.038)	(0.079)
LNLOCATIONS	-0.033	0.131	-0.031	0.163
	(0.079)	(0.157)	(0.079)	(0.151)
CCORP	-0.150	-0.021	-0.148	-0.027
	(0.095)	(0.197)	(0.095)	(0.194)
SCORP	-0.001	0.052	0.002	0.020
	(0.087)	(0.171)	(0.087)	(0.162)
NATIONAL	-0.023	0.392 **	-0.020	0.367 **
	(0.091)	(0.178)	(0.091)	(0.182)
MSA	-0.165 **	0.355 **	-0.169 **	0.368 **
	(0.083)	(0.175)	(0.083)	(0.169)
CONSTANT	-1.192 ***	0.816	-1.180 ***	1.069
	(0.371)	(1.027)	(0.371)	(0.955)
RHO	-0.855 **		-1.049 *	
	(0.389)		(0.578)	
Number of observations	3,444	863	3,444	863

*** Statistically different from zero at the 1% level for a two-tailed test.
** Statistically different from zero at the 5% level for a two-tailed test.
* Statistically different from zero at the 10% level for a two-tailed test.

Table 6. Probability of Loan Application and Loan Denial, continued

Panel B: Hypothesis Tests

HYPOTHESIS (Equation number)	F STATISTIC F (1, 3443) (6.1b)	(6.2b)
H 6: All else equal, non-bank lenders deny non-line-of-credit loan applications at identical rates for race/gender minority-owned firms and majority-owned		
FEMALE = 0	0.27	1.32
MINORITY = 0	3.51 *	
AFROAM = 0		3.80 *
ASIAN = 0		0.01
HISPANIC = 0		4.50 **
H 7: All else equal, non-bank lenders deny line-of-credit loan applications at identical rates for race/gender minority-owned firms and majority-owned		
FEMALE + FEMALE * LOC = 0	0.03	0.33
MINORITY+ MINORITY * LOC = 0	0.81	
AFROAM + AFROAM * LOC = 0		1.39
ASIAN + ASIAN * LOC = 0		0.12
HISPANIC + HISPANIC * LOC = 0		0.57
H 8: All else equal, bank lenders deny non-line-of-credit loan applications at identical rates for race/gender minority-owned firms and majority-owned		
FEMALE + FEMALE * BANK = 0	0.17	0.03
MINORITY+ MINORITY * BANK = 0	13.43 ***	
AFROAM + AFROAM * BANK = 0		4.83 **
ASIAN + ASIAN * BANK = 0		0.33
HISPANIC + HISPANIC * BANK = 0		9.36 ***
H 9: All else equal, bank lenders deny line-of-credit loan applications at identical rates for race/gender minority-owned firms and majority-owned firms.		
FEMALE + FEMALE * LOC + FEMALE * BANK = 0	1.45	0.96
MINORITY+ MINORITY * LOC + MINORITY * BANK = 0	3.76 *	
AFROAM + AFROAM * LOC + AFROAM * BANK = 0		2.37
ASIAN + ASIAN * LOC + ASIAN * BANK = 0		0.04
HISPANIC + HISPANIC * LOC + HISPANIC * BANK = 0		2.66

*** The F-statistic rejects the restriction at the 1% level.
** The F-statistic rejects the restriction at the 5% level.
* The F-statistic rejects the restriction at the 10% level.

TABLE 7. Predicted Probability of Loan Denial

This table presents predicted probabilities that bank and non-bank lenders will reject majority, African-American and Hispanic firm-owners' applications for line-of-credit and non-line-of-credit loans. The probabilities are in percents and range from 0 to 100. The predictions in Panel A are based on Equation (5.2) in Table 5; those in Panel B are based on Equation (6.2b) in Table 6. Predictions appear in the columns for African-American and Hispanic firm owners where F-statistics reported in Panel B of Tables 5 and 6 indicate denial probabilities statistically different from majority firm-owners.

Predictions in both panels were generated by setting the equations' explanatory variables equal to the medians from the sample of firm-owners who applied for loans; the exceptions are the race and market characteristics variables and three of the firm characteristic variables, as shown in the table. Separate predictions are shown for firm-owners with no recent prior legal judgments against them, no late business payments and no recent prior bankruptcy (Case 1); for firm-owners with a recent prior judgment against them only (Case 2); recent late business payments only (Case 3), and a recent prior bankruptcy only (Case 4). Also, separate predictions are shown for firm-owners applying to lenders in banking markets with low concentration (HHI_MED=0, HHI_HIGH=0), medium concentration (HHI_MED=1, HHI_HIGH=0)and high concentration (HHI_MED=0, HHI_HIGH=1).

Panel A: Predicted Probabilities of Loan Denial, Given Loan Application

CASE NUMBER:	Case 1: No judgments against the firm-owner, no late business payments, firm-owner hasn't been bankrupt. (JUDGMENT = 0, BUSPAYLATE = 0, BANKRUPT = 0)			Case 2: One or more judgments against the firm-owner, no late business payments, firm-owner hasn't been bankrupt. (JUDGMENT = 1, BUSPAYLATE = 0, BANKRUPT = 0)			Case 3: No judgments against the firm-owner, one or more late business payments, firm-owner hasn't been bankrupt. (JUDGMENT = 0, BUSPAYLATE = 1, BANKRUPT = 0)			Case 4: No judgments against the firm-owner, no late business payments, firm-owner has been bankrupt. (JUDGMENT = 0, BUSPAYLATE = 0, BANKRUPT = 1)		
DEMOGRAPHIC GROUP:	MAJORITY	AFRICAN-AMERICAN	HISPANIC	MAJORITY	AFRICAN-AMERICAN	HISPANIC	MAJORITY	AFRICAN-AMERICAN	HISPANIC	MAJORITY	AFRICAN-AMERICAN	HISPANIC
MARKET CHARACTISTICS: LOAN and LENDER TYPE:												
Lowest concentration banking market												
Non-line-of-credit loan denied by a non-bank lender	0.0	same as majority	0.4	0.0	same as majority	2.6	0.1	same as majority	3.6	9.4	same as majority	57.9
Line-of-credit loan denied by a non-bank lender	0.1	same as majority	same as majority	0.6	same as majority	same as majority	0.9	same as majority	same as majority	35.1	same as majority	same as majority
Non-line-of-credit loan denied by a bank lender	0.0	1.1	11.3	0.0	5.8	31.1	0.0	7.6	36.2	8.6	71.4	95.0
Line-of-credit loan denied by a bank lender	0.1	3.0	1.3	0.5	9.0	6.4	0.8	11.5	8.3	33.4	78.7	73.2
Medium-concentration banking market												
Non-line-of-credit loan denied by a non-bank lender	0.0	same as majority	0.0	0.5	same as majority	0.2	0.7	same as majority	0.3	32.0	same as majority	23.0
Line-of-credit loan denied by a non-bank lender	0.8	same as majority	same as majority	4.7	same as majority	same as majority	6.3	same as majority	same as majority	68.0	same as majority	same as majority
Non-line-of-credit loan denied by a bank lender	0.0	0.8	1.6	0.4	4.6	7.6	0.6	6.2	9.8	30.4	67.7	76.1
Line-of-credit loan denied by a bank lender	0.7	1.5	0.1	4.3	7.4	0.7	5.7	9.5	1.0	66.3	75.5	37.5
Highest concentration banking market												
Non-line-of-credit loan denied by a non-bank lender	0.0	same as majority	0.4	0.5	same as majority	2.8	0.7	same as majority	3.8	32.6	same as majority	58.9
Line-of-credit loan denied by a non-bank lender	0.9	same as majority	same as majority	4.9	same as majority	same as majority	6.5	same as majority	same as majority	68.5	same as majority	same as majority
Non-line-of-credit loan denied by a bank lender	0.0	9.4	11.8	0.4	27.4	32.0	0.6	32.3	37.1	31.0	93.8	95.3
Line-of-credit loan denied by a bank lender	0.8	13.9	1.3	4.4	35.6	6.7	5.9	41.0	8.7	66.9	96.2	74.0

TABLE 7. Predicted Probability of Loan Denial, continued

Panel B: Predicted Probabilities of Loan Denial, Probability of Loan Application and Loan Denial Estimated Jointly

CASE NUMBER:	Case 1: No judgments against the firm-owner, no late business payments, firm-owner hasn't been bankrupt. (JUDGMENT = 0, BUSPAYLATE = 0, BANKRUPT = 0)			Case 2: One or more judgments against the firm-owner, no late business payments, firm-owner hasn't been bankrupt. (JUDGMENT = 1, BUSPAYLATE = 0, BANKRUPT = 0)			Case 3: No judgments against the firm-owner, one or more late business payments, firm-owner hasn't been bankrupt. (JUDGMENT = 0, BUSPAYLATE = 1, BANKRUPT = 0)			Case 4: No judgments against the firm-owner, no late business payments, firm-owner has been bankrupt. (JUDGMENT = 0, BUSPAYLATE = 0, BANKRUPT = 1)		
DEMOGRAPHIC GROUP:	MAJORITY	AFRICAN-AMERICAN	HISPANIC	MAJORITY	AFRICAN-AMERICAN	HISPANIC	MAJORITY	AFRICAN-AMERICAN	HISPANIC	MAJORITY	AFRICAN-AMERICAN	HISPANIC
MARKET CHARACTISTICS: LOAN and LENDER TYPE:												
Lowest concentration banking market												
Non-line-of-credit loan denied by a non-bank lender	1.6	25.0	13.8	4.2	40.0	25.1	5.5	44.8	29.2	52.4	93.7	86.7
Line-of-credit loan denied by a non-bank lender	7.1	same as majority	same as majority	14.8	same as majority	same as majority	17.8	same as majority	same as majority	77.0	same as majority	same as majority
Non-line-of-credit loan denied by a bank lender	1.5	22.8	48.3	4.0	37.2	64.6	5.1	41.9	69.1	51.2	92.8	98.5
Line-of-credit loan denied by a bank lender	6.7	same as majority	same as majority	14.1	same as majority	same as majority	17.0	same as majority	same as majority	76.1	same as majority	same as majority
Medium-concentration banking market												
Non-line-of-credit loan denied by a non-bank lender	7.7	25.3	4.7	15.6	40.2	10.4	18.8	45.1	12.8	78.1	93.8	70.1
Line-of-credit loan denied by a non-bank lender	22.7	same as majority	same as majority	37.1	same as majority	same as majority	41.8	same as majority	same as majority	92.7	same as majority	same as majority
Non-line-of-credit loan denied by a bank lender	7.2	23.0	26.4	14.9	37.4	41.6	18.0	42.2	46.5	77.2	92.9	94.2
Line-of-credit loan denied by a bank lender	21.8	same as majority	same as majority	35.9	same as majority	same as majority	40.6	same as majority	same as majority	92.3	same as majority	same as majority
Highest concentration banking market												
Non-line-of-credit loan denied by a non-bank lender	6.6	55.4	13.9	13.9	71.1	25.3	16.8	75.1	29.4	75.8	99.0	86.9
Line-of-credit loan denied by a non-bank lender	20.5	same as majority	same as majority	34.3	same as majority	same as majority	38.9	same as majority	same as majority	91.6	same as majority	same as majority
Non-line-of-credit loan denied by a bank lender	6.3	52.5	48.5	13.2	68.5	64.8	16.1	72.8	69.3	74.9	98.8	98.5
Line-of-credit loan denied by a bank lender	19.6	same as majority	same as majority	33.2	same as majority	same as majority	37.8	same as majority	same as majority	91.1	same as majority	same as majority

Table 8: Univariate Statistics and T tests for Firms with Approved Loans

This table presents mean values of variables defined in Table 2 for the sub-sample of firms whose loan applications were approved. Asterisks denote means that differ from the means for majority-owned firms.Means that do no differ significantly from the means for majority firm-owners fail to reject hypothesis H 10, that lenders require minority loan applicants to have characteristics no more preferred than majority applicants to be induced to lend to them.

Firms, by Owner, Loan and Lender Type:	All Loans			Line-of-Credit Loans From Banks			Line-of-Credit Loans From Other Lenders			Other Loans From Banks			Other Loans From Other Lenders		
Independent Variables:	Majority-Owned Firms	African-American Owned Firms [1]	Hispanic-Owned Firms [1]	Majority-Owned Firms	African-American Owned Firms [1]	Hispanic-Owned Firms [1]	Majority-Owned Firms	African-American Owned Firms [1]	Hispanic-Owned Firms [1]	Majority-Owned Firms	African-American Owned Firms [1]	Hispanic-Owned Firms [1]	Majority-Owned Firms	African-American Owned Firms [1]	Hispanic-Owned Firms [1]
Owner Characteristics															
Education / Experience															
POST_HS	0.26	0.42 **	0.21	0.30	0.51 *	0.36	0.38	1.00 *		0.20	0.41	0.11	0.31	0.00	0.17
COLLEGE	0.49	0.52	0.44	0.55	0.40	0.38	0.51	0.00		0.49	0.59	0.46	0.44	0.92 **	0.48
EXPER	17.72	12.39 ***	14.28 **	16.93	12.01 **	13.84	14.97	10.66		18.43	13.80	14.80	17.96	10.93	14.17
Control / Wealth															
OWNSHR [2]	0.79	0.86	0.82	0.80	0.95 **	0.81	0.87	0.57 *		0.77	0.66	0.85	0.81	1.00	0.81
OWNMGR	0.91	0.90	0.94	0.94	0.90	0.96	0.98	1.00		0.88	0.89	1.00	0.91	0.92	0.86
NETW [3]	9.54	2.72	3.10	11.38	3.25	3.97	6.78	0.75		10.41	2.06	2.78	7.09	2.27	2.64
FAMILY	0.81	0.76	0.88	0.85	0.89	0.93	0.83	0.13 **		0.76	0.46 **	0.85	0.89	1.00	0.87
Firm Characteristics															
Financial															
ASSETS [3]	7.41	2.40	3.78	7.66	1.73	3.85	3.32	2.96		7.95	4.27	5.95	7.50	0.84	1.70
SALES [3]	20.24	6.97	10.56	33.25	6.29	6.57	7.66	26.16		19.03	8.86	16.72	15.40	3.11	8.31
ROA	238.31	16.49	1.56	1126.06	0.99	3.09	1.02	3.77 ***		2.21	0.76	0.50	1.01	116.65 ***	1.21
EQUITY [3]	2.15	-0.81	0.00	0.95	0.64	0.86	0.82	0.43		2.57	-3.75 *	-1.17	2.83	-0.12	0.34
NEGEQ	0.27	0.38	0.20	0.30	0.35	0.37	0.21	0.00		0.28	0.36	0.15	0.24	0.62 *	0.11
Credit Record															
BANKRUPT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.01
JUDGMENT	0.03	0.00	0.03	0.06	0.01	0.11	0.03	0.00		0.01	0.00	0.00	0.01	0.00	0.00
OWNPAYLATE	0.05	0.06	0.01	0.02	0.05	0.00	0.00	0.00		0.06	0.00	0.00	0.05	0.25 *	0.04
BUSPAYLATE	0.38	0.48	0.23 *	0.40	0.47	0.21	0.24	1.00 **		0.42	0.42	0.12 **	0.32	0.62	0.36
HIGHRISK	0.31	0.36	0.35	0.33	0.35	0.33	0.25	0.00		0.30	0.24	0.27	0.32	0.68 *	0.43
DEMEDTRCR	0.06	0.14 *	0.07	0.04	0.11	0.20 **	0.07	0.00		0.06	0.01	0.01	0.09	0.68 ***	0.01
Relationships															
NUMRELATIONS	2.96	3.13	3.02	2.89	2.48	2.50	3.24	7.73 ***		2.76	2.92	3.05	3.31	5.71 ***	3.44
LONGESTREL [4]	10.01	7.84	6.52 **	8.37	5.68	4.80 *	7.41	4.57		11.04	8.48	7.10	10.29	15.57	7.49
PRIMARYREL [4]	7.35	4.58 **	4.16 ***	5.86	3.99	2.33 **	5.41	4.17		8.46	6.18	6.46	7.12	3.42	3.62 *
USETRCR	0.73	0.76	0.73	0.73	0.77	0.75	0.57	1.00		0.77	0.74	0.70	0.68	0.75	0.74
USEOWNCC	0.50	0.37	0.44	0.53	0.53	0.74	0.55	0.00		0.47	0.18 **	0.01 ***	0.51	0.36	0.57
USEBUSCC	0.48	0.52	0.50	0.55	0.40	0.56	0.36	1.00 *		0.47	0.68	0.60	0.48	0.62	0.36
Non-Financial															
AGE [4]	12.62	7.74 ***	8.79 ***	11.61	7.93 *	9.23	10.86	5.40		13.73	8.90	7.68 **	11.89	4.60 *	9.45
EMPLOYEES	13.23	10.08	10.84	15.82	7.71	12.01	7.15	70.57 ***		14.16	8.79	11.68	11.15	15.24	9.03
LOCATIONS	1.36	1.65	1.15	1.53	1.37	1.21	1.17	7.10 *		1.33	2.12 *	1.13	1.35	1.04	1.11
CCORP	0.25	0.07 **	0.25	0.24	0.05 *	0.36	0.07	0.00		0.26	0.15	0.11	0.29	0.00	0.28
SCORP	0.28	0.47 **	0.39	0.35	0.26	0.41	0.24	0.13		0.26	0.79 ***	0.39	0.28	0.66	0.37
NATIONAL	0.12	0.14	0.10	0.13	0.15	0.31 *	0.25	0.00		0.13	0.06	0.01	0.06	0.28 **	0.00
MSA	0.73	0.83	0.86 *	0.82	0.82	0.85	0.80	1.00		0.65	0.92 *	0.87	0.76	0.66	0.87
Loan Application															
LENGTH [4]	5.87	4.45	1.64 ***	5.46	5.34	0.88 **	2.12	2.60		7.64	4.81	2.93 *	3.96	0.25	1.10 *
NORELATION	0.23	0.29	0.49 ***	0.23	0.18	0.48 **	0.32	0.13		0.16	0.20	0.20	0.33	0.92 ***	0.78 ***
PRIMARY	0.55	0.62	0.36 **	0.65	0.68	0.64	0.27	0.00		0.69	0.82	0.47	0.28	0.00	0.00 **
Number of Observations	602	34	41	134	17	15	37	2	0	296	10	11	135	5	15

Notes

[1] Asterisk denotes a mean statistically different from the mean for majority-owned firms.
*** Statistically different at the 1% level.
** Statistically different at the 5% level.
* Statistically different at the 10% level.

[2] Percent, in decmial form.
[3] Expressed in hundreds of thousands of dollars.
[4] Expressed in years.

NERA
Economic Consulting

Testimony Concerning the Challenges Faced by Disadvantaged Business Enterprises in the Transportation Sector

Testimony of Dr. Jon S. Wainwright, Vice President, NERA Economic Consulting, 1006 E. 39th St., Austin, Texas 78751, (512) 371-8995

Before the Committee on Transportation and Infrastructure

United States House of Representatives

March 26, 2009

Chairman Oberstar, Ranking Member Mica, and Members of the Committee:

Thank you for the invitation to appear here today. My name is Jon Wainwright. I hold a Ph.D. in economics from the University of Texas at Austin. Currently, I am a Vice President with NERA Economic Consulting, in Chicago, Illinois and Austin, Texas.

NERA is a global firm of experts dedicated to applying economic, finance, and quantitative principles to complex business and legal challenges. For nearly half a century, NERA's economists have been creating strategies, studies, reports, expert testimony, and policy recommendations for government authorities and the world's leading law firms and corporations. We bring academic rigor, objectivity, and real world industry experience to bear on issues arising from competition, regulation, public policy, strategy, finance, and litigation. NERA's clients value our ability to apply and communicate state-of-the-art approaches clearly and convincingly, our commitment to deliver unbiased findings, and our reputation for quality and independence. Our clients rely on the integrity and skills of our unparalleled team of economists and other experts backed by the resources and reliability of one of the world's largest economic consultancies. With its main office in New York City, NERA serves clients from over 20 offices across North America, Europe, and Asia Pacific.

I would like to ask the Committee's permission to include my entire testimony in the record as if read in full and to supplement my testimony with additional material if needed.

I. Introduction

For twenty years, I have devoted the greater part of my professional life to studying race and sex discrimination and its impact on business enterprise and entrepreneurship in the United States. During this time I have served as the project director and principal investigator for almost 30 studies of business discrimination against minorities and women undertaken since 2000 and prior to that time worked on perhaps a dozen more. I have authored a book on the subject and provided expert testimony in federal and state courts on these and other labor and business related matters on 13 occasions.

I was fortunate to have been mentored at the start of my career by two of the country's leading scholars in this field—Dr. Ray Marshall, Professor Emeritus at the Lyndon B. Johnson School of Public Affairs at The University of Texas at Austin and former United States Secretary of Labor, and Dr. Andrew Brimmer, former member of the Board of Governors of the Federal Reserve, former Assistant Secretary of Commerce, and Professor Emeritus at the University of Massachusetts, Amherst.

A key lesson I absorbed from these men was expressed by Professor Marshall in this way:

> "Institutionalized discrimination in business transactions is deeply rooted in the American economy. There can be no doubt that business discrimination inflicts serious damage on the society, polity, and economy. Governments have a responsibility to improve public understanding of the seriousness of this problem and to take positive steps to address it. These positive steps must include public education, specifically outlawing this form of discrimination, using governments' purchasing power to help those who are being discriminated against while rewarding those who do not discriminate, and developing race neutral programs to help all small businesses."[1]

If you accept that discrimination in business transactions has become institutionalized in the American economy, then it is difficult to argue with the logic of Dr. Marshall's conclusions.

During the last twenty years, the primary bulwark against business discrimination has been the policy of using public sector purchasing power to support the entrepreneurial endeavors of DBEs and other historically underutilized businesses and to promote fair and full access to government contracting and procurement opportunities as well as to mitigate the impact of business discrimination in the private sector. The Department of Transportation's Disadvantaged Business Enterprise (DBE) Program[2] is a key example of such policies at the federal level.

II. Constitutional Challenges Facing the USDOT DBE Program

The USDOT DBE Program, like other affirmative public contracting programs, is subject to the highest and strictest standards of constitutional scrutiny.[3] It is important, therefore, that the DBE studies used to assess the scope of business discrimination and the presence of DBEs in the markets of state DOTS, airports, and transit agencies are of high quality—

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[1] Ray Marshall, "Minority and Female Business Development After *Croson*," Working Paper, 2000.

[2] 49 C.F.R. Part 26.

[3] *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989); *Adarand v. Peña*, 515 U.S. 200 (1995) (*Adarand III*).

independent and objective, academically rigorous, and incorporating as much relevant evidentiary data as possible. It is equally important that these DBE studies are carried out by economic and statistical experts who can be qualified in federal court to testify regarding their data, methods, and findings.

In 1999, Congress reviewed and revised the DBE Program's authorizing statute and implementing regulations. To date, every court that has considered the issue has found the DBE regulations to be constitutional on their face.[4] Whether the DBE Program can withstand an "as applied challenge," however, appears to turn at least in part on whether the public sector defendant went to court prepared with a high quality DBE study and testifying expert.

For example, when the DBE programs at Minnesota DOT (*Sherbrooke*) and Illinois DOT (*Northern Contracting*) were challenged, good DBE studies and qualified experts played crucial roles in successfully defending the constitutionality of the DBE program as applied by each agency. In contrast, when the DBE program at Washington State DOT was challenged (*Western States*), no study or expert was proffered at all. As a result, the Ninth Circuit lacked the benefit of any guidance on the correct economic analysis of discrimination and made several serious errors as a result.[5] Although unrelated to the USDOT DBE Program, a similar situation recently occurred in the Federal Circuit Court of Appeals in the *Rothe* case concerning the Department of Defense Program for Small Disadvantaged Businesses.[6] Here again, the defendants proffered no study of their own nor an expert to testify about such a study and once again, the court made several serious errors in its economic reasoning, concluding, for example, that factors such as firm size should be factored into estimates of DBE availability.

III. Findings and Conclusions from NERA's DBE Studies Completed Since 2000

I would like to address the remainder of my remarks today to the state of DBEs as documented in 16 studies and related research I have directed at NERA in the last 10

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[4] *See, e.g., Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147 (10th Cir. 2000), *cert. granted*, 532 U.S. 941, *then dismissed as improvidently granted*, 534 U.S. 103 (2001) ("*Adarand VII*"); *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, and *Gross Seed Co. v. Minnesota Department of Transportation*, 345 F.3d. 964 (8th Cir. 2003), *cert. denied*, 541 U.S. 1041 (2004); *Western States Paving Co., Inc. v. Washington Department of Transportation*, 407 F.3d 983 (9th Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006); *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7th Cir. 2007) ("*Northern Contracting III*").

[5] For more on this, *see* Colette Holt and Jon Wainwright "*Western States Paving Company v. Washington State Department of Transportation*: Ninth Circuit Upholds Federal Disadvantaged Business Enterprise Program for Transportation Contracts But Strikes Down State's Implementation of Program Regulations," American Bar Association, Section of Antitrust Law, *The Transportation Antitrust Update*, No. 16 (Spring), 2007.

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

years, and the implications of these findings for the continuing need for the public sector to use its purchasing power to help remedy the ill effects of business discrimination.

Each of these studies includes one or more entities participating in the USDOT's DBE Program through a state department of transportation, a transit authority, or an airport. With the Committee's permission, I would be pleased to provide copies of all sixteen studies for entry into the record.[7]

It is important to acknowledge as well the enormous amount of relevant evidence that already appears in the Congressional record. A useful synopsis of this evidence was provided by the Tenth Circuit Court of Appeals in their decision in *Adarand Constructors*.[8] Additionally, the U.S. Senate Committee on Small Business and Entrepreneurship, for example, held hearings in May 2007 and September 2008 regarding closely related subject matter. The Subcommittee on Information Policy, Census, and National Archives of the U.S. House Committee on Oversight and Government Reform held a hearing in last September as well on how information policy affects competitive viability in minority contracting.

The DBE studies I have submitted for the record span a wide range of geographic locations—from Pennsylvania in the North, Texas and Tennessee in the South, Maryland in the East, Washington and Colorado in the West, to Illinois, Minnesota, and Missouri in the Midwest. Of the 75 members of this Committee, 50 hail from states represented in the studies we have submitted.

Despite the geographic diversity our studies represent, the findings from these studies show far more similarities than differences—minority-owned businesses and women-owned businesses throughout the nation continue to face large disparities in almost every aspect of business enterprise activity that can be quantified.

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[7] Memphis International Airport, 2008; City of Austin, Texas (including Austin-Bergstrom International Airport), 2008; Illinois State Toll Highway Authority, 2006; Maryland Department of Transportation, State Highway Administration, 2006; Maryland Department of Transportation, Maryland Aviation Administration, 2006; Maryland Department of Transportation, Maryland Transit Administration, 2006; City and County of Denver (including Denver International Airport), 2006; St. Louis Regional Transit, 2005; Washington Department of Transportation, 2005; Minnesota Department of Transportation, 2005; Missouri Department of Transportation, 2004; Illinois Department of Transportation, 2004; Minnesota Department of Transportation, 2000; Southeastern Pennsylvania Transportation Authority, 2000a, 2000b; Chicago Metra, 2000. All but the two SEPTA studies were produced in collaboration with Colette Holt & Associates.

[8] *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1166-1175 (10th Cir. 2000) (discussing evidence before Congress of business discrimination against minorities in the construction industry in enacting the Disadvantaged Business Enterprise Program for federal-aid transportation contracts, Pub.L. No. 100-17, 101 Stat. 132 (1987), Pub.L. No. 102-240, 105 Stat. 1914 (1991) and Pub.L. No. 105-178, 112 Stat. 107 (1998), and the implementing regulations at 49 CFR Part 26 (1999)).

III.A. Data from the Survey of Business Owners

One important source of data that we draw upon in our DBE studies is the Census Bureau's Survey of Business Owners (SBO), performed every five years. According to the most recent data available from the SBO, there are substantial disparities between the share of minorities in the general population and their share of the business population. Specifically:

- Although African Americans comprised 12.7 percent of the U.S. population, they accounted for only 5.3 percent of its businesses.
- Although Hispanics and Latinos comprised 13.4 percent of the population, they accounted for only 7.0 percent of the businesses.
- Although women comprised 50.9 percent of the population, they accounted for only 28.9 percent of the businesses.

Moreover, the minority and female share of business sales and receipts is far lower than their share of the business population.

- Although African Americans comprised 5.3 percent of all U.S. businesses, they earned only 1.0 percent of sales and receipts.
- Although Hispanics and Latinos comprised 7.0 percent of all businesses, they earned only 2.5 percent of sales and receipts.
- Although women comprised 28.9 percent of all businesses, they earned only 10.7 percent of sales and receipts.

Similar disparities are observed for other minority groups as well. Asians and Pacific Islanders comprised 5.0 percent of the business population yet earned only 3.8 percent of sales and receipts. Native Americans comprised 0.9 percent of all businesses but earned only 0.3 percent of sales and receipts.

These disparities between the size of the minority and female business populations and their share of sales and receipts are very large. They are also statistically significant, meaning they are unlikely to result from chance alone. While the exact proportions vary, large and statistically significant disparities are observed in all 50 states and the District of Columbia, for all minority groups—African-Americans, Hispanics and Latinos, Asians and Pacific Islanders, and Native Americans—as well as for women. These disparities are found in the Construction sector as well as in the economy as a whole. This is documented below in Tables 1A through 2F. Similar findings from current and past SBO reports appear in most of NERA's DBE studies.

III.B. Public Use Microdata Samples and Current Population Survey Data

It is fair to ask whether the disparities documented in the SBO data result primarily from discrimination, either past, present or both, or whether they result from other, potentially non-discriminatory, factors.[9]

Our DBE studies have put such questions to the test using the public use microdata samples (PUMS) from the two most recent decennial censuses, as well as microdata from the *Current Population Survey* (CPS) through 2006. The advantage of the PUMS and CPS data is that they allow us to compare these percentages while holding a wide variety of other, potentially non-discriminatory, factors constant, such as industry, geography, education, age, and labor market status.[10]

Like the SBO, the PUMS and CPS data sources show large and statistically significant disparities between the percentage of minorities and women who choose to form businesses and the percentage of comparable non-minority males who choose to form businesses. Such disparities are observed for the nation as a whole and throughout the states, and in the economy as a whole as well as across different industry sectors, including construction and construction-related professional services.

As shown below in Table 3A, our DBE studies have found that even when these other attributes are held constant using regression analysis, the disparities between African-Americans, Hispanics and Latinos, Asians and Pacific Islanders, and Native Americans, and women business owners on the one hand and their non-minority male counterparts on the other, tend to remain large, adverse, and statistically significant. Out of the 49 cases included in Table 3A, 46 show disparities and 45 show large disparities.

Furthermore, even for those minorities and women who manage against the odds to form their own businesses, their entrepreneurial earnings tend to lag far behind their non-minority male counterparts. As shown below in Table 3B, minority and female business owner earnings in construction and construction-related professional services average almost 25 percent lower than their non-minority male counterparts, again even when other attributes are held constant. For African Americans, Native Americans, and non-minority women, the disparities are even larger.

In sum, the evidence gathered from PUMS and CPS data sources, as documented below and in our many DBE studies, strongly suggests that business discrimination is the principal explanation for the disparities in the SBO data.

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[9] This was the subject of a book I authored, *Racial Discrimination and Minority Business Enterprise: Evidence from the 1990 Census*, New York and London: Garland Publishing, 2000. As all of the studies submitted for the record attest, similar results are observed using the 2000 decennial census data.

[10] We have also tested the hypothesis, with similar results, including additional factors such marital and family status, immigration status, ability to speak English, military service and veteran status, disability status, and asset levels.

III.C. Data from the National Survey of Small Business Finances

One particular manifestation of business discrimination is denial of access to credit. One of the primary concerns voiced by minority and women entrepreneurs is disproportionate difficulty accessing commercial capital and credit. If such discrimination exists, not only would it hamper the ability of these entrepreneurs to succeed, it could also prevent them from starting their own businesses in the first place.

In our DBE studies we have used the *National Survey of Small Business Finances* (SSBF), a joint effort of the Federal Reserve Board and the Small Business Administration, to test for the existence of discrimination in the small business credit market during the 1993 to 2003 period. These surveys are based on a large representative sample of firms with fewer than 500 employees.[11]

The SSBF data provide qualitative and quantitative evidence consistent with the presence of discrimination against DBEs in the credit market for small businesses. Using the SSBF, we find that after controlling for a large number of financial and other characteristics of the firms, African-American-owned firms, Hispanic or Latino-owned firms, and to a lesser extent other minority-owned firms are substantially and statistically significantly more likely to be denied credit than are nonminority-owned firms. We find some evidence in the SSBF that women as well are discriminated against in the credit market. The principal findings from the SSBF are as follows:

- A larger proportion of minority-owned firms than nonminority-owned firms report that credit market conditions are a serious concern.
- A larger share of minority-owned firms than nonminority-owned firms believes that the availability of credit is the most important issue likely to confront them in the upcoming year.
- Minority-owned firms were more likely to report that they did not apply for a loan over the preceding three years because they feared the loan would be denied.
- *When minority-owned firms did apply for a loan their loan requests were substantially more likely to be denied than non-minorities, even when differences like firm size and credit history are accounted for.*
- *When minority-owned firms did receive a loan they were obligated to pay higher interest rates on the loans than was true of comparable nonminority-owned firms.*

[11] The 1993 and 1998 surveys deliberately oversampled minority-owned and women-owned firms but the 2003 survey unfortunately did not. The 2003 survey took other steps, however, to increase the likelihood that minority-owned and women-owned firms were captured in the sampling frame. For more details, see National Opinion Research Center, *The 2003 Survey of Small Business Finances: Methodology Report*, Chicago, NORC, p. 11.

- There is no evidence that discrimination in the market for credit is significantly different in different regions of the country, or in the construction industries than it is in the nation or the economy as a whole.

- There is no evidence that the level of discrimination in the market for credit has diminished between 1993 and 2003, the most recent year for which data are available.

The SSBF is designed to produce estimates for the U.S. as a whole and for multi-state census regions. As a check on the findings above, and in order to produce results for specific states and metropolitan areas, we have conducted our own surveys—closely following the SSBF survey instrument—to supplement to national SSBF.

NERA has conducted these state and local credit market surveys on nine occasions between 1999 and 2007. Geographic locations include the Chicago metropolitan area in 1999, the State of Maryland in 2000, the Jacksonville, Florida metropolitan area in 2002, the Baltimore-Washington, DC metropolitan area in 2003, the St. Louis metropolitan area in 2004, the Denver metropolitan area in 2005, the State of Maryland (again) in 2005, the State of Massachusetts in 2005, and the Memphis, TN-MS-AR metropolitan area in 2007. The Chicago, Jacksonville, Baltimore, St. Louis, and Denver surveys focused on construction and construction-related industries, while the two Maryland surveys, the Massachusetts surveys and the Memphis surveys included other goods and services as well.[12]

In Table 3C below, I have combined the results of these nine NERA surveys together in a consistent format and re-estimated the basic loan denial regression model on this larger file. These results are remarkably similar to results seen in the national SSBF. For example, loan denial probabilities for African-American-owned firms compared to nonminority male-owned firms are 29 percentage points higher—even when assets, liabilities, creditworthiness measures such as bankruptcies, judgments, and delinquencies, and other firm and owner characteristics are held constant.

In NERA's own surveys we found statistically significant loan denial disparities for Hispanic or Latino-owned firms and nonminority female-owned firms as well as for African-American-owned firms. Denial rates were 18-24 percentage points higher for Hispanic or Latino-owned firms and 5-9 percentage points higher for nonminority female-owned firms than for their nonminority male-owned counterparts. Significant loan denial disparities were also observed for Native American-owned firms in some cases (18-19 percentage points higher).

Finally, as shown in Table 3D, we modeled the rate of interest charged, conditional upon receiving loan approval, using NERA's nine-jurisdiction dataset. Once again, the results

[12] NERA's Chicago, Maryland I, and Jacksonville survey questionnaires followed the format of the 1993 SSBF while our Baltimore, St. Louis, Denver, Maryland II, Massachusetts, and Memphis surveys followed the format of the 1998 SSBF questionnaire.

are similar to what is observed in the national SSBF. African-Americans pay approximately 1.7 percentage points more, on average, for their business credit than do nonminority males, declining slightly to 1.5 percentage points when creditworthiness and other firm and owner controls are accounted for.

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

III.D. Qualitative/Anecdotal Evidence of Discrimination

In addition to the statistical evidence of business discrimination described above, the numerous studies we have conducted in recent years also found extensive qualitative or "anecdotal" evidence of discrimination against minorities and women, particularly in the key DBE Program sectors of construction and construction-related professional services. In conjunction with my long time colleague, attorney Colette Holt of Colette Holt & Associates in Chicago, we have conducted surveys and in person interviews with hundreds of DBEs and non-DBEs, and the results are strikingly similar across the country.

In general, minorities and women reported that they still encounter significant barriers to doing business in the public and private sector market places, as both prime contractors and subcontractors. They often suffer from stereotypes about a suspected lack of competence and are subject to higher performance standards than similar nonminority men. They also encounter discrimination in obtaining loans and surety bonds; receiving fair price quotes from suppliers; working with trade unions; obtaining public and private sector prime contracts and subcontracts; and being paid promptly.

Significantly, there is also general agreement among DBEs that without the use of affirmative remedies such as the USDOT DBE Program, minorities and women would receive few if any opportunities on government contracts, as is the case on public sector projects without DBE goals and as is especially the case on private sector projects. Our own research has documented time and again that prime contractors who use DBEs on projects with goals rarely use them—or even solicit them—in the absence of such goals.

Thus, the continued operation of federal, state, and local efforts to ensure equal access to the public contracting process is essential to the competitive viability of minority-owned and women-owned business enterprises.

IV. Conclusion

It is fairly easy to specify in a general way the economic consequences of the USDOT DBE Program. It has improved economic opportunities for minorities and women in business and therefore improved the competitiveness and efficiency of the American

economy. It has also focused public attention on discrimination against minority and female businesses for reasons unrelated to their qualifications or performance.

The DBE Program and similar public sector programs, standing alone, will not solve the problem of business discrimination. The private sector, which is far larger in terms of economic activity and scope, must take on more responsibility for eliminating business discrimination as well. Some major corporations have begun to take important steps down this road by developing genuine supplier diversity initiatives, but these companies are still the exception rather than the rule.

I am optimistic that the statistical and anecdotal evidence will one day show that the DBE Program is no longer needed, because minority-owned and women-owned businesses will have achieved competitive parity with their nonminority male-owned counterparts. However, my own research and that of my colleagues demonstrates that this day has not yet arrived.

Thank you. I will be pleased to answer any questions.

Table 1A. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, African American, All Industries, 2002

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Alabama	9.26%	0.62%	2.96%	0.46%	*0.07*	*0.16*
Alaska	1.49%	0.18%	0.66%	0.14%	*0.12*	*0.22*
Arizona	1.66%	0.16%	0.66%	0.13%	*0.10*	*0.19*
Arkansas	4.28%	0.27%	1.38%	0.18%	*0.06*	*0.13*
California	3.88%	0.35%	1.48%	0.26%	*0.09*	*0.18*
Colorado	1.52%	0.20%	0.68%	0.16%	*0.13*	*0.24*
Connecticut	3.42%	0.19%	0.97%	0.14%	*0.05*	*0.14*
Delaware	6.70%	0.18%	1.97%	0.11%	*0.03*	*0.06*
Dist. Columbia	25.86%	1.47%	9.23%	1.28%	*0.06*	*0.14*
Florida	6.63%	0.53%	1.95%	0.36%	*0.08*	*0.19*
Georgia	13.41%	0.77%	3.88%	0.55%	*0.06*	*0.14*
Hawaii	0.82%	0.12%	0.31%	0.10%	*0.15*	*0.33*
Idaho	0.31%	0.08%	0.34%	0.07%	*0.26*	*0.21*
Illinois	7.17%	0.43%	1.73%	0.35%	*0.06*	*0.20*
Indiana	3.24%	0.35%	1.28%	0.31%	*0.11*	*0.24*
Iowa	0.68%	0.11%	0.35%	0.10%	*0.16*	*0.29*
Kansas	2.04%	0.16%	0.96%	0.13%	*0.08*	*0.13*
Kentucky	2.52%	0.39%	0.92%	0.35%	*0.15*	*0.38*
Louisiana	12.24%	0.59%	3.55%	0.40%	*0.05*	*0.11*
Maine	0.24%	0.04%	0.10%	0.03%	*0.18*	*0.33*
Maryland	15.65%	1.25%	4.23%	0.92%	*0.08*	*0.22*
Massachusetts	2.27%	0.19%	0.87%	0.15%	*0.08*	*0.18*
Michigan	6.03%	0.54%	1.68%	0.47%	*0.09*	*0.28*
Minnesota	1.77%	0.15%	0.46%	0.12%	*0.08*	*0.27*
Mississippi	13.33%	0.94%	4.39%	0.59%	*0.07*	*0.13*
Missouri	3.81%	0.30%	1.73%	0.24%	*0.08*	*0.14*
Montana	0.22%	0.03%	n/a	n/a	*0.13*	
Nebraska	1.44%	0.10%	0.62%	0.09%	*0.07*	*0.14*
Nevada	2.56%	0.29%	1.08%	0.23%	*0.11*	*0.22*
New Hampshire	0.37%	0.07%	0.23%	0.06%	*0.19*	*0.26*
New Jersey	5.12%	0.38%	1.86%	0.31%	*0.07*	*0.16*
New Mexico	1.13%	0.29%	0.50%	0.27%	*0.26*	*0.53*
New York	7.58%	0.43%	1.81%	0.31%	*0.06*	*0.17*
North Carolina	8.11%	0.59%	3.07%	0.45%	*0.07*	*0.15*
North Dakota	0.14%	0.03%	n/a	n/a	*0.24*	
Ohio	4.36%	0.40%	1.56%	0.34%	*0.09*	*0.22*
Oklahoma	2.55%	0.23%	0.96%	0.18%	*0.09*	*0.19*
Oregon	0.74%	0.15%	0.39%	0.13%	*0.20*	*0.34*
Pennsylvania	2.83%	0.22%	1.17%	0.18%	*0.08*	*0.16*
Rhode Island	n/a	n/a	n/a	n/a		
South Carolina	9.77%	0.63%	3.31%	0.42%	*0.06*	*0.13*
South Dakota	0.18%	0.10%	0.11%	0.10%	*0.58*	*0.90*
Tennessee	5.90%	0.40%	2.16%	0.29%	*0.07*	*0.14*
Texas	5.12%	0.35%	1.79%	0.26%	*0.07*	*0.14*
Utah	0.34%	0.13%	0.15%	0.13%	*0.38*	*0.86*

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Vermont	0.29%	0.05%	0.15%	0.05%	*0.18*	*0.33*

Table 1A. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, African American, All Industries, 2002, cont'd

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Virginia	7.77%	0.67%	3.39%	0.55%	*0.09*	*0.16*
Washington	1.49%	0.23%	0.84%	0.21%	*0.16*	*0.25*
West Virginia	1.30%	0.11%	0.39%	0.08%	*0.08*	*0.22*
Wisconsin	1.70%	0.15%	0.76%	0.12%	*0.09*	*0.16*
Wyoming	0.28%	0.03%	0.24%	0.02%	*0.10*	*0.10*

Notes: The disparity ratio is derived by dividing the percentage of sales by the corresponding percentage of firms. A disparity ratio of zero indicates complete disparity while a value of 1 indicates parity. Disparity ratios in italics are statistically significant at a 1-in-100 probability level. "n/a" indicates data was suppressed by Census for statistical reason and/or to protect confidentiality.

Table 1B. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Hispanic or Latino, All Industries, 2002

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Alabama	0.82%	0.28%	0.90%	0.26%	*0.34*	*0.29*
Alaska	2.00%	0.37%	1.85%	0.34%	*0.19*	*0.18*
Arizona	9.21%	1.32%	5.30%	1.10%	*0.14*	*0.21*
Arkansas	1.00%	0.23%	0.84%	0.20%	*0.23*	*0.24*
California	14.70%	2.04%	7.06%	1.68%	*0.14*	*0.24*
Colorado	5.17%	1.33%	3.48%	1.21%	*0.26*	*0.35*
Connecticut	3.12%	0.33%	1.70%	0.28%	*0.11*	*0.16*
Delaware	1.38%	0.12%	0.72%	0.09%	*0.09*	*0.12*
Dist. Columbia	4.60%	0.51%	3.18%	0.48%	*0.11*	*0.15*
Florida	17.33%	3.80%	11.09%	3.27%	*0.22*	*0.29*
Georgia	2.71%	0.57%	1.66%	0.48%	*0.21*	*0.29*
Hawaii	3.12%	0.73%	2.05%	0.66%	*0.23*	*0.32*
Idaho	2.28%	0.48%	1.82%	0.41%	*0.21*	*0.23*
Illinois	4.13%	0.64%	2.69%	0.57%	*0.16*	*0.21*
Indiana	1.26%	0.16%	0.81%	0.14%	*0.13*	*0.17*
Iowa	0.65%	0.12%	0.58%	0.11%	*0.19*	*0.19*
Kansas	1.90%	0.29%	1.47%	0.25%	*0.15*	*0.17*
Kentucky	0.70%	0.27%	n/a	n/a	*0.39*	
Louisiana	2.33%	0.60%	1.63%	0.56%	*0.26*	*0.34*
Maine	0.54%	0.15%	0.32%	0.13%	*0.28*	*0.41*
Maryland	3.46%	0.64%	2.00%	0.54%	*0.19*	*0.27*
Massachusetts	2.83%	0.32%	1.41%	0.26%	*0.11*	*0.19*
Michigan	1.34%	0.40%	0.90%	0.39%	*0.30*	*0.43*
Minnesota	0.90%	0.10%	0.57%	0.08%	*0.11*	*0.14*
Mississippi	0.71%	0.15%	0.56%	0.13%	*0.21*	*0.22*
Missouri	0.83%	0.15%	0.63%	0.14%	*0.18*	*0.22*
Montana	0.96%	0.22%	n/a	n/a	*0.23*	
Nebraska	1.35%	0.31%	0.94%	0.29%	*0.23*	*0.31*
Nevada	5.75%	1.11%	3.18%	0.96%	*0.19*	*0.30*
New Hampshire	0.73%	0.21%	0.65%	0.18%	*0.28*	*0.28*
New Jersey	7.03%	0.85%	3.78%	0.73%	*0.12*	*0.19*
New Mexico	21.73%	5.40%	15.08%	4.83%	*0.25*	*0.32*
New York	9.58%	0.71%	3.26%	0.56%	*0.07*	*0.17*
North Carolina	1.41%	0.30%	1.09%	0.25%	*0.21*	*0.23*
North Dakota	0.41%	0.04%	0.25%	0.03%	*0.09*	*0.13*
Ohio	0.87%	0.14%	0.67%	0.13%	*0.16*	*0.19*
Oklahoma	1.87%	0.58%	1.40%	0.53%	*0.31*	*0.38*
Oregon	2.12%	0.56%	1.56%	0.52%	*0.26*	*0.34*
Pennsylvania	1.26%	0.18%	0.72%	0.15%	*0.14*	*0.21*
Rhode Island	3.91%	0.32%	1.20%	0.20%	*0.08*	*0.17*
South Carolina	1.03%	0.27%	0.90%	0.25%	*0.26*	*0.28*
South Dakota	0.51%	0.20%	0.49%	0.19%	*0.40*	*0.39*
Tennessee	0.95%	0.23%	0.92%	0.21%	*0.24*	*0.23*
Texas	18.41%	2.33%	9.47%	1.88%	*0.13*	*0.20*
Utah	2.68%	0.38%	1.82%	0.32%	*0.14*	*0.17*

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Vermont	0.62%	0.10%	0.35%	0.08%	*0.15*	*0.22*

Table 1B. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Hispanic or Latino, All Industries, 2002, cont'd

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Virginia	3.59%	0.62%	1.79%	0.53%	*0.17*	*0.30*
Washington	2.20%	0.34%	1.74%	0.30%	*0.16*	*0.18*
West Virginia	0.57%	0.22%	0.81%	0.20%	*0.38*	*0.25*
Wisconsin	0.95%	0.22%	0.77%	0.21%	*0.23*	*0.27*
Wyoming	2.49%	0.66%	1.95%	0.63%	*0.26*	*0.32*

Notes: See Table 1A.

Table 1C. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Asians, All Industries, 2002

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Alabama	1.38%	0.56%	2.17%	0.53%	*0.41*	*0.24*
Alaska	3.07%	0.91%	4.05%	0.82%	*0.30*	*0.20*
Arizona	2.68%	0.73%	3.36%	0.67%	*0.27*	*0.20*
Arkansas	0.96%	0.37%	1.84%	0.36%	*0.39*	*0.19*
California	12.77%	4.50%	15.24%	4.17%	*0.35*	*0.27*
Colorado	2.35%	0.64%	2.94%	0.58%	*0.27*	*0.20*
Connecticut	2.38%	0.48%	3.24%	0.41%	*0.20*	*0.13*
Delaware	2.98%	0.53%	3.96%	0.49%	*0.18*	*0.12*
Dist. Columbia	5.11%	0.94%	10.11%	n/a	*0.18*	
Florida	2.68%	1.04%	3.78%	0.99%	*0.39*	*0.26*
Georgia	3.99%	1.08%	5.97%	1.00%	*0.27*	*0.17*
Hawaii	45.28%	18.88%	43.92%	17.73%	*0.42*	*0.40*
Idaho	0.91%	0.39%	1.29%	0.38%	*0.43*	*0.29*
Illinois	4.64%	1.27%	5.43%	1.19%	*0.27*	*0.22*
Indiana	1.40%	0.54%	2.11%	0.52%	*0.38*	*0.24*
Iowa	0.76%	0.20%	1.12%	0.18%	*0.26*	*0.16*
Kansas	1.62%	0.39%	2.36%	0.36%	*0.24*	*0.15*
Kentucky	1.08%	0.48%	1.89%	0.47%	*0.45*	0.25
Louisiana	2.50%	0.55%	3.07%	0.47%	*0.22*	*0.15*
Maine	0.62%	0.27%	1.28%	0.26%	*0.45*	*0.21*
Maryland	5.90%	1.89%	7.44%	1.76%	*0.32*	*0.24*
Massachusetts	3.21%	0.77%	3.76%	0.72%	*0.24*	*0.19*
Michigan	2.09%	0.64%	2.80%	0.60%	*0.31*	*0.21*
Minnesota	1.73%	0.38%	1.61%	0.35%	*0.22*	*0.22*
Mississippi	1.56%	0.87%	2.34%	0.79%	*0.56*	*0.34*
Missouri	1.45%	0.42%	2.19%	0.40%	*0.29*	*0.18*
Montana	0.51%	0.22%	0.90%	0.22%	*0.44*	0.24
Nebraska	1.00%	0.49%	1.53%	0.49%	*0.49*	*0.32*
Nevada	5.23%	1.35%	5.37%	1.17%	*0.26*	*0.22*
New Hampshire	1.22%	0.43%	2.07%	0.39%	*0.35*	*0.19*
New Jersey	7.33%	2.18%	8.46%	2.06%	*0.30*	*0.24*
New Mexico	1.73%	0.73%	2.52%	0.69%	*0.42*	*0.27*
New York	8.50%	1.76%	8.40%	1.58%	*0.21*	*0.19*
North Carolina	2.13%	0.58%	2.84%	0.54%	*0.27*	*0.19*
North Dakota	0.49%	0.25%	0.97%	0.25%	*0.52*	*0.26*
Ohio	1.68%	0.57%	2.71%	0.54%	*0.34*	*0.20*
Oklahoma	1.57%	0.47%	2.28%	0.42%	*0.30*	*0.18*
Oregon	3.02%	0.87%	3.42%	0.76%	*0.29*	*0.22*
Pennsylvania	2.59%	0.69%	3.17%	0.63%	*0.27*	*0.20*
Rhode Island	1.75%	0.49%	1.78%	0.44%	*0.28*	*0.25*
South Carolina	1.51%	0.81%	2.47%	0.79%	*0.54*	*0.32*
South Dakota	0.43%	0.15%	0.46%	0.14%	*0.34*	*0.31*
Tennessee	1.59%	0.50%	2.86%	0.47%	*0.31*	*0.16*
Texas	4.49%	1.14%	5.99%	1.04%	*0.25*	*0.17*
Utah	1.46%	0.48%	1.81%	0.45%	*0.33*	*0.25*

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State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Vermont	0.60%	0.17%	1.00%	n/a	*0.28*	

Table 1C. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Asians, All Industries, 2002, cont'd

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Virginia	5.75%	1.38%	6.05%	1.27%	*0.24*	*0.21*
Washington	5.75%	1.59%	6.01%	1.46%	*0.28*	*0.24*
West Virginia	1.09%	0.51%	2.12%	0.50%	*0.47*	*0.23*
Wisconsin	1.26%	0.34%	1.61%	0.32%	*0.27*	*0.20*
Wyoming	0.76%	0.25%	1.34%	0.24%	*0.33*	*0.18*

Notes: See Table 1A.

Table 1D. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, American Indians and Alaska Natives, All Industries, 2002

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Alabama	0.94%	0.18%	0.69%	0.16%	*0.19*	*0.23*
Alaska	8.29%	6.02%	4.76%	6.07%	*0.73*	*1.28*
Arizona	1.72%	0.17%	0.49%	0.14%	*0.10*	*0.29*
Arkansas	1.09%	0.19%	0.50%	0.16%	*0.18*	*0.31*
California	1.31%	0.14%	0.54%	0.11%	*0.11*	*0.20*
Colorado	0.85%	0.14%	0.50%	0.11%	*0.16*	*0.23*
Connecticut	0.40%	0.04%	n/a	n/a	*0.09*	
Delaware	n/a	n/a	n/a	n/a		
Dist. Columbia	0.47%	0.05%	0.33%	0.05%	*0.10*	*0.14*
Florida	0.64%	0.06%	0.23%	0.04%	*0.09*	*0.16*
Georgia	0.66%	0.08%	0.42%	0.06%	*0.12*	*0.15*
Hawaii	0.90%	0.15%	n/a	n/a	*0.17*	
Idaho	0.94%	0.28%	0.54%	0.26%	*0.30*	*0.48*
Illinois	0.35%	0.04%	0.20%	0.03%	*0.11*	*0.16*
Indiana	0.45%	0.05%	0.27%	0.05%	*0.12*	*0.17*
Iowa	0.27%	0.04%	n/a	n/a	*0.13*	
Kansas	0.79%	0.15%	0.60%	0.14%	*0.20*	*0.24*
Kentucky	0.44%	0.03%	0.15%	0.02%	*0.06*	*0.11*
Louisiana	0.82%	0.10%	0.30%	0.08%	*0.12*	*0.27*
Maine	0.50%	0.06%	0.32%	0.05%	*0.13*	*0.15*
Maryland	0.81%	0.11%	0.35%	0.09%	*0.13*	*0.24*
Massachusetts	0.40%	0.06%	0.24%	0.05%	*0.14*	*0.20*
Michigan	0.73%	0.09%	0.40%	0.08%	*0.12*	*0.19*
Minnesota	0.62%	0.07%	0.43%	0.06%	*0.11*	*0.15*
Mississippi	0.36%	0.05%	n/a	n/a	*0.12*	
Missouri	0.75%	0.08%	0.39%	0.06%	*0.10*	*0.14*
Montana	1.98%	0.48%	1.26%	0.43%	*0.24*	*0.34*
Nebraska	0.29%	0.03%	0.11%	0.03%	*0.11*	*0.25*
Nevada	1.12%	0.14%	0.59%	0.10%	*0.13*	*0.17*
New Hampshire	0.42%	0.06%	0.29%	0.05%	*0.15*	*0.17*
New Jersey	0.37%	0.03%	0.18%	0.02%	*0.09*	*0.14*
New Mexico	4.99%	0.52%	1.14%	0.45%	*0.11*	*0.39*
New York	0.65%	0.04%	0.23%	0.03%	*0.06*	*0.13*
North Carolina	0.93%	0.10%	0.55%	0.07%	*0.11*	*0.14*
North Dakota	1.50%	0.29%	0.55%	0.26%	*0.19*	*0.48*
Ohio	0.38%	0.05%	0.20%	0.05%	*0.14*	*0.23*
Oklahoma	5.86%	1.28%	3.53%	1.10%	*0.22*	*0.31*
Oregon	1.02%	0.14%	0.53%	0.10%	*0.13*	*0.20*
Pennsylvania	n/a	n/a	n/a	n/a		
Rhode Island	0.51%	0.04%	0.13%	0.02%	*0.08*	*0.19*
South Carolina	0.49%	0.06%	0.32%	0.05%	*0.12*	*0.16*
South Dakota	1.87%	0.22%	0.73%	0.21%	*0.12*	*0.28*
Tennessee	0.78%	0.15%	0.38%	0.12%	*0.19*	*0.32*
Texas	0.93%	0.17%	0.61%	0.15%	*0.19*	*0.25*
Utah	0.59%	0.06%	0.36%	0.05%	*0.09*	*0.13*

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Vermont	0.41%	0.11%	0.18%	0.10%	*0.27*	*0.54*

Table 1D. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, American Indians and Alaska Natives, All Industries, 2002, cont'd

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Virginia	0.50%	0.08%	0.36%	0.07%	*0.17*	*0.19*
Washington	1.23%	0.22%	0.72%	0.19%	*0.18*	*0.27*
West Virginia	0.36%	0.04%	0.30%	0.03%	*0.11*	*0.09*
Wisconsin	0.64%	0.10%	0.35%	0.09%	*0.15*	*0.25*
Wyoming	1.12%	0.18%	0.87%	0.15%	*0.16*	*0.18*

Notes: See Table 1A.

Table 1E. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Native Hawaiians and Pacific Islanders, All Industries, 2002

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Alabama	0.03%	0.00%	0.01%	0.00%	*0.06*	*0.24*
Alaska	0.24%	0.02%	0.22%	n/a	*0.09*	
Arizona	0.09%	0.01%	0.07%	0.01%	*0.13*	*0.14*
Arkansas	0.03%	0.00%	n/a	n/a	*0.09*	
California	0.24%	0.04%	0.15%	0.03%	*0.18*	*0.22*
Colorado	0.08%	0.01%	0.05%	0.01%	*0.11*	*0.16*
Connecticut	0.06%	0.02%	n/a	n/a	*0.36*	
Delaware	0.03%	n/a	n/a	n/a		
Dist. Columbia	n/a	n/a	n/a	n/a		
Florida	0.10%	0.01%	0.04%	0.00%	*0.07*	*0.13*
Georgia	0.03%	0.00%	0.03%	0.00%	*0.13*	*0.08*
Hawaii	8.42%	2.16%	4.26%	1.98%	*0.26*	*0.46*
Idaho	0.08%	0.01%	n/a	n/a	*0.15*	
Illinois	0.07%	n/a	n/a	n/a		
Indiana	0.03%	0.02%	n/a	n/a	*0.61*	
Iowa	0.01%	0.00%	0.00%	n/a	*0.39*	
Kansas	0.02%	0.01%	n/a	n/a	*0.42*	
Kentucky	0.02%	n/a	0.00%	n/a		
Louisiana	n/a	n/a	n/a	n/a		
Maine	n/a	n/a	n/a	n/a		
Maryland	0.02%	n/a	0.04%	0.01%		*0.24*
Massachusetts	n/a	n/a	n/a	n/a		
Michigan	0.03%	0.00%	n/a	n/a	*0.17*	
Minnesota	n/a	n/a	n/a	n/a		
Mississippi	0.07%	0.00%	n/a	n/a	*0.07*	
Missouri	0.02%	0.01%	n/a	n/a	*0.35*	
Montana	0.04%	0.00%	n/a	n/a	*0.12*	
Nebraska	0.01%	n/a	0.00%	0.00%		
Nevada	0.18%	0.04%	n/a	n/a	*0.20*	
New Hampshire	0.01%	n/a	n/a	n/a		
New Jersey	0.06%	0.00%	n/a	n/a	*0.07*	
New Mexico	0.10%	0.02%	n/a	n/a	*0.19*	
New York	0.18%	0.01%	0.04%	n/a	*0.04*	
North Carolina	0.03%	0.00%	n/a	n/a	*0.07*	
North Dakota	0.00%	n/a	0.00%	0.00%		
Ohio	n/a	n/a	n/a	n/a		
Oklahoma	0.10%	0.00%	0.03%	0.00%	*0.05*	*0.10*
Oregon	0.12%	0.02%	0.08%	0.02%	*0.18*	*0.21*
Pennsylvania	0.03%	0.00%	n/a	n/a	*0.13*	
Rhode Island	n/a	n/a	n/a	n/a		
South Carolina	0.01%	0.00%	n/a	n/a	*0.29*	
South Dakota	0.02%	n/a	0.01%	n/a		
Tennessee	n/a	n/a	n/a	n/a		
Texas	0.08%	0.00%	n/a	n/a	*0.05*	
Utah	0.22%	0.10%	0.18%	0.10%	*0.47*	0.58

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Vermont	n/a	n/a	n/a	n/a		

Table 1E. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Native Hawaiians and Pacific Islanders, All Industries, 2002, cont'd

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Virginia	0.08%	0.03%	0.07%	n/a	*0.32*	
Washington	0.16%	0.05%	0.09%	0.05%	*0.33*	*0.55*
West Virginia	0.01%	n/a	0.00%	0.00%		
Wisconsin	0.03%	0.00%	0.01%	0.00%	*0.03*	*0.12*
Wyoming	0.04%	0.00%	0.00%	0.00%	*0.04*	

Notes: See Table 1A. The Employer disparity ratio for Utah is statistically significant at a 1-in-10 probability level.

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Table 1F. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Women, All Industries, 2002

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Alabama	26.43%	4.29%	15.77%	3.87%	*0.16*	*0.25*
Alaska	26.24%	5.08%	18.87%	4.53%	*0.19*	*0.24*
Arizona	28.79%	4.83%	16.60%	4.26%	*0.17*	*0.26*
Arkansas	23.74%	3.85%	14.92%	3.50%	*0.16*	*0.23*
California	29.93%	4.92%	17.18%	4.25%	*0.16*	*0.25*
Colorado	29.08%	4.25%	18.36%	3.69%	*0.15*	*0.20*
Connecticut	27.23%	3.14%	14.66%	2.68%	*0.12*	*0.18*
Delaware	24.14%	1.74%	14.86%	1.45%	*0.07*	*0.10*
Dist. Columbia	33.23%	2.25%	17.92%	n/a	*0.07*	
Florida	28.41%	5.70%	18.09%	5.01%	*0.20*	*0.28*
Georgia	29.09%	4.06%	17.02%	3.60%	*0.14*	*0.21*
Hawaii	30.18%	6.91%	19.32%	6.17%	*0.23*	*0.32*
Idaho	23.71%	4.42%	13.72%	3.96%	*0.19*	*0.29*
Illinois	29.74%	4.08%	16.53%	3.69%	*0.14*	*0.22*
Indiana	27.39%	3.41%	14.77%	3.07%	*0.12*	*0.21*
Iowa	26.98%	3.17%	14.04%	2.86%	*0.12*	*0.20*
Kansas	27.18%	3.02%	15.78%	2.68%	*0.11*	*0.17*
Kentucky	25.66%	3.33%	15.01%	2.95%	*0.13*	*0.20*
Louisiana	26.43%	3.76%	15.54%	3.36%	*0.14*	*0.22*
Maine	24.01%	4.40%	14.88%	3.83%	*0.18*	*0.26*
Maryland	30.98%	4.63%	17.24%	3.99%	*0.15*	*0.23*
Massachusetts	28.73%	3.57%	15.88%	3.07%	*0.12*	*0.19*
Michigan	29.59%	3.68%	15.61%	3.29%	*0.12*	*0.21*
Minnesota	27.92%	3.52%	14.71%	3.15%	*0.13*	*0.21*
Mississippi	25.11%	4.79%	15.67%	4.27%	*0.19*	*0.27*
Missouri	27.41%	4.14%	16.69%	3.80%	*0.15*	*0.23*
Montana	24.42%	4.79%	16.41%	4.16%	*0.20*	*0.25*
Nebraska	26.61%	4.16%	14.95%	3.91%	*0.16*	*0.26*
Nevada	28.13%	5.86%	15.36%	5.17%	*0.21*	*0.34*
New Hampshire	24.74%	4.99%	15.80%	4.56%	*0.20*	*0.29*
New Jersey	26.13%	4.19%	15.46%	3.79%	*0.16*	*0.24*
New Mexico	30.91%	5.44%	18.54%	4.81%	*0.18*	*0.26*
New York	29.59%	4.10%	15.74%	3.55%	*0.14*	*0.23*
North Carolina	27.06%	4.43%	16.14%	4.02%	*0.16*	*0.25*
North Dakota	23.25%	3.12%	11.87%	2.74%	*0.13*	*0.23*
Ohio	28.12%	3.61%	15.11%	3.23%	*0.13*	*0.21*
Oklahoma	25.73%	4.69%	15.97%	4.25%	*0.18*	*0.27*
Oregon	29.49%	4.21%	16.30%	3.66%	*0.14*	*0.22*
Pennsylvania	25.98%	4.09%	15.28%	3.76%	*0.16*	*0.25*
Rhode Island	26.52%	5.48%	14.40%	4.92%	*0.21*	*0.34*
South Carolina	26.22%	4.29%	15.55%	3.86%	*0.16*	*0.25*
South Dakota	22.40%	2.58%	13.61%	2.31%	*0.12*	*0.17*
Tennessee	25.96%	4.04%	14.78%	3.61%	*0.16*	*0.24*
Texas	27.02%	3.63%	17.43%	3.18%	*0.13*	*0.18*
Utah	25.12%	4.06%	12.69%	3.66%	*0.16*	*0.29*

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State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Vermont	26.26%	3.64%	13.41%	3.00%	*0.14*	*0.22*

Table 1F. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Women, All Industries, 2002, cont'd

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Virginia	29.66%	3.96%	17.35%	3.52%	*0.13*	*0.20*
Washington	29.40%	3.88%	16.21%	3.41%	*0.13*	*0.21*
West Virginia	27.68%	3.82%	14.76%	3.38%	*0.14*	*0.23*
Wisconsin	26.49%	4.03%	14.99%	3.75%	*0.15*	*0.25*
Wyoming	24.38%	3.37%	15.63%	n/a	*0.14*	

Notes: See Table 1A.

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Table 2A. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, African Americans, Construction Industries, 2002

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Alabama	5.71%	1.09%	3.12%	0.74%	*0.19*	*0.24*
Alaska	0.44%	0.13%	0.23%	0.11%	*0.30*	*0.46*
Arizona	0.57%	0.10%	0.20%	0.09%	*0.18*	0.45
Arkansas	2.60%	1.38%	n/a	n/a	0.53	
California	2.10%	0.47%	1.05%	0.40%	*0.22*	*0.38*
Colorado	0.65%	0.24%	n/a	n/a	*0.36*	
Connecticut	2.13%	0.39%	0.97%	0.28%	*0.18*	*0.28*
Delaware	n/a	n/a	n/a	n/a		
Dist. Columbia	34.90%	n/a	17.16%	7.05%		*0.41*
Florida	4.15%	0.59%	1.67%	0.45%	*0.14*	*0.27*
Georgia	6.19%	1.68%	2.96%	1.42%	*0.27*	*0.48*
Hawaii	n/a	n/a	n/a	n/a		
Idaho	n/a	n/a	n/a	n/a		
Illinois	2.79%	0.80%	0.94%	0.74%	*0.29*	*0.79*
Indiana	0.89%	0.97%	0.65%	1.02%	*1.09*	*1.57*
Iowa	0.22%	0.15%	0.13%	0.14%	*0.68*	*1.04*
Kansas	1.09%	0.52%	1.17%	0.48%	*0.48*	*0.41*
Kentucky	n/a	n/a	n/a	n/a		
Louisiana	9.90%	1.34%	2.92%	0.77%	*0.14*	*0.26*
Maine	0.04%	n/a	0.04%	n/a		
Maryland	7.12%	2.05%	2.69%	1.82%	*0.29*	*0.68*
Massachusetts	1.18%	0.55%	0.59%	0.51%	*0.47*	*0.87*
Michigan	1.64%	1.33%	0.85%	1.32%	*0.81*	*1.55*
Minnesota	0.73%	0.18%	0.11%	0.15%	*0.25*	*1.40*
Mississippi	10.47%	2.14%	5.65%	0.98%	*0.20*	*0.17*
Missouri	1.50%	0.62%	0.77%	0.60%	*0.41*	*0.78*
Montana	n/a	n/a	n/a	n/a		
Nebraska	0.51%	n/a	0.54%	n/a		
Nevada	1.18%	0.37%	n/a	n/a	*0.31*	
New Hampshire	n/a	n/a	n/a	n/a		
New Jersey	2.42%	0.58%	1.31%	0.47%	*0.24*	*0.36*
New Mexico	0.60%	0.16%	n/a	n/a	*0.27*	
New York	4.86%	0.77%	1.52%	0.67%	*0.16*	*0.44*
North Carolina	4.22%	0.87%	n/a	n/a	*0.21*	
North Dakota	0.00%	0.00%	0.00%	0.00%		
Ohio	2.04%	1.45%	1.37%	1.50%	*0.71*	*1.10*
Oklahoma	1.41%	0.32%	0.26%	0.16%	*0.23*	*0.61*
Oregon	0.41%	0.30%	0.38%	0.31%	*0.74*	*0.80*
Pennsylvania	1.41%	0.38%	0.54%	0.35%	*0.27*	*0.64*
Rhode Island	n/a	n/a	n/a	n/a		
South Carolina	6.65%	1.44%	3.95%	0.99%	*0.22*	*0.25*
South Dakota	n/a	n/a	n/a	n/a		
Tennessee	2.72%	0.70%	1.39%	0.57%	*0.26*	*0.41*
Texas	2.16%	0.57%	0.92%	0.41%	*0.26*	*0.45*
Utah	0.25%	0.03%	0.02%	n/a	*0.12*	

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Vermont	n/a	n/a	n/a	n/a		

Table 2A. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, African Americans, Construction Industries, 2002, cont'd

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Virginia	4.10%	1.05%	2.71%	0.88%	*0.26*	*0.33*
Washington	0.55%	0.28%	n/a	n/a	*0.52*	
West Virginia	0.54%	0.94%	0.29%	0.97%	*1.73*	*3.32*
Wisconsin	0.54%	0.40%	n/a	n/a	*0.75*	
Wyoming	0.13%	n/a	n/a	n/a		

Notes: The disparity ratio is derived by dividing the percentage of sales by the corresponding percentage of firms. A disparity ratio of zero indicates complete disparity while a value of 1 indicates parity. Disparity ratios in italics are statistically significant at a 1-in-20 probability level or better. The Employer disparity ratio for Arizona and the All Firms disparity ratio for Arkansas are statistically significant at a 1-in-10 probability level.

Table 2B. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Hispanic or Latino, Construction Industries, 2002

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Alabama	1.23%	0.44%	1.32%	0.28%	*0.36*	*0.21*
Alaska	2.20%	0.86%	2.50%	0.81%	*0.39*	*0.32*
Arizona	11.66%	2.73%	6.97%	2.47%	*0.23*	*0.35*
Arkansas	1.50%	0.76%	0.44%	0.66%	*0.51*	*1.48*
California	15.38%	4.30%	8.25%	3.71%	*0.28*	*0.45*
Colorado	7.35%	2.61%	5.50%	2.22%	*0.36*	*0.40*
Connecticut	3.50%	0.64%	1.67%	0.44%	*0.18*	*0.26*
Delaware	1.16%	0.58%	0.25%	0.36%	*0.50*	*1.45*
Dist. Columbia	19.76%	n/a	10.65%	n/a	n/a	
Florida	17.44%	5.15%	8.25%	3.90%	*0.30*	*0.47*
Georgia	5.77%	1.39%	1.95%	0.62%	*0.24*	*0.32*
Hawaii	3.40%	1.31%	3.05%	n/a	*0.38*	
Idaho	2.01%	1.63%	1.93%	1.67%	*0.81*	*0.87*
Illinois	4.52%	1.52%	2.24%	1.38%	*0.34*	*0.61*
Indiana	1.67%	0.73%	0.97%	0.62%	*0.44*	*0.64*
Iowa	0.73%	0.29%	0.46%	0.18%	*0.39*	*0.40*
Kansas	2.49%	1.53%	n/a	n/a	*0.61*	
Kentucky	0.79%	0.43%	0.41%	0.32%	*0.55*	*0.77*
Louisiana	3.23%	1.84%	0.82%	1.70%	*0.57*	*2.07*
Maine	0.31%	0.33%	0.28%	0.37%	*1.04*	*1.34*
Maryland	8.43%	1.89%	3.13%	1.44%	*0.22*	*0.46*
Massachusetts	2.05%	0.75%	1.15%	0.67%	*0.37*	*0.58*
Michigan	1.33%	0.75%	0.95%	0.70%	*0.57*	0.73
Minnesota	0.88%	0.42%	0.67%	0.35%	*0.47*	*0.52*
Mississippi	0.75%	0.57%	0.31%	0.49%	*0.76*	*1.59*
Missouri	0.72%	0.43%	0.68%	0.41%	*0.59*	*0.60*
Montana	n/a	n/a	n/a	n/a		
Nebraska	1.35%	0.33%	n/a	n/a	*0.24*	
Nevada	7.05%	2.70%	3.93%	2.64%	*0.38*	*0.67*
New Hampshire	n/a	n/a	n/a	n/a		
New Jersey	6.97%	2.13%	3.33%	1.83%	*0.31*	*0.55*
New Mexico	29.50%	17.20%	25.44%	15.39%	*0.58*	*0.60*
New York	7.59%	1.72%	2.74%	1.48%	*0.23*	*0.54*
North Carolina	2.26%	1.11%	1.32%	0.72%	*0.49*	*0.55*
North Dakota	n/a	n/a	n/a	n/a		
Ohio	0.76%	0.32%	0.58%	0.27%	*0.42*	*0.47*
Oklahoma	2.27%	1.03%	1.49%	0.82%	*0.46*	*0.55*
Oregon	1.69%	1.10%	1.92%	1.10%	*0.65*	*0.57*
Pennsylvania	1.22%	0.36%	0.65%	0.28%	*0.29*	*0.44*
Rhode Island	n/a	n/a	n/a	n/a		
South Carolina	1.41%	0.67%	1.13%	0.58%	*0.48*	*0.51*
South Dakota	n/a	n/a	n/a	n/a		
Tennessee	1.47%	0.34%	0.71%	0.22%	*0.23*	*0.31*
Texas	30.86%	7.30%	11.30%	4.71%	*0.24*	*0.42*
Utah	2.78%	0.77%	1.60%	0.68%	*0.28*	*0.43*

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Vermont	n/a	n/a	n/a	n/a		

Table 2B. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Hispanic or Latino, Construction Industries, 2002, cont'd

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Virginia	7.24%	1.99%	2.10%	1.41%	*0.28*	*0.67*
Washington	1.67%	0.76%	1.78%	0.76%	*0.45*	*0.43*
West Virginia	0.35%	0.96%	0.41%	1.02%	*2.75*	*2.50*
Wisconsin	0.70%	0.37%	0.58%	0.35%	*0.53*	*0.61*
Wyoming	1.23%	0.44%	1.32%	0.28%	*0.36*	*0.21*

Notes: See Table 2A. The Employer disparity ratio for Michigan is statistically significant at a 1-in-10 probability level.

Table 2C. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Asians, Construction Industries, 2002

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Alabama						
Alaska	1.73%	0.43%	0.67%	0.32%	*0.25*	0.48
Arizona	0.55%	0.14%	n/a	n/a	*0.25*	
Arkansas	n/a	n/a	n/a	n/a		
California	4.77%	1.55%	3.57%	1.30%	*0.32*	*0.36*
Colorado	0.88%	0.21%	0.54%	0.17%	*0.24*	*0.31*
Connecticut	0.30%	0.26%	0.27%	0.27%	*0.86*	*1.01*
Delaware	n/a	n/a	n/a	n/a		
Dist. Columbia	2.69%	n/a	6.80%	n/a		
Florida	0.75%	0.36%	0.45%	0.35%	*0.48*	*0.78*
Georgia	0.69%	0.40%	n/a	n/a	*0.58*	
Hawaii	37.27%	27.68%	35.62%	27.67%	*0.74*	*0.78*
Idaho	0.31%	0.16%	0.24%	0.14%	*0.51*	*0.58*
Illinois	0.80%	0.60%	0.65%	0.59%	*0.74*	*0.90*
Indiana	0.35%	0.08%	n/a	n/a	*0.23*	
Iowa	n/a	n/a	n/a	n/a		
Kansas	0.32%	0.06%	n/a	n/a	*0.19*	
Kentucky	0.17%	0.27%	0.20%	0.29%	*1.62*	*1.50*
Louisiana	0.63%	0.21%	n/a	n/a	*0.34*	
Maine	n/a	n/a	n/a	n/a		
Maryland	4.14%	1.28%	1.49%		*0.31*	
Massachusetts	1.21%	1.03%	0.54%	1.03%	*0.85*	*1.90*
Michigan	0.34%	0.25%	0.26%	0.24%	0.72	*0.95*
Minnesota	0.47%	0.44%	n/a	n/a	*0.92*	
Mississippi	n/a	n/a	n/a	n/a		
Missouri	0.23%	0.29%	0.23%	n/a	*1.22*	
Montana	0.18%	0.15%	n/a	n/a	*0.87*	
Nebraska	n/a	n/a	n/a	n/a		
Nevada	1.11%	0.48%	0.70%	0.47%	*0.44*	*0.66*
New Hampshire	n/a	n/a	n/a	n/a		
New Jersey	1.33%	0.77%	0.89%	n/a	*0.58*	
New Mexico	n/a	n/a	n/a	n/a		
New York	4.12%	1.15%	1.93%	1.03%	*0.28*	*0.53*
North Carolina	0.53%	0.34%	0.40%	0.31%	*0.65*	*0.76*
North Dakota	n/a	n/a	n/a	n/a		
Ohio	0.43%	0.39%	n/a	n/a	*0.91*	
Oklahoma	0.57%	0.10%	n/a	n/a	*0.18*	
Oregon	0.86%	0.30%	0.67%	0.25%	*0.35*	*0.38*
Pennsylvania	0.72%	0.23%	0.23%	0.20%	*0.32*	*0.88*
Rhode Island	0.38%	0.25%	0.06%	n/a	*0.67*	
South Carolina	n/a	n/a	n/a	n/a		
South Dakota	n/a	n/a	n/a	n/a		
Tennessee	0.47%	0.16%	0.32%	0.13%	*0.35*	*0.39*
Texas	1.02%	0.40%	0.69%	0.36%	*0.39*	*0.52*
Utah	0.42%	0.66%	n/a	n/a	*1.57*	

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Vermont	n/a	n/a	n/a	n/a		

Table 2C. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Asians, Construction Industries, 2002, cont'd

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Virginia	3.14%	0.86%	1.28%	0.58%	*0.27*	*0.45*
Washington	2.10%	1.09%	1.72%	1.06%	*0.52*	*0.62*
West Virginia	0.15%	0.15%	n/a	n/a	*0.96*	
Wisconsin	0.21%	0.06%	n/a	n/a	*0.26*	
Wyoming	0.13%	n/a	n/a	n/a		

Notes: See Table 2A. The Employer disparity ratio for Alaska and the All Firms disparity ratio for Michigan are statistically significant at a 1-in-10 probability level.

Table 2D. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Amer. Indians and Alaska Natives, Construction Industries, 2002

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Alabama	1.30%	0.56%	1.31%	0.53%	*0.43*	*0.40*
Alaska	5.08%	15.03%	5.24%	15.67%	*2.96*	*2.99*
Arizona	2.05%	0.56%	0.80%	0.51%	*0.27*	0.64
Arkansas	1.81%	1.53%	1.19%	1.51%	*0.84*	*1.26*
California	2.15%	0.70%	1.27%	0.62%	*0.33*	*0.49*
Colorado	1.18%	0.31%	0.87%	0.24%	*0.26*	*0.28*
Connecticut	0.53%	0.09%	n/a	n/a	*0.16*	
Delaware	n/a	n/a	n/a	n/a		
Dist. Columbia	0.75%	n/a	0.00%	0.00%		
Florida	1.00%	0.17%	n/a	n/a	*0.17*	
Georgia	1.03%	0.17%	0.26%	0.03%	*0.16*	*0.12*
Hawaii	0.54%	n/a	n/a	n/a		
Idaho	1.47%	0.84%	n/a	n/a	*0.57*	
Illinois	0.33%	0.13%	0.22%	0.12%	*0.39*	*0.55*
Indiana	0.20%	0.23%	n/a	n/a	*1.16*	
Iowa	n/a	n/a	n/a	n/a		
Kansas	1.21%	0.71%	0.90%	0.69%	*0.59*	*0.77*
Kentucky	n/a	n/a	n/a	n/a		
Louisiana	1.05%	0.29%	n/a	n/a	*0.28*	
Maine	0.81%	0.18%	n/a	n/a	*0.22*	
Maryland	2.07%	0.32%	n/a	n/a	*0.15*	
Massachusetts	0.67%	0.07%	0.29%	0.05%	*0.11*	*0.18*
Michigan	0.95%	0.34%	0.48%	0.31%	*0.36*	*0.65*
Minnesota	0.66%	0.21%	0.42%	0.20%	*0.32*	*0.48*
Mississippi	0.38%	0.03%	n/a	n/a	*0.08*	
Missouri	1.36%	0.39%	n/a	n/a	*0.28*	
Montana	2.30%	1.91%	1.81%	1.99%	*0.83*	*1.10*
Nebraska	0.33%	0.29%	0.20%	0.28%	*0.86*	*1.36*
Nevada	2.07%	0.29%	1.10%	0.26%	*0.14*	*0.23*
New Hampshire	0.79%	0.38%	n/a	n/a	0.47	
New Jersey	0.38%	n/a	0.16%	n/a		
New Mexico	n/a	n/a	n/a	n/a		
New York	0.96%	0.19%	0.38%	0.14%	*0.20*	*0.37*
North Carolina	1.34%	0.48%	0.95%	0.38%	*0.36*	*0.40*
North Dakota	1.93%	1.02%	1.68%	1.00%	*0.53*	*0.60*
Ohio	0.48%	0.15%	n/a	n/a	*0.32*	
Oklahoma	8.30%	5.39%	5.00%	4.75%	*0.65*	*0.95*
Oregon	1.36%	0.64%	1.03%	0.60%	*0.47*	*0.58*
Pennsylvania	0.37%	0.08%	0.23%	0.07%	*0.21*	*0.28*
Rhode Island	n/a	n/a	n/a	n/a		
South Carolina	0.58%	0.17%	n/a	n/a	*0.29*	
South Dakota	2.65%	1.74%	1.85%	1.79%	*0.66*	*0.97*
Tennessee	1.03%	0.35%	n/a	n/a	*0.34*	
Texas	1.09%	0.57%	0.91%	0.54%	*0.53*	*0.60*
Utah	0.92%	0.22%	0.48%	0.18%	*0.23*	*0.37*

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Vermont	0.91%	0.38%	0.31%	0.27%	*0.42*	*0.85*

Table 2D. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Amer. Indians and Alaska Natives, Construction Industries, 2002, cont'd

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Virginia	0.75%	0.30%	0.40%	0.20%	*0.40*	*0.50*
Washington	1.06%	0.66%	0.92%	0.63%	0.62	*0.68*
West Virginia	0.55%	0.13%	0.09%	0.12%	*0.24*	*1.33*
Wisconsin	0.57%	0.32%	0.31%	0.31%	*0.55*	*1.00*
Wyoming	1.82%	0.84%	n/a	n/a	*0.46*	

Notes: See Table 2A. The Employer disparity ratio for Arizona and the All Firms disparity ratio for New Hampshire and Washington are statistically significant at a 1-in-10 probability level.

Table 2E. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Native Hawaiians and Pac. Islanders, Construction Industries, 2002

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Alabama	0.00%	n/a	0.01%	n/a		
Alaska	n/a	n/a	n/a	n/a		
Arizona	0.14%	n/a	n/a	n/a		
Arkansas	n/a	n/a	n/a	n/a		
California	n/a	n/a	n/a	n/a		
Colorado	0.14%	0.03%	0.09%	n/a	*0.24*	
Connecticut	n/a	n/a	n/a	n/a		
Delaware	0.00%	0.00%	0.00%	0.00%		
Dist. Columbia	0.06%	n/a	0.00%	0.00%		
Florida	n/a	n/a	n/a	n/a		
Georgia	0.03%	0.03%	0.07%	0.03%	0.89	0.44
Hawaii	12.87%	4.66%	n/a	n/a	*0.36*	
Idaho	n/a	n/a	n/a	n/a		
Illinois	n/a	n/a	n/a	n/a		
Indiana	n/a	n/a	n/a	n/a		
Iowa	0.01%	n/a	n/a	n/a		
Kansas	0.00%	0.00%	0.00%	0.00%		
Kentucky	0.01%	n/a	n/a	n/a		
Louisiana	0.00%	n/a	0.01%	n/a		
Maine	0.01%	n/a	0.04%	n/a		
Maryland	0.01%	n/a	0.01%	n/a		
Massachusetts	n/a	n/a	n/a	n/a		
Michigan	0.00%	n/a	0.01%	n/a		
Minnesota	n/a	n/a	n/a	n/a		
Mississippi	0.02%	0.02%	0.02%	n/a	0.74	
Missouri	n/a	n/a	n/a	n/a		
Montana	0.00%	0.00%	0.00%	0.00%		
Nebraska	0.01%	n/a	0.00%	0.00%		
Nevada	0.06%	n/a	n/a	n/a		
New Hampshire	n/a	n/a	n/a	n/a		
New Jersey	0.03%	n/a	0.07%	n/a		
New Mexico	0.01%	n/a	0.02%	n/a		
New York	n/a	n/a	n/a	n/a		
North Carolina	0.01%	0.00%	n/a	n/a	0.47	
North Dakota	0.00%	0.00%	0.00%	0.00%		
Ohio	n/a	n/a	n/a	n/a		
Oklahoma	0.50%	0.06%	n/a	n/a	*0.11*	
Oregon	0.08%	0.09%	n/a	n/a	1.05	
Pennsylvania	n/a	n/a	n/a	n/a		
Rhode Island	0.02%	n/a	0.00%	0.00%		
South Carolina	n/a	n/a	n/a	n/a		
South Dakota	0.00%	0.00%	0.00%	0.00%		
Tennessee	0.00%	n/a	0.01%	n/a		
Texas	n/a	n/a	n/a	n/a		
Utah	0.17%	0.82%	n/a	n/a	*4.85*	

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Vermont	0.00%	0.00%	0.00%	0.00%		

Table 2E. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, Native Hawaiians and Pac. Islanders, Construction Industries, 2002, cont'd

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Virginia	0.02%	n/a	0.05%	n/a		
Washington	0.13%	n/a	0.18%	n/a		
West Virginia	0.00%	0.00%	0.00%	0.00%		
Wisconsin	n/a	n/a	n/a	n/a		
Wyoming	0.03%	n/a	0.00%	0.00%		

Notes: See Table 2A. The Employer disparity ratio for Georgia is statistically significant at a 1-in-10 probability level.

Table 2F. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employers Firms, Women, Construction Industries, 2002

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Alabama	7.45%	3.97%	6.96%	3.75%	*0.53*	*0.54*
Alaska	10.30%	8.39%	n/a	n/a	*0.81*	
Arizona	7.47%	4.69%	7.23%	4.34%	*0.63*	*0.60*
Arkansas	7.37%	4.05%	5.55%	4.11%	*0.55*	0.74
California	5.98%	4.97%	5.65%	4.95%	*0.83*	*0.88*
Colorado	7.85%	3.99%	7.32%	3.89%	*0.51*	*0.53*
Connecticut	6.85%	5.69%	7.03%	5.68%	*0.83*	*0.81*
Delaware	5.19%	4.30%	7.36%	n/a	*0.83*	
Dist. Columbia	5.25%	n/a	10.36%	n/a		
Florida	8.33%	5.31%	7.38%	5.05%	*0.64*	*0.68*
Georgia	6.96%	3.76%	6.49%	3.53%	*0.54*	*0.54*
Hawaii	8.03%	3.62%	5.93%	3.56%	*0.45*	0.60
Idaho	6.89%	4.92%	5.88%	4.97%	0.71	*0.84*
Illinois	8.92%	7.87%	10.83%	8.12%	0.88	*0.75*
Indiana	7.45%	4.32%	5.85%	4.36%	*0.58*	*0.75*
Iowa	6.74%	4.59%	4.60%	4.60%	*0.68*	*1.00*
Kansas	6.57%	4.57%	n/a	n/a	*0.70*	
Kentucky	7.62%	5.30%	6.75%	5.29%	*0.70*	*0.78*
Louisiana	7.06%	5.64%	7.89%	5.66%	*0.80*	*0.72*
Maine	6.12%	5.45%	5.47%	5.32%	*0.89*	*0.97*
Maryland	8.14%	5.46%	7.75%	5.40%	*0.67*	*0.70*
Massachusetts	6.44%	4.00%	6.31%	3.98%	*0.62*	*0.63*
Michigan	8.01%	4.98%	6.49%	4.94%	*0.62*	*0.76*
Minnesota	6.61%	3.98%	6.49%	3.93%	*0.60*	*0.61*
Mississippi	5.14%	5.70%	6.12%	5.07%	*1.11*	*0.83*
Missouri	8.21%	5.50%	8.05%	5.57%	*0.67*	*0.69*
Montana	7.09%	5.34%	7.35%	5.49%	0.75	*0.75*
Nebraska	4.55%	3.13%	4.22%	3.21%	*0.69*	0.76
Nevada	9.79%	5.22%	9.21%	5.09%	*0.53*	*0.55*
New Hampshire	3.38%	4.64%	3.35%	5.22%	*1.37*	*1.56*
New Jersey	7.37%	7.55%	7.76%	7.78%	*1.02*	*1.00*
New Mexico	10.34%	6.92%	n/a	n/a	*0.67*	
New York	8.11%	6.65%	8.51%	6.71%	*0.82*	*0.79*
North Carolina	8.05%	5.30%	7.64%	5.24%	*0.66*	*0.69*
North Dakota	4.80%	n/a	5.56%	n/a		
Ohio	7.55%	5.05%	8.00%	5.16%	*0.67*	*0.65*
Oklahoma	7.37%	5.40%	6.61%	5.69%	*0.73*	*0.86*
Oregon	6.29%	3.72%	5.84%	3.60%	*0.59*	*0.62*
Pennsylvania	6.18%	4.79%	7.01%	4.98%	*0.77*	*0.71*
Rhode Island	6.96%	10.55%	7.80%	11.20%	*1.52*	*1.44*
South Carolina	6.66%	5.45%	5.55%	5.50%	*0.82*	*0.99*
South Dakota	6.48%	4.21%	3.90%	4.26%	*0.65*	*1.09*
Tennessee	8.30%	3.99%	6.40%	3.69%	*0.48*	*0.58*
Texas	7.22%	5.15%	9.19%	5.18%	*0.71*	*0.56*
Utah	6.66%	3.61%	5.06%	3.59%	*0.54*	*0.71*

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Vermont	6.20%	n/a	2.67%	n/a		

Table 2F. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employers Firms, Women, Construction Industries, 2002, cont'd

State	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
Virginia	6.81%	4.59%	6.97%	4.58%	*0.67*	*0.66*
Washington	6.87%	3.37%	5.42%	3.26%	*0.49*	*0.60*
West Virginia	6.03%	7.84%	7.75%	7.96%	*1.30*	*1.03*
Wisconsin	6.52%	5.63%	5.49%	5.87%	*0.86*	*1.07*
Wyoming	7.77%	6.60%	9.07%	6.69%	*0.85*	*0.74*

Notes: See Table 2A. The Employer disparity ratio for Arkansas, Hawaii, and Nebraska and the All Firms disparity ratio for Idaho, Illinois, and Montana are statistically significant at a 1-in-10 probability level. "n/a" indicates data was suppressed by Census for statistical reason and/or to protect confidentiality.

Table 3A. Actual and Potential Business Formation Rates, Construction and Construction-Related Industries

Race/Sex, Location, Transportation Mode	Business Formation Rate (%)	Expected Business Formation Rate (%)	Disparity Ratio
Austin, TX MSA (Airport)	(1)	(2)	(3)
African-American	17.7	27.4	0.646
Hispanic or Latino	10.8	18.4	0.587
Asian	18.6	24.2	0.769
Native American	39.3	46.9	0.838
Nonminority female	11.7	24.2	0.483
All minority and female	11.5	20.1	0.572
Chicago, IL MSA (Highways)			
African-American	20.2	16.0	n/a
Hispanic or Latino	10.5	18.1	0.580
Asian	9.9	15.6	0.635
Native American	8.0	16.0	0.500
Nonminority female	11.0	19.5	0.564
All minority and female	12.1	20.8	0.582
Colorado (Airport)			
African-American	30.3	23.4	n/a
Hispanic or Latino	7.3	19.8	0.369
Asian	12.4	18.1	0.685
Native American	3.3	11.3	0.292
Nonminority female	12.5	21.0	0.595
All minority and female	10.3	18.9	0.545
Maryland (Highways, Transit, Airport)			
African-American	11.3	21.1	0.536
Hispanic or Latino	7.1	14.7	0.483
Asian	16.8	22.8	0.737
Native American	7.2	15.2	0.474
Nonminority female	9.5	18.0	0.528
All minority and female	10.0	18.6	0.538
Memphis, TN-MS-AR MSA (Airport)			
African-American	14.6	24.3	0.601
Hispanic or Latino	12.6	20.2	0.624
Asian	0.0	5.6	0.000
Native American	28.8	36.4	0.791
Nonminority female	21.9	30.5	0.718
All minority and female	15.8	24.4	0.648

Table 3A. Actual and Potential Business Formation Rates, Construction and Construction-Related Industries, cont'd

Race/Sex, Location, Transportation Mode	Business Formation Rate (%)	Expected Business Formation Rate (%)	Disparity Ratio
Missouri (Highways)	(1)	(2)	(3)
African-American	13.91	23.21	0.599
Hispanic or Latino	12.86	22.46	0.573
Asian	11.70	17.50	0.669
Native American	28.47	16.47	n/a
Nonminority female	19.21	22.91	0.838
All minority and female	18.13	24.00	0.755
Minnesota (Highways)			
African-American	4.6	14.3	0.322
Hispanic or Latino	11.5	19.1	0.602
Asian	16.1	21.8	0.739
Native American	6.5	14.5	0.448
Nonminority female	16.8	25.3	0.664
All minority and female	15.1	23.2	0.651
Philadelphia, PA MSA (Transit)			
All minority and female	13.2	18.1	0.729
Washington State (Highways)			
African-American	5.5	25.5	0.216
Hispanic or Latino	10.5	18.1	0.580
Asian	13.4	19.0	0.705
Native American	13.3	20.9	0.636
Nonminority female	14.5	18.7	0.775
All minority and female	14.4	20.7	0.696

Notes The figure in column (1) is the average self-employment rate weighted using PUMS population-based person weights. The figure in column (2) is derived by inflating the figure in column (1) according to the corresponding coefficient from the business formation regression analysis, which holds constant industry, geography, education, age, and labor market status. Column (3) is column (1) divided by column (2). "n/a" indicates no adverse disparity observed. If there is parity in the relevant marketplace, then the disparity ratio will equal 1.000 because the expected business formation rate (that is, the business formation rate that would be observed in a non-discriminatory marketplace) will be equivalent to the actual business formation rate. In cases where adverse disparities are present in the relevant marketplace, then the disparity ratio will be less than 1.000 because expected business formation rates will exceed current business formation rates.

Source: 2000: Five Percent PUMS.

Table 3B. Actual and Potential Business Owner Earnings, Construction and Construction-Related Industries

Race/Sex, Location, Transportation Mode	Business Earnings Deficit (%)
Austin, TX MSA (Airport)	(1)
African-American	-33.8
Hispanic or Latino	n/a
Asian	-6.9
Native American	-35.3
Nonminority female	-50.5
Chicago, IL MSA (Highways)	
African-American	-29.2
Hispanic or Latino	-14.7
Asian	-5.7
Native American	-36.8
Nonminority female	-51.2
Colorado (Airport)	
African-American	-29.0
Hispanic or Latino	n/a
Asian	-5.7
Native American	-36.8
Nonminority female	-51.3
Maryland (Highways, Transit, Airport)	
African-American	-27.9
Hispanic or Latino	-18.8
Asian	-3.8
Native American	-38.0
Nonminority female	-43.7
Memphis, TN-AR-MS MSA (Airport)	
African-American	-30.1
Hispanic or Latino	-19.0
Asian	-4.1
Native American	-38.4
Nonminority female	-44.0
Missouri (Highways)	
African-American	-17.5
Hispanic or Latino	-12.3
Asian	-1.6
Native American	-14.9
Nonminority female	-47.4
Minnesota (Highways)	
African-American	-29.0
Hispanic or Latino	-14.5
Asian	-5.6
Native American	-36.7

Race/Sex, Location, Transportation Mode	Business Earnings Deficit (%)
Nonminority female	-51.3

Table 3B. Actual and Potential Business Owner Earnings, Construction and Construction-Related Industries, cont'd

Race/Sex, Location, Transportation Mode	Business Earnings Deficit (%)
Philadelphia, PA MSA (Transit)	
All minority and female	-38.3
Washington State (Highways)	(1)
African-American	-33.8
Hispanic or Latino	-14.7
Asian	-6.9
Native American	-35.4
Nonminority female	-50.5

Notes The figure in column (1) is the percentage by which minority or female business owner earnings are lower than comparable non-minority male earnings, based on results of the business owner earnings regression analysis, which holds constant industry, geography, education, age, and labor market status.

Source: Five Percent Decennial Census PUMS.

Table 3C. Excess Loan Denial Rates–Nine Jurisdictions

Race/Sex	(1)	(2)
	Most Recent Application (%)	*Last Three Years (%)*
African-American	28.9	29.3
Hispanic or Latino	17.8	24.4
Asian and Pacific Islander	4.2	0.3
Native American	8.7	18.8
Nonminority female	4.6	8.6

Source: NERA Credit Market Surveys, 1999-2007.

Table 3D. Excess Cost of Credit–Nine Jurisdictions

Race/Sex	(1)	(2)
	Most Recent Application (Int. Rate % Points)	*Last Three Years (Int. Rate % Points)*
African-American	1.683	1.491
Hispanic or Latino	0.820	0.895
Asian and Pacific Islander	1.221	0.789
Native American	1.241	1.008
Nonminority female	0.046	0.018

Source: NERA Credit Market Surveys, 1999-2007.

Statement of RELM Wireless Corporation

Before The

US HOUSE OF REPRESENTATIVES

Committee on Small Business

Hearing on Small Business Participation in the Federal Procurement Marketplace

March 24, 2010

Madam Chairman Velazquez, Ranking Member Graves and Members of the Committee, thank you for taking the time to hold this hearing on such an important topic and for the opportunity to submit a statement on behalf of RELM Wireless.

RELM WIRELESS CORPORATION

RELM Wireless is a certified Small Business, established in 1947, manufacturing Land Mobile Radios (LMR) primarily for public safety and military applications, where conditions are demanding and lives are often at risk. RELM designs and manufactures two-way portable (hand-held) radios, mobile (vehicle mounted) radios, base stations and repeaters in both analog and digital configurations. RELM's digital products comply with the Project 25 standard of the Association of Public Safety Communications Officials (i.e. APCO Project 25, or P-25). RELM's headquarters and manufacturing operations are located in Melbourne, FL, with digital product development and engineering located in Lawrence, KS. For over 60 years RELM has produced high quality, professional-grade products, MADE IN AMERICA, BY AMERICANS, FOR AMERICAN HEROS.

RELM's significant federal customers include the following agencies:

- U. S. Department of Defense – U. S. Army

  Over 7,000 RELM units are currently deployed in Afghanistan

- U. S. Department of Agriculture – U. S. Forest Service

  Over 57,000 units currently in service

- U. S. Department of the Interior – National Parks Service, Bureau of Land Management, Fish & Wildlife Services, Bureau of Indian Affairs, among others

  Estimated over 25,000 units in service across all DoI agencies

- Active target customer initiatives include, but are not limited to, the U. S. Transportation Security Administration, the U. S. Customs and Border Protection, and other agencies of the U. S. Department of Homeland Security.

COMPETITIVE DISADVANTAGES

Although RELM has had limited success competing for some contracts, primarily with these federal Agencies, RELM and other Small Businesses are at a distinct competitive disadvantage due to lack of access to federal contracts for a number of reasons. Some of these reasons have been mentioned in previous testimony before this Committee including contract bundling and agencies counting contract awards to large companies as small business contracts. RELM vigorously supports all efforts to end both practices.

LARGE COMPANIES BENEFIT FROM SMALL BUSINESS CONTRACTS

Small business regulations require that recipients of federal contracts set aside for small businesses provide the product(s) of a small business manufacturer or processor. This requirement is commonly referred to as the "non-manufacturer rule". The non-manufacturer rule can be waived for a class of products, however, if there are no small business manufacturers available.

Influenced by the dominant LMR manufacturer, the SBA erroneously concluded in 1998 that there were no small business manufacturers for LMR equipment, and consequently granted a waiver to the non-manufacturer rule for LMR products. The impact of the waiver was to enable large manufacturers such as Motorola to receive through their dealers, contracts that were set aside for small businesses.

Upon becoming aware of the waiver, RELM approached the SBA and presented facts showing the existence of numerous small LMR manufacturers. Accordingly, on October 6, 2009, the SBA terminated the waiver of the non-manufacturer rule for LMR products. As a result, federal LMR contracts that are set aside for small business must be awarded to small business manufacturers. For over ten years preceding the waiver termination, however, large manufacturers were able to benefit from federal small business set-asides.

CONTRACTUAL REQUIREMENTS

There have been many opportunities over the years in which RELM has been unable to compete due to barriers encountered within the procurement process. Seemingly, many Agency procurement practices allow Request for Proposals (RFP) for LMR products that include over-specified requirements that can only be met by one company (usually the market leader), thus "locking out" many small businesses that offer comparable products at better value. This practice results in the elimination of real competition. When small businesses are placed at such a competitive disadvantage, communities lose business opportunities and jobs, while the federal government loses the diversity of suppliers, which ultimately leads to higher prices. Legitimate full and open competition leads to better quality and the best value for the American taxpayer.

CONCLUSION

This Committee understands that American Small Businesses are the primary engine of innovation and job creation and has been a champion of its enterprise. Therefore, RELM urges its Members to consider: 1) further investigation of federal agency procurement practices that place small businesses at a competitive disadvantage; and, 2) strengthening existing enforcement mechanisms and implementing new enforcement mechanisms to ensure a level playing field for small businesses within the federal procurement marketplace.

Thank you for the opportunity to comment on this important topic.

David P. Storey

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