

# OVERSIGHT OF THE SMALL BUSINESS ADMINISTRATION

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## HEARING

BEFORE THE

### COMMITTEE ON SMALL BUSINESS

### UNITED STATES

### HOUSE OF REPRESENTATIVES

ONE HUNDRED EIGHTEENTH CONGRESS

FIRST SESSION

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HEARING HELD  
MARCH 23, 2023

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## OVERSIGHT OF THE SMALL BUSINESS ADMINISTRATION

THURSDAY, MARCH 23, 2023

HOUSE OF REPRESENTATIVES,  
COMMITTEE ON SMALL BUSINESS,  
*Washington, DC.*

The Committee met, pursuant to call, at 2:30 p.m., in Room 2360, Rayburn House Office Building, Hon. Roger Williams [chairman of the Committee] presiding.

Present: Representatives Williams, Luetkemeyer, Alford, Stauber, Meuser, Bean, Van Duyne, Ellzey, Mann, LaLota, Velázquez, Golden, Mfume, Phillips, Landsman, McGarvey, Gluesenkamp Perez, Scholten, Thanedar, Chu, Davids, and Pappas.

Chairman WILLIAMS. Good afternoon. Sorry for the lateness. I want to thank everybody for being here.

And before we begin, I am going to take a moment to ask for Dan Meuser to lead us in opening prayer and the Pledge.

Mr. MEUSER. Thank you, Mr. Chairman.

If you all would just please bow your heads. Dear Lord, we appreciate you bringing us all together here today to discuss the important matters facing our wonderful country. We appreciate the administrator of the Small Business Administration being here with us, and we ask your blessings as we try to bring wisdom and intelligence and just simply doing for our small businesses and our country. Amen.

Stand for the pledge. Join me in the Pledge of Allegiance. I pledge allegiance to the flag of the United States of America, and to the republic, for which it stands, one nation under God, indivisible, with liberty and justice for all.

Chairman WILLIAMS. Okay. I now call the Committee on Small business to order.

Without objection, the Chair is authorized to declare a recess of the Committee at any time.

I now recognize myself for my opening statements.

Today's hearing will focus on the much needed oversight of the Small Business Administration. And first, I want to thank our witness, Administrator Guzman, for joining us today, a fellow Texan. Thank you. And as someone with ties to the great State of Texas, it is a pleasure to have you here today. I hope this is the first of several productive hearings we will have with you at this Congress. So I appreciate you making the trip to speak with us today.

This hearing could not come at a more important time for Main Street America. And our nation's small businesses are facing unprecedented levels of inflation, interest rates that are being raised

at the fastest pace since the '80s, and a labor shortage that have windows plastered with help wanted signs across our country. As a small business owner, I have been working with these economic headwinds. This Committee must ensure that the Small Business Administration is focusing their attention on ways to help them get through these daunting challenges.

During the COVID-19 Pandemic, the SBA was asked to step up in ways that they had never had to do before. While they were able to get money out the door quickly, the After Action report showed there were serious problems within the Agency. A disorganized management structure and a lack of basic guardrails to prevent fraud led to unacceptable amounts of waste of taxpayer dollars. And in the Economic Injury Disaster Loan Program, that office, the Office of Inspector General, found potentially \$78 billion in loans and grants were fraudulently obtained. Criminal opportunists took advantage when the SBA was overwhelmed with the sheer volume of work they were asking to do, and the taxpayers were the ones left holding the bag, as usually happens.

While there were many past findings that showed what could have been done to prevent fraud, there are other recommendations that were made in the last few months that could have remedied some of these crimes. And unfortunately, it looks like the SBA is not taking these recommendations seriously. For example, against the OIG's advice, the SBA has decided to end their collection, forgive all PPP loans with an outstanding balance of \$100,000 or less. While I support ensuring that the forgiveness process is as seamless as possible for small business owners, you cannot help but wonder how many illegitimate entities were able to walk away with tens of thousands of taxpayer dollars because of this decision.

Given all the problems the SBA had during the pandemic, we must have a serious discussion on the role the SBA should be playing in the future.

The President's budget proposal and some rules currently being developed by the Agency make it very clear that this Administration thinks the SBA did a great job over the past few years and deserves more responsibilities. I completely disagree with that assessment. With such high levels of fraud that occurred during the pandemic and the most recent failures of large banks in California and New York, I have serious concerns about expanding the government backed 7(a) loan program and increasing the SBA's role as a regulator.

Additionally, I am very concerned that the President's budget request diverts resources away from the programs that have bipartisan support and a proven track record of helping main street to duplicate programs with unclear performance metrics.

And finally, we continue to hear how the customer service of the Agency continues to fail our constituents. We must ensure the Agency is capable of handling their current task before they expand into more areas.

Main Street America has been forced to endure profound challenges over the last couple of years, and I hope this hearing can serve as the starting point to get the SBA back on track. Too much is at stake for America's small businesses to be not taken seriously.

And I want to thank you all again for being here with us today. And I am looking forward to today's conversation.

And with that, I want to yield our distinguished Ranking Member from New York, Ms. Velázquez. I now recognize the distinguished Ranking Member for her opening remarks.

Ms. VELAZQUEZ. Thank you, Administrator Guzman, for testifying before the Committee today.

It has been 2 years since you were confirmed as SBA Administrator. In those years, SBA delivered more than a trillion dollars in pandemic relief, saving countless jobs and small businesses from permanent closure. There have been a record number of small business applications, thanks in large part to an historic investment in not just the nation's economic recovery, but also its future. This effort unlocked opportunities for Americans, leading to a surge in entrepreneurship, which is vital to our economy. Small businesses have the power to spark economic growth and create good paying jobs in our local communities. They can turn main street into a vibrant destination, where retailers, restaurants, and personal service businesses can thrive. Entrepreneurship can spark innovation, bringing new ideas and solutions to the marketplace.

Looking ahead to the next 2 years, I hope to learn more about your vision for the Agency, in particular, how SBA's fiscal year 2024 budget plan will nurture our nation's 33 million entrepreneurs and innovative startups while creating a landscape that will be ripe for local economic growth. Part of that discussion will inevitably include SBA's IG and GAO's reports and recommendations on the pandemic relief programs. Their investigations have identified billions of dollars in potential fraud, and it is important for the Committee to hear the steps you have taken to address fraud and save taxpayers' dollars.

Finally, I want to hear from you about the two proposed rulemakings, which could lead to major changes in how the 7(a) program operates. The stated intent of the two rules is to fill a gap in underserved markets, and it goes without saying that ensuring support for minority owned small businesses and entrepreneurs from underserved communities is a top priority of mine.

With that said, I have been disappointed with the SBA's initial lack of engagement on the proposed rulemakings. Questions remain that I hope can be answered prior to finalizing the rules. Put simply, the Agency should slow down and address issues with fraud in the Paycheck Protection Program before moving forward with major policy changes to the 7(a) program.

As you know, the IG identified 70,000 potentially fraudulent PPP loans totalling more than \$4.6 billion, and a disproportionate share of these loans were made by FinTechs. These entities are not subject to the same prudent lending rules as traditional banks and credit unions, and lifting the moratorium on SBLCs to allow non-regulated entities to participate in SBA flagship lending programs may not be the best way to reach under bank communities.

Congress put the moratorium in place 40 years ago to safeguard the 7(a) loan program and make sure the Agency had the resources to supervise lenders effectively. We do not have any assurances that SBA has the bandwidth to manage these new unregulated entities, even though we have been asking.

Major policy changes cannot be made hastily. The Agency should be working with this Committee and stakeholders to improve the program while still protecting its integrity.

Let me finish by stating there may be areas of disagreement throughout this hearing, but that is part of the legislative process. Today's hearing will give us an excellent opportunity to closely examine the achievements we have made for small businesses, but also to discuss the challenges they face and learn how best to support them through our bipartisan efforts.

I look forward to our discussion, and I yield back, Mr. Chairman. Chairman WILLIAMS. Thank you, Ranking Member.

And it is my honor today to introduce our witness, Small Business Administrator Guzman. Administrator Guzman is a graduate of the University of Pennsylvania Wharton School of Business. In March 2021, she was confirmed as the 27th Administrator of the Small Business Administration. Prior to being becoming SBA administrator, Ms. Guzman served in various capacities in the Agency for 9 years, including as deputy chief of staff and senior advisor at the SBA. Ms. Guzman also served as a small business advocate for the State of California. Administrator Guzman is tasked with ensuring that the SBA's programs and services are available to all small businesses, no matter who or where they are, so they can have access to capital, revenue growth opportunities and support networks all entrepreneurs need to start, grow, and lead our economy.

As the person tasked with the leading the SBA during such an important time for America's small business, we have brought Administrator Guzman here to address growing concerns, as you have heard of the Agency's effectiveness, priorities, and issues facing Main Street America.

Administrator Guzman, thank you for joining the Committee today, and I am looking forward to your important conversation with you. And so I now recognize Ms. Guzman for her 5 minute opening remarks.

**STATEMENT OF THE HONORABLE ISABELLA CASILLAS  
GUZMAN, ADMINISTRATOR, UNITED STATES SMALL BUSINESS ADMINISTRATION**

Ms. GUZMAN. Thank you so much, Chairman Williams, Ranking Member Velázquez, as well as the distinguished Members of this Committee. Thank you so much for giving me the opportunity to come and discuss the U.S. Small Business Administration and the impact that we have on the entrepreneurial community, as well as the continuous improvements that we have made in helping small businesses start and grow.

The entrepreneurial spirit of the American people, as you have seen, their trademark grit, determination, and agility have really made small businesses in our nation the most important driver of job growth, competition, and innovation. America's entrepreneurs have not only helped deliver an incredible economic expansion, but they are also powering a surge in new businesses—'21 to '22, 10.5 million new business applications were filed, the most in any 2 year span on record.

Our nation's small businesses continue to need support as they position to grow their businesses and pivot to continue to adapt to remaining supply chain challenges, inflationary pressures, and the tight labor market. They consistently share that funding is one of their biggest challenges, especially as we see they are facing rising interest rates and tightening credit standards. Access to affordable capital is one of my key priorities at the SBA. In 2022, SBA delivered more than \$43 billion across our capital programs and finally reversed a 5 year decline in small dollar lending, but we continue to see large gaps in this space, especially in loans under \$150,000. This funding gap truly limits entrepreneurial growth, especially for the smallest of the small, as well as for minority, veteran, rural, and other historically underserved small businesses.

To effectively address this market gap, the SBA must streamline its regulations and its capital programs. First, we need more competition and capacity in small business lending. That is why we propose expanding our distribution networks by revitalizing the existing Small Business Lending Company or SBLC program. The SBLC Rule will make the Community Advantage Pilot program permanent and provide certainty to the over 100 nonprofit mission lenders who have been effectively lending to underserved communities through this program in the 7(a). With permanence, the SBA can expand the number of these mission lenders serving the hardest to reach small businesses through a new Community Advantage License.

We will also lift the cap on regular SBLC licenses, enabling SBA to admit new non depository lenders aligned with the Agency's mission in the 7(a) program.

Second, we will modernize our loan products and meet our businesses where they are by cutting red tape and complexity that exists in our 7(a) and 504 programs through our proposed affiliation rule. Based on extensive feedback from our lending partners over the past decade, we will streamline affiliation roles which lenders have shared are burdensome. We will also align with existing lender best practices on credit underwriting. As we implement, we will prioritize maintaining the core integrity and oversight of SBA's lending programs. Based on past oversight performance and existing structures and processes, we can both improve our support for underserved communities and fill capital gaps, as well as ensure program integrity at the same time.

Third, we will add a provision to help owners with business transitions to employee ownership, an issue many of the Members of this Committee have supported. SBA is finding ways for its products to help finance partial buyouts so that an owner can sell their business to employees, for example, for a successful exit.

Finally, a bipartisan interest of this Committee has been to attract more private investment capital to innovative startups critical to our national economic competitiveness and our national defense. Our proposed rule, Modifying the Small Business Investment Company, or SBIC program, will add a new accrual SBIC license to incentivize patient and growth capital. It will also expand investment in rural and underserved communities by ensuring a diversified portfolio across the nation and streamlining and improving the licensing process.

These three rules will help the SBA more effectively address capital gaps so we can power entrepreneurship. As we move forward with these updates to our capital programs, we will continue to build on the lessons learned through managing the biggest disaster response in our Agency's history. Our COVID relief helped millions of small businesses navigate the pandemic and preserve jobs recover quickly. However, while these programs have ended, the SBA's portfolio has changed and we continue to support small businesses through ongoing loan servicing, grant reporting, and PPP forgiveness processing. We will work with Congress to ensure the Agency has the necessary resources to serve these small businesses.

The SBA has implemented the Biden Harris Priority effort to combat fraud and pandemic relief. Aligned with the Inspector General and the GAO recommendations, we have instituted standard fraud protections to deliver funds with not just speed, but also certainty. We also improved SBA operations by implementing the GAO recommended fraud risk framework, and we continue to collaborate with the Inspector General to recover stolen funds. The SBA is more strongly positioned than ever to combat fraud, waste and abuse, and this strengthened position enables us to better serve the 33 million small businesses and disaster survivors into the future.

So I appreciate your time, and I do look forward to diving into more detail with your questions regarding all of SBA's critical programs around capital and technical assistance.

Chairman WILLIAMS. Thank you for being here.

Now we will now move to the Member questions. And I recognize myself for 5 minutes.

Businesses need long-term certainty. I am a small business owner, and you have to deal with certainty as they make decisions on where to invest in their operations. In the next few years, some major components of the Tax Cuts and Job Act will be expiring. Specifically for small businesses organized as pass through entities, there will be a large increase for their tax liability because these businesses pay individual income tax rates instead of the corporate tax rate. Administrator Guzman says now 80 percent of all small businesses are organized as pass throughs. Will you commit to working with the President to make sure that these small businesses won't have their taxes increased when this provision expires?

Ms. GUZMAN. The President has demonstrated that he is committed to lowering costs for families and small businesses. And we recognize the Trump tax cut did not make permanent the small business tax assistance, only the corporate. So as a lot of small businesses, of course, are not corporations, we remain committed to providing the advice and being that voice of small business.

Chairman WILLIAMS. You are recommending to him that he keep that component, ma'am?

Ms. GUZMAN. You know, obviously, Congress makes the tax policy.

Chairman WILLIAMS. Right.

Ms. GUZMAN. And I know the President has——

Chairman WILLIAMS. He supports——



Ms. GUZMAN.—committed to working with Congress to ensure that we can help ensure that—a vibrant economy okay.

Chairman WILLIAMS. Okay. There has been bipartisan concerns over the proposed changes to the SBA's flagship 7(a) lending program. Now, given the recent failures of some large banks in California and New York, it does not seem wise to change some of the prudential underwriting standards of this lending program while simultaneously opening up to more companies, whose sole federal regulator will be the SBA. The 7(a) portfolio is backed by the government, so if something goes wrong, the taxpayers are on the hook.

And so, Administrator Guzman, how do you justify relaxing the underwriting standards of this program when we just experienced the second largest bank failure in our country's history? And secondly, does the SBA even have the authority to transition pilot program participants into full time 7(a) lenders without an act from Congress, as the rule does?

Ms. GUZMAN. So the SBLC program is an existing program. It is been four decades long, and we have 14 SBLCs currently. We have passed over those licenses multiple times. They have had different 60 different licenses as well. Across those licenses, there was a moratorium put in place. We are recommending lifting the moratorium so that we can allow for more competition and a broader distribution network, as we saw with PPP.

You know, with this, we plan to implement strong controls within this program, as we have been doing for the past 4 decades. We have strong credit risk management processes and controls in place to ensure that these SBLCs, as well as our Community Advantaged lenders can perform. And that includes in credit underwriting as.

Chairman WILLIAMS. Well, you want to make sure you tighten up the overseers. That is important.

Before any business makes an investment decision, they must have a general understanding of the return they will see on dollars spent. And I think it is responsible for the government to do the same thing. So kind of return on investment.

So I want to go over some numbers in the Office of the Budget request to see if they make sense in terms of ROI for the taxpayers.

In the SBA's budget request, it states, the Community Navigators program spent \$131,000,000 in fiscal year '22, which started 422 new businesses and serviced 16,312 new clients. This means it cost the taxpayers over \$300,000 for each new business started and over \$8,000 per client serviced. During the same period, the SBDCs performed similar services at a cost of \$7,064 per new business started and \$319 per client serviced. The numbers don't lie. It is very obvious which one of these programs is a much better return on investment ROI for the taxpayers.

However, the budget request seeks a 400 percent increase for Community Navigators and a 10 percent budget decrease for the SBDCs.

So, Administrator Guzman, I will be sending you a letter to get more information on this program, but I wanted to ask, why are you looking to transfer funds from a program that is more effective

and has a bipartisan support to an ineffective program that was passed along party lines?

Ms. GUZMAN. At the SBA we try to look holistically at the entire entrepreneurial ecosystem. We are increasing by \$14 million our entrepreneurial development programs, you know, leaning into supporting our veterans, as we just launched this successful Vet Certification program, leaning into contracting and capital assistance. We provide grants to organizations to help get businesses capital ready and contract ready, as well as all of our incredible resource partners. They all serve a different function.

During the pandemic, we saw huge gaps in the initial rounds of PPP. For example, businesses that were the smallest of the small or underserved were unable to access relief. They didn't know how to navigate the system. And so, clearly, we need to ensure that we have a strong ecosystem that works together.

The purpose of the Community Navigator program, and we are happy to share more data to demonstrate that it has strong results, they have been working with existing businesses to fortify them. We see that there is less performance because of a lack of investment across women and minority founders, as an example. We want to make sure that they can deliver for the economy, just as all our businesses.

So it is a comprehensive approach. And I welcome further discussion in your letter.

Chairman WILLIAMS. Invest money, make money.

My time is up. I am sorry.

And I now recognize the Ranking Member for 5 minutes of questions.

Ms. VELÁZQUEZ. Thank you, Mr. Chairman.

Administrator Guzman, I have a lot of questions, so please try to be brief.

Associate Administrator Kelly assured us that SBA was working to improve lending to ESOPS and co-ops. However, last December, we heard testimony that the SBA proposed rule does nothing to improve lending to ESOPS. When will the Agency finally implement changes to expand 7(a) loans to ESOPS and co-ops?

Ms. GUZMAN. We have implemented some changes, but clearly we need to continue to go further. And so we are hoping with this affiliation rule, with the partial buyout, that will help assist. We have also launched an SBIC that is focusing on ESOPS in particular. So we are continuing to try to work with the industry to address issues.

Ms. VELÁZQUEZ. And what is that? The proposed rule doesn't provide anything.

Ms. GUZMAN. The affiliation rule allows for partial buyout. So, for example, if an owner wanted to transition to some of their employees right now, they would not be able to do that. It calls for a full exit. And so with this, it allows for an owner to stay in place, transition to employee ownership as a potential exit strategy, since it is difficult to sell your business, and then that way, you know, allow for more employee ownership.

Ms. VELÁZQUEZ. Okay, thank you.

I just need a yes or no answer on these questions. Is it true SBA intends for FinTechs to participate in the 7(a) program when the SBLC moratorium is lifted?

Ms. GUZMAN. We intend for non depository, so that could include FinTech, along with others.

Ms. VELAZQUEZ. Okay. Have you heard concerns with allowing unregulated companies, some associated with significant fraud, into a federally guaranteed program?

Ms. GUZMAN. I don't share those concerns because I know that the SBA has a rigorous application process for the SBLC program and intends to hold any business that wants to participate to account to their performance, to their underwriting standards, to transparency, to borrower protections, and to extreme oversight.

Ms. VELAZQUEZ. That is what we heard from the big banks and here we are with two banks going underwater.

I have been telling you that you have got to do due diligence, and I hope that you are doing so. Can you tell me what are the type of steps that you are taking to protect the integrity of the 7(a) program?

Ms. GUZMAN. Most definitely. I mean, obviously, that is our first and foremost priority. We deliver a zero subsidy. That is true for this rule as well. And we will be able to continue to provide fee relief across our loan products. You know, we hold ourselves to a high count in terms of ensuring performance. That is why we do quarterly reviews of our entire portfolio. We have great technology and great systems to do so.

Ms. VELAZQUEZ. Thank you.

Four years ago, the director of the Office of Credit Risk Management testified that the Office was increasing its personnel to 42 FTEs to better fulfill its mission. Currently there are 29 FTEs in OCRM. How does the Agency plan to conduct oversight over the new SLBCs with fewer employees in OCRM? How much of your budget will be dedicated to hiring more OCRM personnel?

Ms. GUZMAN. Yes, we have 29 individuals, but we also have 7 contracts that support our Office of Credit Risk Management with personnel and with technology. We did a thorough analysis to see what our capacity for growth and competition would be and we assessed that we would do no more than 30 nonprofit lenders, an additional 3 non depository institutions.

Ms. VELAZQUEZ. So you are telling me that the 29 FTEs will be enough with the contractors that you are bringing in?

Ms. GUZMAN. Based on our analysis of what the Office would have capacity to deliver, yes. And we are committed to continuing to, you know, review our resources and support our OCRM because obviously it is a critical function at the Agency.

Ms. VELAZQUEZ. I understand late last year, the Agency abruptly cancelled a public briefing on the issuance of new SOPs that detailed lender responsibilities. When do you intend to issue this SOP?

Ms. GUZMAN. We are working right now to finalize our three rules for capital access and investments. And we alongside obviously are wanting to put in all the processes in place, so the SOP as well. So hopefully as soon as we can get through all that internal review.

Ms. VELÁZQUEZ. Will you commit to briefing the Committee on the details of the SOP and any other proposed rules that make significant changes to the SBA program in a timely manner?

Ms. GUZMAN. Yes.

Ms. VELAZQUEZ. I yield back, Mr. Chairman.

Chairman WILLIAMS. Okay.

Ms. VELAZQUEZ. Thank you.

Chairman WILLIAMS. Thank you very much.

And I now recognize Mr. Luetkemeyer from Missouri for 5 minutes.

Mr. LEUTKEMEYER. Thank you, Mr. Chairman.

Ms. Guzman, welcome.

We have had a lot of discussions over the last couple of years, and one of them last term was about your employees showing up for work. So today, how many people that work for the SBA are working from home?

Ms. GUZMAN. We have about 1 percent of our full-time employment, our full-time employees in remote stance. However, we do have a mission based, mission aligned remote work policy overall. And so I believe I shared with you that, you know, we have employees working up to 2 days per pay period. And while many more come in more frequently and obviously I said mission based remote status, some offices are 5 days a week, some offices are 3 days a week, we still are trying to position—

Mr. LEUTKEMEYER. No offense, that is not acceptable. Everybody should be back at work. COVID is over. President himself said COVID's over. We don't need people working from home. We need people in the office so you can oversee them to make sure we get the job done.

How many applications are you behind right now?

Ms. GUZMAN. Applications behind?

Mr. LEUTKEMEYER. For loan applications.

Ms. GUZMAN. The SBA's performance has been remarkable over the years that we have been—

Mr. LEUTKEMEYER. I am not looking at how remarkable it was over the years. I was asking you how many are past due right now.

Ms. GUZMAN. Now, even today we have been able to streamline services around our certifications to increase the rate of certification during this this time.

Mr. LEUTKEMEYER. Ms. Guzman, I sit on the Financial Services Committee. I have to put up with the Federal Reserve Chairman coming in every so often. And I have listened to three or four of them. You are really good at, just like they do with the Fed, two step. You don't answer my question. I ask you how many people today are at home working? Can you give me an answer, or do I need to write you a letter about this?

Ms. GUZMAN. No. We have just over 2,800 full-time employees. And as I said, 1 percent are fully remote. The rest of them are in this flexible, remote position.

Mr. LEUTKEMEYER. Okay.

Ms. GUZMAN. And so, as the President's Declaration of the pandemic expires in May, we continue to work towards solutions for the future of—

Mr. LEUTKEMEYER. Okay. Next question.

A minute ago the Ranking Member asked you a question with regards to FinTechs. You are looking to do FinTech expansion, or expand into FinTech's ability to access your programs. Who was the biggest problem with regards to fraud in the PPP program?

Ms. GUZMAN. Studies have shown that, you know, FinTechs and banks were high performers as well as some—

Mr. LEUTKEMEYER. Oh, Ms. Guzman, come on now. We had the IG report from the guy sitting in your chair. And most of the problems in the PPP program were the FinTech companies. Why are you denying that? Because what you are doing is expanding to the very people who are the problem children. They do not perform the kind of auditing and oversight over themselves that the banks do. Why do you want to expand into the very people who are the problem children in the programs that we have already gone through?

Ms. GUZMAN. Again, as shared, those three SBLCs that I would have available when lifting the moratorium would have to go through a rigorous review process at the SBA. We would not be aligning with anybody that was identified during the Oversight Panel, which included banks and FinTechs.

Mr. LEUTKEMEYER. So Anybody who has had a PPP problem in the past will now be somebody who can't access the program? Is that what you just said?

Ms. GUZMAN. I am sorry, could you repeat that?

Mr. LEUTKEMEYER. So any FinTech company that had a problem with the PPP program would be somebody who can't access these programs, the rest of your programs? Is that correct?

Ms. GUZMAN. In fact, we have banned the two FinTechs that were identified within the climate report from ever participating with SBA.

Mr. LEUTKEMEYER. Very good.

SBA's fiscal year '24 request is \$10 million for climate change administrative expenses so the SBA can hire experts to update policies on climate issues. Money that could be used to address your vast amount of fraud and servicing needs is instead going towards climate change experts. Not only that, according to Job Creators Network poll from last month, small Businesses across the nation are most concerned about over regulation, cutting taxes, foreign competition, of course, inflation. I don't see climate change on the list.

Explain to me how \$10 million for climate change expenses will help a small business in Missouri address 6 percent inflation or any other real concerns they have.

Ms. GUZMAN. The \$10 million will be used within our Office of Capital Access programs to help get out effectively capital access for businesses to position themselves for resilience. We know from FEMA, their data shows that if a business is impacted by a natural disaster and they don't reopen within 5 days, they will close within a year. And so we are working hard to build up their resilience.

Mr. LEUTKEMEYER. That's not climate change, you are talking about a FEMA responsibility there.

Ms. GUZMAN. I am talking—

Mr. LEUTKEMEYER. That has nothing to do with what I—the question I just asked.

Ms. GUZMAN. I can respond to the question.

Mr. LEUTKEMEYER. I got one quick question before my time runs out here. I have asked you this question before. Do you talk to the President very much?

Ms. GUZMAN. The President has been remarkable by ensuring that the Cabinet Member—

Mr. LEUTKEMEYER. Do you talk to the President at all?

Ms. GUZMAN. Yes, I do.

Mr. LEUTKEMEYER. Okay. How many times have you talked to him in the last—since the beginning of the year?

Ms. GUZMAN. The President convenes his cabinet regularly and participates in—and is prioritizing small businesses—

Mr. LEUTKEMEYER. How many times have you talked to the President since the beginning of the year?

Ms. GUZMAN. Again, my conversations with the President are private, as are any frequency or—

Mr. LEUTKEMEYER. So my question is, have you explained to him about the problem that we are having with taxes right now with his proposal?

Ms. GUZMAN. This proposal is focused on lowering costs for small businesses and families—

Mr. LEUTKEMEYER. So you haven't talked to him about it then. You just told me that you did not do that. That is dereliction of duty, madam. You are advocate for small businesses from everything, from all the rules and regulations to the tax policy.

I yield back.

Chairman WILLIAMS. Thank you.

I now recognize Mr. Phillips from Minnesota for 5 minutes.

Mr. PHILLIPS. Thank you, Mr. Chairman.

Administrator Guzman, I want to thank you for what you are trying to do to help small businesses after 3 terrible years for all of us, for small business owners. And I know nothing is perfect, but I know your head and heart are in the right place and I want to thank you. I want to thank you for coming to Minnesota just last week, spending time with me, did an on the job with Dean at Tierra Encantada, had lunch at Duke's on 7, a recipient of PPP loans, and then had a great roundtable where you heard directly from a number of stakeholders, and particularly about my personal mission to help expand employee ownership of enterprises.

So I would like to begin by simply asking you about your perspective on employee ownership, what the SBA and you are doing to promote it. I believe it is an extraordinary intersection between Democrats and Republicans to build wealth for hardworking people who contribute to economic success. And as all the evidence indicates, it actually is accretive to business performance. So just love your thoughts on the subject and what the SBA is doing, and most importantly, what we can do to help you do more to incentivize, promote and support employee ownership.

Ms. GUZMAN. Well, thank you for that.

The employee owners ownership, for sure, is definitely a benefit to small businesses who will deploy it. Studies have shown that they have a stronger performance as the employees are vested and

committed to the mission in a whole new way. I would say that on employee ownership, from the SBA's perspective, you know, we view that it is a very effective succession plan, as well as businesses look to exit. So from multiple fronts, we help to help support small businesses in this regard.

We have done it both on the technical assistance side, trying to provide knowledge and assistance, sharing information about employee ownership, and ESOPS through our network of resource partners to small businesses directly who are seeking alternatives.

In addition, within our lending program, it has been challenging for employee owners to access the program, so we are constantly looking for ways to improve the program, not only on the lending side, but on the investment vehicles as well. And so I am hopeful, with the changes that we are making, as well as with the new interest in our SBSC program, to see progress on the capital access front.

Mr. PHILLIPS. To that end, I mean, access to capital is the foremost challenge, as the Chair and Ranking Member ably pointed out. You know, the main street program, the 2018 program, I think, has only resulted in 17 7(a) loans to conversions. I think that is too few. I think the SBAS acknowledge that. Would love to see incremental support for that. I am also hearing from some that losing preferred contracting status, which is something that came up in Minnesota, is an impediment. The fear that if they convert to an employee ownership model or a co-op, that they might lose preferred status. Can you speak to that? And are there some ways, perhaps, that we might work together to eliminate that risk and ensure to promote that we can promote employee ownership?

Ms. GUZMAN. Most definitely after flagged by the constituents in your district I am looking into it further in terms of the contracting and certification side of SBA, the entry point for contractors. And then, in addition, interested in observing and tracking the pilot the Department of Defense has deployed to try to be more inclusive of employee ownership in contracting specifically.

Mr. PHILLIPS. Is there something you might need from us to accomplish that?

Ms. GUZMAN. At this point, I don't believe it is any statutory block, but I will, you know, definitely follow up to see if there is a pathway on the certification specifically that could be more specific and give us language that would help power a more inclusiveness around our certification programs for government contracting.

Mr. PHILLIPS. Okay, I appreciate that.

And I just extend an invitation, a warm invitation to my colleagues on both sides to look for ways that we can use this platform of ours and the SBA to encourage more ownership. I see no reason why it shouldn't be a mutual goal, one to which we can work in unison. And I simply extend that invitation.

Ms. VELAZQUEZ. Will the gentleman yield?

Mr. PHILLIPS. I will surely yield.

Ms. VELAZQUEZ. I don't know for how long—since we passed my legislation, we have been working hard to get more lending, because this is the problem. If we don't provide access to capital—

Mr. PHILLIPS. Exactly.

Ms. VELAZQUEZ.—it is not going to work.

Ms. GUZMAN. And if I could add on that, and we did discuss this, but one of the big issues flagged is the personal guarantee.

Mr. PHILLIPS. Yup.

Ms. GUZMAN. And SBA, you know, cannot move forward on removing a personal guarantee that is core to our program. So that would be something that would need to be statutory.

Mr. PHILLIPS. So, most of all, thank you for listening. Thanks for coming to Minnesota. I know you are traveling the country. I encourage other Members of the Committee to extend that invitation to you, too, and hear the same thing.

Thank you. I yield back.

Chairman WILLIAMS. Thank you.

I now recognize Mr. Stauber, who also is from Minnesota, for 5 minutes.

Mr. STAUBER. The northern part of Minnesota.

Thank you, Mr. Chair.

Administrator Guzman, thanks for being here again. And, you know, as a former small business owner, I remain extremely concerned about the nearly \$320,000,000,000 of additional regulations this Administration has put on small businesses and our farmers. This number is set to only get worse when the disastrous WOTUS Rule takes effect.

Last year, as you know, you and I spoke about the need for agencies to consider the negative impacts that this rule would have on American small business owners, farmers and manufacturers. And I asked you to ensure that a SBREFA panel was held to better understand their concerns and the significant economic negative impacts of the WOTUS Rule. Did this happen?

Ms. GUZMAN. No. The—

Mr. STAUBER. In fact, to make matters worse, the EPA and Army Corps made the claim WOTUS wouldn't have significantly impacted small businesses and the entities without even talking to them. Did you have conversations with them, as the administrator, the protector of small businesses across the United States?

Ms. GUZMAN. Within the SBA, actually, the Office of Advocacy, which is an independent office within the SBA, is the one responsible for ensuring regulatory compliance and that they can assess the small business impacts.

Mr. STAUBER. So SBREFA wasn't—a panel wasn't put together on the WOTUS Rule. You allow the EPA and the Corps to make that decision?

Ms. GUZMAN. The Office of Advocacy is the entity responsible by statute for implementing SBREFA. Again, I respect their independence, but in talking to the Office of Advocacy regarding this, they did do a couple of roundtables, and we are in constant contact with EPA, but a SBREFA panel was not done.

Mr. STAUBER. I can tell you that. I have had roundtables across northern Minnesota, and their biggest concern is the regulations, including WOTUS. And so we needed you to be the protector. And I gave you a heads up last year on protecting the small businesses and the farmers. That was one of the biggest pieces of conversation that I took from those meetings.

So tell me the reason why SBREFA panel was not held before the WOTUS Rule was finalized as required—as required by law.



Ms. GUZMAN. As I believe you stated within your earlier statement that the SBREFA panel was not implemented because EPA had certified that there was not significant impact. And Office of Advocacy—

Mr. STAUBER. Do you agree with that?

Ms. GUZMAN. I am not the one who and analyzes it, oversees it, so—

Mr. STAUBER. You can't do the Texas two step here, although Mr. Williams would love you to do the Texas two step. Do you believe that the WOTUS Rule does not affect small businesses and farms?

Ms. GUZMAN. I have not done the analysis myself.

Mr. STAUBER. Extremely concerning that we are witnessing federal agencies implement this rule without the protection—rather protecting our small businesses, and you are at the point to protect them. And I think in this instance, on the WOTUS rule, you failed at protecting the small businesses.

I am also extremely concerned that we are witnessing federal agencies implement ESG policies under this Administration. As you know, the SBA is responsible for the licensing and regulating SBICs. In 2022 the SBA licensed 29 SBICs. That is supporting over \$2 billion—that is with a “B”, \$2 billion in capital. My question do any SBICs consider ESG factors when choosing small businesses to invest in?

Ms. GUZMAN. As all of the large financial institutions recommend, and as Wall Street has supported, not considering ESG is a mistake and something that could lead to financial risk. So, you know, I am sure that many of my SBICs responsible for their fiduciary responsibility to their investors are looking all risk.

Mr. STAUBER. So you agree putting forth ESG factors are important when choosing—SBICs choose small business to invest in. Do you agree with that?

Ms. GUZMAN. I agree with the Wall Street experts who have determined that that is a financial risk and it is something that all fiduciaries should be looking at, yes.

Mr. STAUBER. Can you tell me for a fact that the SBA does not consider ESG factors when determining what SBICs to license?

Ms. GUZMAN. We do not restrict any SBICs who do not consider ESG. And so we have 300 SBICs today, and we are continuing to look at to expand our SBICs across the country. And so—

Mr. STAUBER. My last question, because I am running out of time, do you think \$320,000,000,000 in new regulatory costs on American small businesses is good or bad?

Ms. GUZMAN. Look, much of the regulation, especially the over 60 regulations that we are putting forward, are about simplification. So just because regulations are being put out there, that doesn't mean that it isn't about cutting red tape and simplifying our current system.

Mr. STAUBER. Yeah, with all due respect, I disagree with your assessment on the \$320,000,000,000 is good for small businesses, because it is not.

And I yield back.

Chairman WILLIAMS. I now recognize Mr. Golden from Maine for 5 minutes.

Mr. GOLDEN. Thank you.

Administrator Guzman, in the past, some of us on the Committee have held hearings and also expressed concern that the Community Navigators program should not be duplicative of the work of Small Business Development Centers, Women's Business Centers, SCORE, or the Veterans Business Outreach Centers. And obviously a lot of testimony we received was that they would act more as a force multiplier than being in competition with these existing resource partners that are out there and have been out there for a long time working with small businesses around the country.

The President's budget directs a \$30 million increase to the Community Navigator program, but also makes cuts to the—would make cuts to the Small Business Development Centers, roughly a 14 percent cut, as well as a 40 percent cut to the SCORE program. When you add these two together, it almost equals the amount that you are proposing an increase to the Community Navigators.

The most recent metrics that we have available to us demonstrate that both the SBDCs and SCORE are over performing. They are more than meeting their stated targets when it comes to job creation, number of people assisted, amount of capital that they have brought into the business community. And we are really lacking in any kind of data or metrics as it relates to the Navigators.

So I guess my question is why would, at this point, the President propose cutting funds from partners who we can see are meeting their targets and even over performing their targets, who have long standing relationships out in the business community, particularly the SBDCs, which we see from the metrics enjoy 93 percent satisfaction rating from the clients that they do provide services to. It is almost as if they are getting punished for succeeding. And we are being asked to make a big shift here in putting such a large increase into a program for which we are lacking similar data. What is the justification for both the cuts and the increase?

Ms. GUZMAN. And again, we see an increase overall in our entrepreneur development, but we are faced with the challenge of having evolved—

Mr. GOLDEN. I am interested in shifting of funds rather than the top line of—

Ms. GUZMAN. Yes. So as we are trying to evolve and prioritize inclusion in a way that reflects that. At the beginning of the pandemic, as I mentioned, many communities were left behind. And so we do an incredible job reaching small businesses through our resource partners, over 750,000, but we have 33 million small businesses with constant births and deaths. It is an insurmountable challenge. If I had enough resources—you know, obviously I feel strongly that the SBDCs, the WBCs, the VBOCs, all of them are doing incredible job reaching small businesses. But there are gaps that we are trying to fill and create a more cohesive ecosystem that is inclusive.

And so I would also state that the Navigators program has also outperformed. And we have seen incredible work from the Institute for IVMF, the Institute for Veteran Military Families, the Ethnic Chambers, the LISC that focuses as well on rural. So we have seen incredible performance in building trust and building bridges, and great referrals and collaboration amongst the network as well.

So the hope is to increase the amount of reach that we have across our network, work in new ways to build trust in communities so that we don't leave people behind.

Mr. GOLDEN. Thank you.

Well, I haven't seen any metrics in front of the Committee in regards to how the Navigators are performing, but are you not worried that by shifting resources into this program to fill any gaps that you see, that you are going to create gaps amongst those communities that are working very closely with SBDCs or VBOCs or Women Business Centers?

Ms. GUZMAN. Clearly, I mean we are obviously working with limited resources. You know, these are all great programs that I would love to see funded, but I do need to continue to prioritize some of the other elements as well. Like I said, the veterans, the contracting, as well as the access to capital, and the Navigators as a new source of building an ecosystem. We incentivize and provide a base structure for a lot of these resource partners who are able to then get additional support in the community. And I hope to see them all continue to thrive.

Mr. GOLDEN. Well, this just recalls for me a hearing that we had in the last Congress in this Committee where we expressed concern about how the Community Navigators may draw away from our existing resource partners. And I think that is unfortunate to see that reflected in the budget and, of course, have an interest in working with my colleagues on the Committee to try and address that in a way where we don't have to take from one successful program in order to try and address a gap within a new program.

Ms. GUZMAN. Thank you.

Chairman WILLIAMS. All right, thank you.

And I now recognize Mr. Meuser from Pennsylvania for 5 minutes.

Mr. MEUSER. Well, thank you very much, Mr. Chairman. Thank you, Administrator, for being with us.

So less than 2 years ago—I am going to go back to the non federally regulated lenders and related to the SBLCs—but less than two years ago the SBA stated they do not have the administrative resources needed to oversee non federally regulated lenders with the nationwide 7(a) lending platform in addition to the 14 SBLCs it currently regulates. What has changed?

Ms. GUZMAN. I am not familiar with those statements that you are referencing, but we have now a strong system in place with the 7 contracts that I referenced, as well as the 29 employees. Just in 2020 to 2021, we have done over 2,200 risk assessments in the portfolio. And again, we assessed what our capacity would be and limited our expected growth based on that to just 3 non depositories.

Mr. MEUSER. So you don't think there is going to be a so called subsidy rate impact as a result of this expansion for non federally regulated SBLCs?

Ms. GUZMAN. No. In fact, the rules are baked in to the current subsidy modeling. And so as a result, they will not have an impact on subsidy.

Mr. MEUSER. If there are, will anybody get terminated? Will anybody be accountable for making bad decisions that cost taxpayers?

Ms. GUZMAN. We do. The lenders are held accountable to, obviously, giving loans with a strong ability to repay. And so we have an opportunity to continue to track performance, as we do on a quarterly basis and throughout the year. And if we identify problems, we have the power to revoke a license at any time.

Mr. MEUSER. I am sorry, it has been as we stated, because that was the history, certainly, with the EIDL and the PPP, so you could understand the level of concern.

Ms. GUZMAN. And what I would share is that the PPP was such a different program, I can't even cross-reference the performance on PPP or COVID EIDL—

Mr. MEUSER. But 85 percent came from the FinTechs. And I don't have a problem necessarily with FinTechs. I really have the problem with that they are not federally regulated. Why not have a federally regulated FinTech and invite them into the 7(a) program once that got established? Once it gets established?

Ms. GUZMAN. Well, we have demonstrated results on our SBLCs as well as in our SBA Express program that gives us data to know that we can move forward with expanding access to capital. And main street I don't think can wait for us to try to figure out capital. I would argue that by inserting the SBA programs into any FinTech operation, you are actually going to get stronger oversight and regulation because they are going to have to meet the SBA's programs of terms and—

Mr. MEUSER. No, no, there seems to be a strong leniency towards this, and I am just trying to figure out why. Now, the OCRM—you testified yesterday in the Senate, stated that the capacity to take on more—well, regarding the capacity to take on more lenders, but the OIG, the SBA OIG publicly disagrees, stating in a report released just this past Tuesday that the OCRM resources are threadbare with 38 percent vacancies. That doesn't build confidence.

Ms. GUZMAN. Well, my understanding is that report too is based on 2015 to 2017. So a lot has happened at the SBA. We have scaled dramatically to meet the needs of small businesses during the pandemic. And obviously, those learnings, the GAO risk framework that we have put in place at the SBA, all the controls that we put in place, position the SBA to be much stronger, to be able to strengthen—

Mr. MEUSER. Seems to be a bit of an irrational exuberance for heading into added players such as FinTechs that are not federally regulated. So we will continue to watch that.

So the SBDCs, which just came up by one of my colleagues, they have been performing so well and yet, as he stated, they are being punished by their budget being reduced. I have got several in my district. Why?

Ms. GUZMAN. This is not a punishment. I think the SBDCs are strong performers within the ecosystem, to be clear. And obviously working within limited resources, we wanted to ensure that we were investing where small businesses have shared concerns around capital access, around—

Mr. MEUSER. I would like you to try to look into that, because that would really be unfortunate for a lot of businesses and certainly for those organizations themselves and for many parts of my district, frankly.

Back to the WOTUS question. The SBA's mission is to protect the interests of small business. And the SBA Office of Advocacy say that the EPA should withhold this rule and other rules that do not properly consider their effect on small businesses. I mean, will you consider advocating against this WOTUS Rule that every one of my farmers has serious issues with? Family farms.

Ms. GUZMAN. I value the Office of Advocacy deeply. And obviously, their independence is really important. That is the way they were structured, to report to me, Congress, as well as the President. They are continuing to do SBREFA panels across the board, including multiple—

Mr. MEUSER. My time has run out.

Thank you, Administrator.

I yield back, Mr. Chairman.

Chairman WILLIAMS. Thank you.

Next, I recognize Mr. Mfume from the State of Maryland.

Mr. MFUME. Thank you very much, Mr. Chairman.

Administrator Guzman, I want to go back to this matter of fraud. I can't get away from it because there are so many people who believe, rightly or wrongly so, that we don't do enough to protect the government and taxpayer dollars from the vicious people who come up with schemes to defraud the government. And in May of last year, the Office of your Inspector General found that the SBA didn't have adequate fraud protection prevention and the mechanisms were not there. Their assessment was that some of it had to do with the speed of the rollout of PPP, and that some of it had to do with what is unfortunately, a continuous and rapid discovery of new and different fraud schemes.

So I was listening when the Ranking Member asked the question about full-time employees, with the assessment being that there should be at least 42, reality being as it is that there are 29. So I don't understand that gulf. If the recommendation was made, it seems to me there was adequate justification for it. And if we are not there, what is the adequate justification for being not there?

Ms. GUZMAN. The Office of Credit Risk Management does not oversee fraud at the SBA. They strictly monitor our portfolio of loans within the Office of Capital Access. More broadly than that, we have hundreds of people working on fraud on an ongoing basis. And so we have a fraud risk management framework that was implemented during the Biden-Harris Administration, as recommended by the GAO. We have also taken efforts to implement all IG recommendations across the board. We have strong performance in terms of complying with those.

Mr. MFUME. Including the recommendations against self-certification?

Ms. GUZMAN. On the contracting programs?

Mr. MFUME. Mm-hmm.

Ms. GUZMAN. We continue to try to evolve our contracting programs to meet—

Mr. MFUME. Is that a yes or a no?

Ms. GUZMAN. Not across the board. We continue to try to work through what exactly we can do to ensure that our self-certification program, the Women Owned Small business program specifically, I believe—

Mr. MFUME. It just seems to me that self-certification in and of itself begs for misuse. And since that has been a problem with a number of Inspector General reports, why is it the SBA won't move to eliminate that?

Ms. GUZMAN. We always look for technology and solutions to improve our programs, as we have done with the Vet Cert program is our gold standard now in terms of performance, which the IG has agreed is a strong system of controls. And so we are focused on making sure that we can translate those learnings across our certification programs.

Mr. MFUME. But the IG also considers self-certification the wrong way to go about doing things. So if we are implementing their suggestions, why aren't we implementing that one?

Ms. GUZMAN. Specifically on that one, first, to be clear that we still look at size standards. We have them attest to their size within that program, but we still are able to look at some controls for size. Obviously, 99.9 percent of all businesses are small. We are talking about a very small fraction of businesses that we have to ensure do not get into our programs.

Mr. MFUME. I don't have a lot of time, but seems to me if all I have to do is self-certify to cross the hurdle, I am going to continue to do it. That is the worst thing that I have ever heard of, particularly now in light of how much fraud has come about.

Can you provide an update on the operations of the Risk Management Board, briefly?

Ms. GUZMAN. Sure. The Fraud Risk Management Board was put into place—it is a GAO recommendation across the federal government and the SBA deployed that it includes ensuring that cross collaboration across our program offices, that senior leadership sit on this Fraud Risk Management Board so that we can share best practices around the Agency, but ensure controls are put in place from our CFO, SCO—

Mr. MFUME. And it is a very important board, it is a very important board.

I understanding there is a detailee that is running the board. Is that correct?

Ms. GUZMAN. A detailee that is running the board?

Mr. MFUME. Mm-hmm.

Ms. GUZMAN. Our CFO is Chairing the Board, that is a Senior Executive Service Member. And so—

Mr. MFUME. The program manager.

Ms. GUZMAN. The program manager position was open for filling, and it might have already been filled at this point, and in the meantime—

Mr. MFUME. My information is that it has not been filled. But why is it taking—if it has not been filled—so long if we consider this a priority?

Ms. GUZMAN. Is a priority, and that has not been questioned. The GAO comptroller general, who I meet with quarterly, as well as the IG, who I meet with bi-weekly, have recognized the work

that we have done. Obviously, in setting up a new program at the SBA, we have to take the resources, the best and the brightest all across the Agency.

Mr. MFUME. My time is expired.

Administrator, I hope that the seriousness of these questions goes beyond just this hearing.

Ms. GUZMAN. Thank you.

Mr. MFUME. I am not going to let go of this one.

Chairman WILLIAMS. All right.

Mr. MFUME. That is a very important position

Ms. GUZMAN. Thank you. Yes.

Chairman WILLIAMS. I now recognize Ms. Van Duyne from Texas for 5 minutes.

Ms. VAN DUYNE. Thank you very much, Mr. Chairman.

And I really appreciate my colleagues questioning on the fraud, the amazing amount of fraud that we have seen.

Administrator Guzman, you are painting a picture that small businesses across the country are thriving, but I don't see that being any farther from the truth. Every single small business that I talk to in North Texas is struggling from high inflation and an overburdensome regulatory environment. Mr. Leutkemeyer's questioning, are you talking to the President, it wasn't sarcastic. He asked that question because we legitimately want to know who is talking to the Administration, who is the voice of small businesses in the President's ear. Because what I am seeing, at least in my district, and I'll tell you, we have had a lot of people who have come to these small business hearings and have told us the exact same thing, their wishes, their concerns, their priorities are not being reflected in this Administration's priorities or their agenda. In fact, they are being immediately hurt.

Inn your testimony, you said under your leadership that you put guardrails to stop fraud, and yet the SBA decided to stop collecting PPP loans that exceeded a balance of \$100,000. Not grants, but loans that led to \$4.6 billion in potentially fraudulent PPP loans. We have seen \$78.1 billion in potential fraud in EIDL loans and then \$1.1 billion in SBA loans. And you are refusing to collect on that. Do you think that should stop fraud?

Ms. GUZMAN. I can address that last part first. Those loans, \$100,000 and under, first off, would separate fraud from those \$100,000 and under any loan, whatever size, will be for fraud. And we continue to flag all of those loans for the IG. for pursuit?

Ms. VAN DUYNE. How do you know?

Ms. GUZMAN. We have actually reviewed all of our 12 million loans within the PPP program to ensure that we identify—

Ms. VAN DUYNE. Since you looked at every single one of them and you know which ones are fraud and which ones aren't, how much is fraudulent?

Ms. GUZMAN. We are still continuing to flag loans and refer them over to the IG. We have so far to date referred tens of thousands. But just because a loan has an indicator of fraud, that does not mean that it is going to be fraud. And so there is a lot of work and analysis that has to go in play. And so we will know as time moves on.

Ms. VAN DUYNE. But how do you know if you are not even going back? If you are counting them as grants and not loans, how do you even know?

Ms. GUZMAN. They continue to have a flag so they are not forgiven, they are not removed until we can identify whether or not they are fraud.

Ms. VAN DUYNE. Okay.

Ms. GUZMAN. And I will speak, though, to the \$100,000 and under and just let you know that obviously we take fraud seriously, as well as those who misuse the program. We also have to be good prudent—

Ms. VAN DUYNE. And I appreciate that.

Do you think you are ever going to get this money back?

Ms. GUZMAN. We have been able to successfully—

Ms. VAN DUYNE. How much of the nearly \$85 billion in fraud have we gotten back?

Ms. GUZMAN. Overall, inclusive of all clawbacks, is \$29 billion that the IG reports—

Ms. VAN DUYNE. So the \$85 billion we have received \$29 billion back?

Ms. GUZMAN. I don't know the \$85 billion and what specifically that includes, but what the IG reports—

Ms. VAN DUYNE. \$4.6 billion PPP loans, \$78.1 billion in EIDL, and \$1.1 billion in SBA loan.

Ms. GUZMAN. What the IG says is that we have been able to recover \$29.5 billion across PPP and EIDL in collaboration with the banks as well as the Secret Service.

Ms. VAN DUYNE. So what are they what are they doing with that service?

Ms. GUZMAN. The funds either initially went back to the SBA or to the Treasury, but of course, all those funds, as the program has been closed for quite some time, have been returned.

Ms. VAN DUYNE. So we have got \$29 billion that we need to—

Ms. GUZMAN. No, that actually has already been clawed back, and I know that it has been used and already either redirected to another program or taken back to Treasury. So there are more funds at the SBA to use.

Ms. VAN DUYNE. Okay. So the SBA received \$3.4 billion at the beginning of the pandemic that was to be in assistance for COVID relief programs, right. When you took office, half of that hadn't even been spent yet.

So, as of January 21, right before you took office, SBA had hired 6,000 temporary employees for the office that runs the EIDL program, they had hired an additional 400 for the PPP program. How are we looking at \$85 billion worth of fraud when we hired all of those people and we are still trying to get those dollars back? And what are you doing to make sure that doesn't happen again?

Ms. GUZMAN. Yeah. And unfortunately, in 2020, when those programs were deployed, there were not the same controls that we implemented in 2021, including on the EIDL program. Not checking and validating tax returns, not checking the Treasury Do Not Pay list. We implemented those controls. So when you hear records



of fraud, it is the entire portfolio. We don't separate from administration to administration.

Ms. VAN DUYNE. But you would have dates on the fraud?

Ms. GUZMAN. I am sorry, what?

Ms. VAN DUYNE. You would have dates on the fraud?

Ms. GUZMAN. Correct, correct. And we have implemented—

Ms. VAN DUYNE. You can provide this Committee of the \$85 billion potential in fraud when that was committed?

Ms. GUZMAN. I don't know what the \$85 billion is, but we are happy to work with you closely to figure out—

Ms. VAN DUYNE. I yield back my time.

Chairman WILLIAMS. Thank you.

And I now recognize Ms. Chu from California for 5 minutes.

Ms. CHU. Administrator Guzman, first, I want to thank you so much for joining me in my district last month to visit with the small business owners that surrounded the Monterey Park shooting site in California. Eleven people died last month, and you visited those businesses. Your visit and your ability to provide resources for them was appreciated by the businesses so much. So thank you so much for that.

And I commend you on your focus on increasing access to capital for hard to reach underserved small businesses just like this. I share this focus, and I look forward to continuing to work together on this important goal.

And that is why I have worked on legislation to codify the Community Advantage pilot program, which is, I believe, one of the strongest tools for reaching underserved businesses. In fact, SBA's own data shows that in 2022, Community Advantage reached significantly more women and minority-owned businesses than the traditional 7(a) program. I believe that codifying it is the best way to make the program work for the people and also to make sure that no future administration can dismantle it.

In November, the SBA issued the proposed rulemaking for SBLC and said that lifting the SBLC moratorium is needed to make sure that persistent gaps would be met, especially in Community Advantage. However, just last April, SBA made changes to the Community Advantage pilot program, including allowing new lenders to join the program and increasing the loan limit. So why is SBA not waiting to assess the impact of those changes before declaring that the Community Advantage pilot program needs to be changed?

Ms. GUZMAN. The Community Advantage program has been successful for 12 years. We are committed to making sure that it can scale. They do about 500 loans a year, we do typically 50 to 60,000 loans total. We would really like to see, especially these community based lenders who reach underserved markets, expand in our program. And so clearly it is important that they have permanence because their ability to raise capital, to grow their program really depends on that certainty, as any business would face. And so with this program, we feel that the 12 years with us are strong. We also have implemented improvements by extending the program, as you have mentioned, as well as agreeing to expand it within the pilot environment. But a pilot is not permanent, and a pilot really limits their ability to scale and grow, which is so need-

ed right now with huge gaps in small dollar lending, persistent and unmovable.

So we hope to continue to serve the needs of those underserved businesses by expanding it immediately by moving them into a special Community Advantage SBLC program that would give them the exact same features.

Ms. CHU. Right. Well, that is actually why—I wanted to ask another question about that. I understand that you would create this new Community Advantage or mission based SBLC license and it would make the Community Advantage program permanent, which I applaud you for doing, however, I am very concerned that the proposed rule does not establish a minimum threshold of underserved lending for the new Community Advantage SBLCs. Right is 60 percent that they have to make sure that they serve underserved markets, certain specific ones at 60 percent of their loans. Well, I am very concerned if we don't have a specific goal, that that threshold will not be met. And also if we don't specify underserved markets the types of markets that they have to serve.

Are you considering changing this in the final rule and using the same underserved lending requirements already used in Community Advantage within this new Community Advantage SBLC model?

Ms. GUZMAN. I am happy to work with your office and discuss it further. The entire 7(a) portfolio doesn't have any specific requirements on it. 58 percent of our loans do go to underserved communities women, veterans, rural, LMI. We are committed to ensuring that the Community Advantage partners, who are CDFIs, who are CDCs, they are mission lenders, continue to perform not only for their mission and achieving their goals with the CDFI Fund at the Treasury as an example, but that they continue to focus on these marketplaces. So I am happy to talk to you further about that.

At this time, we were not imposing anything across the 7(a) portfolio.

Ms. CHU. But we can continue work on that and make that possibly in the final rule then.

Ms. GUZMAN. Exactly. And we actually can prioritize the types of licenses we bring in, again focusing on the 30 nonprofits, but ensuring that they are filling gaps in the marketplace.

Ms. CHU. Okay. Thank you.

I yield back.

Chairman WILLIAMS. Thank you.

And I now recognize Mr. Alford from Missouri for 5 minutes.

Mr. ALFORD. Thank you, Mr. Chairman and Ranking Member for holding this important hearing today. I appreciate that. And thank you, Administrator Guzman, for being here today.

I have a strong affinity for small business, having been a small business owner back in my district. It is really the fabric, as you know, of our society, rich fabric of America, small business, creating prosperity, I think patriotism, unity, things that our country needs right now. I think we can agree on that. But small businesses also need some things. They need clarity, they need certainty, and they need a government and an SBA that works with them and not against them.

Small businesses certainly do not need an SBA that is more interested in promoting the far left Biden agenda and wastefully spending, taxpayer dollars.

So looking at the summary of changes in the President's budget, we see a request for \$1 million to transition the federal vehicle fleet to zero emissions, we see \$10 million in climate change administrative expenses, and the SBA will continue to support Executive Order One 14057 to minimize greenhouse gas emissions. How is this helping small businesses flourish in America and prosper as Americans?

Ms. GUZMAN. We know that small businesses are affected by the increasing number of natural disasters as a result of climate change. Our focus as the SBA, who comes into play after disaster to provide financial relief to not only small businesses, but the non-profits, the individual renters who are their consumers and their employees, we see it as a priority to help businesses prepare for and become more resilient to natural disasters and climate change. And so that \$10 million allotment will help us, across our capital programs ensure that businesses can leverage those tools to build resilience in their business, fortify, physically their building, if that is the case. And we hope that this will inure to our overall disaster lending portfolio.

Mr. ALFORD. Well, I disagree with the whole notion of that, but I know that is going to be a difference that we are not going to agree on here today.

I want to get back to this fraud, the PPE. Last year, NBC reporters really got rich from the theft, as much as \$85 billion, a little more than 10 percent of the paycheck protection program. This story really hasn't gotten the attention it deserved. I think it is starting to catch on. We have been talking about here in this Committee, and you have talked about some about how we are going to recover it. There is still \$59 billion—I am trying to do the math here, I am not great at math—\$59 billion left out there that you think that was flagged for fraud. Is that correct? That has not been recovered?

Ms. GUZMAN. No. If I could clarify that.

Mr. ALFORD. Yes.

Ms. GUZMAN. Because I didn't have an opportunity to respond. But the IG has reported that he has been able to recover \$29.5 billion.

Mr. ALFORD. Right.

Ms. GUZMAN. And that might have been businesses who gave it back early on in PPP, you recall some of those reports. And so we do not have a final number yet on fraud.

Mr. ALFORD. So you don't know how much money out there is ripped off from the American taxpayers?

Ms. GUZMAN. We are still finalizing those numbers.

Mr. ALFORD. Can you put a guess on it? A guesstimate here?

Ms. GUZMAN. At this point, I cannot. And I continue to work with the IG to work towards a final on this. But clearly, we have done the work to identify fraud indicators, which is what that report is—

Mr. ALFORD. So when an account or a person who has gotten these grants or loans has been flagged, the indication has been put

on them, are their accounts frozen? Is that money frozen so they can't spend what they didn't rightfully get?

Ms. GUZMAN. Correct. A fraud flag is an indicator to us that we need to do further analysis. And so we have steps following the fraud indicator to analyze the full portfolio and ultimately leading to a manual review and a referral to the IG.

Mr. ALFORD. How long is this going to take?

Ms. GUZMAN. It was a massive portfolio, a huge scaling of the SBA, obviously, from—we do about \$50 billion a year to \$1.2 trillion in relief. And so, clearly it is a large portfolio, but we are committed, which is why the President asked for another \$100 million in the budget for the IG. We have stepped up the increase for the IG as well as our enforcement arm to pursue fraud.

Mr. ALFORD. All right.

Last question on the SBLC. This moratorium, is it going to be lifted this week? I know it is been proposed. I know there is a lot of consternation about it. When is my moratorium being lifted?

Ms. GUZMAN. I don't have a final time yet because the team internally is still working through the comments. We had 60 days for public comment and quite a bit to work through on both the pro and—

Mr. ALFORD. What is the need for this? Because I have talked to a lot of community bankers and credit unions, they said we have got people covered that want the money. We are there for them. Why is this needed? Spreading the risk out for the SBA in a regulatory fashion?

Ms. GUZMAN. Well, Federal Reserve will-report that two thirds of businesses do not get the funding at all or complete their full request. And so there is a huge gap.

Mr. ALFORD. All right.

Ms. GUZMAN. \$10 billion of the funds at the SBA were unused last year, so there are clearly more—

Mr. ALFORD. I appreciate that.

Ms. GUZMAN.—opportunities.

Mr. ALFORD. Thank you.

I yield back.

Chairman WILLIAMS. I now recognize Ms. Gluesenkamp Perez from Washington State.

Ms. PEREZ. Thank you, Mr. Chair. And thank you, Administrator Guzman, for being here and for your visit to my district. It was really meaningful to small business owners.

I am a small business owner. I own auto repair and a machine shop work, an independent shop. We work in the trades. And I actually have a degree in economics. I have an undergrad in econ. And it literally took me a year to fill out the SBA 504. And it is concerning that it is at times overly onerous, that the capital may not be going to where it is going to, but it is also clear that this is a vital avenue of funding for many of us who work in the trades who don't have access to traditional capital.

But I actually had a conversation with Michael Larry of Source Climbing Center, who you met with when you visited our district. And Michael was having issues with Pay.gov and CAFS to manage his loan. So I know that you guys have created a new website, MYSBA.gov, and I have heard it is definitely an improvement over

the old website, but he says there is still some room for improvement. So I was wondering, what are the opportunities for feedback you have created for small businesses? How is that feedback being incorporated and what is the timeline for launching the new website?

Ms. GUZMAN. Yes. And I will say on the 504 program that the regulatory reform that we are embarking on is supported by the NADCO, which is the National Association of Development Corporation. So I am hopeful that we will be able to streamline the 504 program as well.

Within the MYSBA structure, we are trying to streamline and give a single point of entry for businesses to come and perform the services that they need. Only half of the loans from EIDL, obviously it is an enormous amount, have been transitioned to date, but we have had over a million supported at this point. There is a strong customer service element, and hopefully this business owner has been able to reach out. But we are continuously taking those customer service issues and translating them into continuous improvement as technology must be.

Ms. PEREZ. Thank you.

And like so many people in rural America, I do not have broadband at home. I get it from a radio tower. It is not good. And I am just wondering, how is the SBA keeping programs accessible for people who don't have internet or who have bad internet, like we do?

Ms. GUZMAN. Clearly, we are looking forward to broadband for everyone as the investments in the broadband infrastructure are implemented over the coming years. But in the interim, obviously, the SBA tries to make an effort to distribute resources around the country. Our district offices try to go into different regions, even if for a few hours, to have some sessions and try to connect with small business owners. And it is partially why we also deployed the Community Navigator pilot program to try to focus on an expansion into communities that are underserved, including rural communities. So it is a constant challenge. I have shared that we have limited reach, obviously, but important reach to those businesses, and we hope to grow it.

Ms. PEREZ. Yeah. And so many, many small businesses like mine choose to bank with our small regional banks because we know those bankers, we trust them, we believe in keeping our dollars local. And these past few weeks have put an incredible amount of stress on small regional banks. When people have trust in their bank, they keep their money in the bank, and the bank remains solvent. But I think it is important we remember how critical small banks are in delivering SBA assistance to their communities. So, for example, 67 percent of PPP relief was provided through small community banks, credit unions, and small financial institutions, not the big guys.

So I would like to hear from you what impact, if any, the recent Silicon Valley bank collapse has had on small business broadly. Do you see credit conditions tightening for small businesses going forward?

Ms. GUZMAN. Credit was tightening before, and obviously with challenges in liquidity across lending institutions, we are seeing it

tighten further. I will share that 4,000 of the 4,500 community banks, when doing PPP hadn't done an SBA loan in the last 2 years. And that is what this regulatory reform is about, is trying to make it simpler to navigate our programs, removing the most onerous elements of our regulation to ensure that the lending institutions can start to use SBA products as guaranteed products. They sit in their books in a preferable light and that is a benefit to trying to ensure that limited liquidity doesn't limit our lending as well.

So government guarantees are more important now than ever before. And I have heard from multiple community banks expressing confidentially concern as people were concerned initially about their deposits. But I think after repeated actions by the Treasury and the regulators, people are starting to feel confident as well. And we know that community banks serve their businesses and their individuals well, and people will go back for that customer service.

Ms. PEREZ. Thank you so much for your time here today.

I yield back.

Chairman WILLIAMS. Thank you.

I now recognize Mr. Bean from Florida for 5 minutes.

Mr. BEAN. Mr. Chairman, thank you so much. And good afternoon, Small Business Committee. It is good to see you. And Secretary Guzman, we are glad to have you here today.

Do you have any indication by business code? I know we track business codes. Is there any business that is failing or any sector that is failing against the historical rate?

Ms. GUZMAN. Well, the only thing that I could share is that obviously some of the industries hit really hard. The travel and tourism restaurants continue to face more challenges with credit access, as they obviously had a lot of debt during that time that their revenues dropped. They are starting to recover and seeing those revenues come back up, but obviously facing continued challenges with inflationary pressures and tight labor markets. So I would say those are the industries that I have heard most concerns from in terms of their continued challenges coming out of the COVID programs.

Mr. BEAN. Very good. And I have traveled around and on our off days, including the auto repair shop in northeast Florida that I have visited, several—nine out of ten small businesses right now are struggling getting people to work. What is our plan? Do you have a plan? Or is the SBA saying, this is what we need to do to help small businesses get the labor that they need? What are we doing?

Ms. GUZMAN. Yeah, I mean, the workforce issues are a challenge. We always try to provide the technical assistance, the referrals to local workforce development programs, et cetera. So an immediate support for our businesses, but it is a larger issue. The President's budget includes strategies to increase pre-K, increase childcare. These things are challenging for small businesses whose workers can't come because of children at home or other issues as well. So as much as we can get more participation in the workforce that will also help our small businesses.

Mr. BEAN. Well, that is the challenge, because as we enter this budget year, we are going to tighten our belt. Is there things that SBA do you think that we could reduce or cut spending on? Is there something that you should offer up now, say this is where if you are going to cut SBA or cut there some

fat, this is what I recommend. Is there anything that you could give us today?

Ms. GUZMAN. We hope that the proposed budget gets approved. I know that in the past couple of years, there have been additional funding put on top of it for specialized district support. As much as we can continue to support the core programs of the SBA, that is what we prefer.

Mr. BEAN. Is SBA still working from home?

Ms. GUZMAN. Not fully, no. We have 1 percent of our workforce, our full-time employees, permanent staff are in full remote, the rest of them are admission based remote. So that means a minimum of 2 days per pay period, so 1 day per week. However, other offices have started to move or had already moved throughout the whole process to 3 to 5 days. So obviously, with the end of the pandemic in May, we continue to work through strategies to ensure that we are delivering our mission.

Mr. BEAN. Very good.

Just a few minutes ago, the gentleman from Maryland, Mr. Mfume—

Ms. GUZMAN. Mm-hmm.

Mr. BEAN.—was outraged over the fraud. And there is so much of it. And I think you have noticed a theme here, because we are getting reports. Your report card shows how much fraud has walked out the door and how little it is recovered. So you could say it is bipartisan outrage over the amount of fraud, including the EIDL program, \$78 billion were fraudulently obtained. That is according to the inspector. What are we doing?

And here I have got a minute and a half left, and I will yield to you the remainder of that. Can you give us assurances that you are making changes? I don't have it yet. I don't have the assurance. I know it is bad, and you have said it is bad, and you said you are trying, but what are we doing to change the culture? Can we stop these programs to begin with because we have lost control of them? But can you give us assurance that things are being changed? That is what frustrates the American people. You can see we are all frustrated up here because everybody else follows the rules and we look at people cheating the system. There are so many other things that we could do. And I have got 50 seconds left. Can you make me or this Committee inspired knowing that there are big changes? That this isn't going to happen anymore.

Ms. GUZMAN. All COVID relief programs are closed.

And in terms of the fraud implementation that we have been able to successfully do, we have implemented controls across the program. As you know, early efforts focused on—

Mr. BEAN. So we have stopped it. Has anybody gone to jail? Has anybody—

Ms. GUZMAN. Oh, yes. Oh, yes.

Mr. BEAN.—gone to jail?

Ms. GUZMAN. There have been multiple convictions—

Mr. BEAN. And we have gotten—we have?

Ms. GUZMAN. Yes, multiple convictions, multiple funds recovered directly from fraud, multiple indictments—

Mr. BEAN. But still billions out the door, though, that is the thing.

Ms. GUZMAN. Still billions out the door that is being assessed clearly. I mean, we do not have a final number on fraud. Again, all these are reports of indicators or fraud. They may have checked one database and said, these could be your potential fraud, but they haven't cross referenced it. You know better than others that small business owners may not always check all the right boxes and have alignment. And so you got to check multiple data sources.

Mr. BEAN. And we are counting you to do that.

Thank you so much.

I yield back, Mr. Chairman.

Chairman WILLIAMS. Thank you.

And I now recognize Mr. Pappas from New Hampshire for 5 minutes.

Mr. PAPPAS. Thank you very much, Mr. Chairman and administrator, it is great to see you again.

Thank you again for visiting my district this past January. We had you in Derry and Manchester. We were at the Palace Theater talking with a number of business owners who, almost to a person, said without the support from SBA, they are not sure they would be open today. So we are grateful for that commitment and all the work that is gone on the last few years.

Of course, we are in a new phase in terms of this pandemic, and I think the work that the Agency does is as important as ever to provide businesses the support they need in a really uncertain climate. Members have mentioned a number of critical issues to businesses, but I want to build on what Representative Bean was asking in terms of cuts.

You said, we hope the proposed budget gets approved, but I have a concern. Included in this budget is a 14 percent cut to the Small Business Development Center. Other Members have mentioned this, but I want to stress how important SBDC is to our frontline businesses in New Hampshire. SBDC is the boots on the ground. They have increased and expanded their mission since the pandemic. They have gone from seeing roughly 862 businesses to about 1,500 businesses a year. That is a more than 70 percent increase since the pandemic began. And so that work continues. But the concern is that they are going to lose about \$105,000 of the roughly \$778,000 that they receive in a federal allocation. That means they would have to cut two full time advisors. So that would have a direct impact on the ground in terms of the support that is out there for a critical resource partner.

And I just want to give you another opportunity to respond to this. Why are we cutting a successful program that provides such important assistance to our small businesses at a time where they need it more than ever?

Ms. GUZMAN. And again, what I would re-emphasize is that we are trying to diversify our entrepreneurial ecosystem to be inclusive of all types of providers. The SBDCs do a remarkable job, as does our SCORE partner, as does the Women's Business Centers.



And we want to make sure that we are able to incentivize support for these great institutions across the board.

And so we do need additional types of support to be more inclusive and make sure nobody's left on the sidelines. And ideally, we have enough resources to continue to support all of our great resource partners at scale, but there has to be some change to reach out to more of these micro small businesses around the country and serve them effectively.

Mr. PAPPAS. I appreciate that, but just getting back, one of the important functions of SBDC is disaster assistance. Wouldn't cutting SBDC impact that critical function and other things that we rely on them to do?

Ms. GUZMAN. The SBA actually has a full field operation for disaster assistance, which we scale in the events of the disasters. And so, clearly, we need to work on the ground with partners, those are chambers, those are local economic development agencies. Our SBDCs are great partners on the ground as well. And we hope to continue to support a strong field outreach within our disaster programs and expect to continue to partner on the ground with great organizations like the America's SBDC.

Mr. PAPPAS. Well, one thing I want to note is that New Hampshire's SBDC participates in the Community Navigator program, but this isn't necessarily the case across the country in terms of what other SBDCs do.

So can you provide some additional clarity around the proposal to give more money to the Community Navigators versus initially funding the pilot program at \$175,000,000? And will only those tier one national level funding programs be receiving funding moving forward? And is ensuring that resources will be effectively distributed as partners work to continue this program?

Ms. GUZMAN. And for clarity, we are requesting \$30 million for Navigators, dropping down from that original \$175 million, not an additional \$30 million on top. So that we intend to ensure that all of our great programs, our Navigators, are successful in connecting all of our resource partners on the ground. They are there to build trust and build lines of communication to all of the entrepreneurs who could benefit from the full suite of SBA's resources on the ground.

So I am committed to continue with that effort.

Mr. PAPPAS. One final question. I have heard this feedback from a number of small businesses in my district, and it is the frustration around federal procurement policies. And we have seen a sharp decline in the number of small businesses that are participating in federal procurement in that space. And so about what SBA is doing to reverse that trend in the limited time you have?

Ms. GUZMAN. Yes, we have seen a 40 percent decline in small businesses participating in federal contracting. So the whole of government approach that the Biden-Harris Administration has deployed means including our small businesses in procurement opportunities, creating more small dollar contracts basically for small businesses to participate by giving them category management status. But there is more to do at the SBA. We have simplified our certification program so we get more small businesses in the door,

and are increasing our grants, our 7(j) grants, which help small businesses get contract ready to participate in federal procurement.

Mr. PAPPAS. Thank you.

I yield back.

Mr. BEAN. Thank you very much.

We have got three questioners left, Davids, Scholten, and Thanedar.

So let's go to Kansas, where Ms. Davids is standing by. She is recognized for questions for 5 minutes.

Ms. DAVIDS. Thank you. And thank you, Administrator Guzman, for joining us.

As we have heard, oversight of the SBA is one of the most important functions that our Committee here serves. And given the unprecedented last few years, it will continue to be very important. And I completely agree, the PPP and EIDL programs were enormously successful at helping to sustain millions of small businesses during the worst months of the COVID-19 pandemic. And it is also unfortunately true that these programs saw high rates of fraud, including in the district that I represent. And just one example is that a business owner in Overland Park, Kansas, had to deal with fraud due to identity theft. And obviously, that was through no fault of their own. And I also want to just highlight and thank your team for helping with some of my constituents to quickly close out their cases, just recently, ensuring that they wouldn't be held liable for these fraudulent loans.

But, of course, there is still work to do and we are hearing about that. And so, Administrator Guzman, I was just hoping to hear maybe a broader description of some of the anti fraud efforts, whether it is the PPP or EIDL programs, because I know that that is an area that you all are working on. And I just want to make sure that we have a good understanding of what the anti fraud efforts look like.

Ms. GUZMAN. Sure. On the PPP program, there were more limited controls when launched for speed. And so we tried to add certainty to the process and added, of course, the Do Not Pay system review to both COVID, EIDL, and PPP, as well as, of course, on the EIDL program, added the collection of tax returns. We want to ensure, of course, in the Biden-Harris Administration that we limit fraud and abuse. And so we have been following the recommendations of the IG and the GAO around our capital programs to ensure that we implement a fraud risk management framework. Again, we have hundreds of people working on fraud at the Agency, but the collaboration across program offices is key to ensure that they receive the support and structure that is recommended by the IG and the GAO.

So we think that the controls, combined with the management framework is what positions the SBA for stronger success outcomes on fraud. And we have seen that come to fruition. The IG has personally commented to the committees that SBA's culture from the top has shifted. We have been implementing, against recommendations, at a steady pace to ensure that we solve for some of the pandemic relief program holes and can deliver certainty and speed at the same time. We have demonstrated that now with the EIDL program reforms.

Ms. DAVIDS. Yeah. And speaking of the OIG recommendations related to the SBA's pandemic relief programs, I know you mentioned including tax returns and beefing up the certainty of the programs and the collaboration that has been happening. Can you speak to the number of recommendations that OIG made to address some of the anti fraud efforts that you have been implementing? How many are still pending? And then do you have a timeline for the implementation of those recommendations?

Ms. GUZMAN. It is a continuous process. On the GAO side, we have closed six of the eight high risk list items and eight of the fifteen priority, and obviously continue to try to drive towards successful outcomes with GAO. On the IG, we have done 14 of the 21 management challenges and over 100 of their regular enforcement actions.

And so we know that obviously, the pandemic relief was a huge portion of all of those findings. We continue to try to drive through that portfolio, identify fraud, and work collaboratively with the IG to ensure that those individuals are prosecuted and those funds collected.

Ms. DAVIDS. Thank you.

I have limited time left, so I do just want to take a moment to highlight the work that has been going on around Women's Business Centers. It is a very successful program. It is something that I have worked in a bipartisan way with others on this Committee to make improvements to the program and make sure that it can continue to be successful. And I know SBA has recently expanded the number of WBCs across the country, and I would love to do a follow up conversation about the ways that we can be supportive of that effort from the perspective of this Committee.

Thank you so much for your time.

I yield back.

Mr. BEAN. Thank you very much.

Let's go to Michigan, where Ms. Scholten is standing by. She is recognized for 5 minutes of questions.

Ms. SCHOLTEN. Why, thank you so much, Mr. Chair. I really appreciate that.

And first of all, thank you again to Administrator Guzman. Good to see you again. Appreciate your time today, and just want to echo the sentiments of my colleagues in thanking you for leading your Agency through part of the global pandemic, among other extraordinary events.

As the Ranking Member for the Small Business Committee on Contracting, I know the importance of the 8(a) program for business development and how much it helps minority small businesses to compete in the federal marketplace.

Administrator Guzman, could you please elaborate on some of the ongoing challenges that small businesses face in federal contracting and how the 8(a) program in particular is helping to level the playing field?

Ms. GUZMAN. In addition to the decline of citizens participating in government contracting by 40 percent, there has also been a decline of new entrants by 60 percent. So the challenges are on the outset when they are trying to get certified and start to learn about how to participate in federal contracting. And that is where the

SBA steps in with its certification program. So the streamlining of our certification programs is really key, including across the 8(a) program.

Vet cert is now our gold standard. We just transitioned that successfully from the Veterans Administration. It is unfortunate that less people heard about it because it was such a success. And our veterans are very happy with the program and want to see those reforms implemented across all of our certifications. But it is also about how the agencies source contracts.

And so we worked diligently in the Biden-Harris Administration to ensure that we fought for all of our socioeconomic firms, including the 8(a) firms, to have access to category management status, as we call it, tier two. That is our strategic sourcing. So it is often times sometimes large, bundled actions. And so we continue to try to advocate for opportunities for small businesses to have entry contracts and participate in federal contracting. And we believe that will help ensure that more small businesses can participate.

But the President took very strong action by creating a 15 percent goal for small disadvantaged businesses, which includes 8(a), a 15 percent goal by 2025. So that is tens of billions of dollars. We are trying to ensure that we ready our 8(a)s with the proper grant funding to support a network of technical assistance providers to position them for success. And we have increased the number of procurement center representatives who connect small businesses to contract opportunities in our field offices.

Ms. SCHOLTEN. That is excellent. Thank you so much for your work there.

I have three reports here on the 8(a) program, and Mr. Chairman, I would like to request that they be entered into into the record.

Mr. BEAN. Without objection, they are so entered into the record.

Ms. SCHOLTEN. Thank you so much, sir.

I yield back the remainder of my time.

Mr. BEAN. Very good. And thank you so much.

But let's stay in Michigan, where Mr. Thanedar is standing by. He's got 5 minutes and he is recognized.

Ms. SCHOLTEN. Thank you, Chairman, and thank you, administrator, for being here and working with us.

I am a firm believer in small businesses and advocate for them at every chance, being a serial entrepreneur myself. Establishing, expanding, and sustaining a business is a difficult job, as I know from my own experience running different companies. Despite obstacles, such as lack of capital, I was able to achieve my American dream. However, the largest corporations received the utmost attention—99+ percent of the businesses in our nation are small businesses. Additionally, small businesses contribute significantly to the economy by hiring, investing, and supporting their respective communities. Nonetheless, the disparity in accessing capital remains silent. Salient for business owners, particularly disadvantaged communities.

In my district, Detroit, I have witnessed the challenges presented to business owners seeking capital to grow and sustain their operations. Most of the small businesses in my district make less than

\$150,000 annually and have limited access to financial advisors and banking relationships, which adversely impact their bottom line.

To remedy the inequities, we must look no further than history. Minorities have historically faced steep challenges as business owners. The infamous Tulsa Massacre is one of the numerous examples. On the fateful day of May 31, 1921, an angry mob descended upon the once thriving Greenwood District and unleashed a wave of terror on the black community, destroying businesses and assets worth millions of dollars, without reparations to this very day. Similarly, the Black Bottom neighborhood of Detroit, an area I represent, once possessed a formidable business infrastructure. However, policies such as the National Housing Act of 1949, decimated businesses by constructing Interstate 375.

To this end, the business environment is extremely challenging for minorities. During the COVID-19 pandemic, minority business owners lost a disproportionate amount of business and revenues in comparison to their white counterparts. Moreover, SBA relief programs, such as the Paycheck Protection Program, also highlighted stark disparities. According to Harvard University data, black-owned firms were 8.9 percent less likely to receive PPP loan than similar white-owned firms.

Small business owners are willing and able to grow our economy, and my goal is for them to reach their entrepreneurial dreams, as I did. The goal of SBA should ensure a cohesive environment to grow access to capital for all.

An article in Boston Globe on racial equity stated that eight out of every ten black businesses failed within the first eighteen months. As you know, the first year as a business owner is crucial and capital intensive. The goal of the SBA lending company rule-making is to help reach the smallest of the small businesses women, minority, and veterans.

Administrator Guzman, with that said, what type of gaps would you like to see any new SBLCs fill in small business lending?

Ms. GUZMAN. Thank you for that.

And non depository lending institutions, as well as our Community Advantage nonprofit lenders during PPP were the institutions that were able to fill gaps. I mean, we know that more than half of black businesses go straight to online services to get capital, skipping the banking system altogether. And there is no protection or set terms and condition product out there until the SBA can expand competition in its marketplace.

And so we know that the licensing process for our SBLCs, whether they are Community Advantage SBLCs or regular SBLCs, will be thorough and critical. And we will make sure that we are mission aligned, that they will be filling gaps. That will be one of the key areas. Attract some lenders out there. Obviously, anybody could have bought an SBLC over the last 4 decades, and so the program is open to all now, but we hope to attract some lenders who want to focus on this very important issue, and we think the time is now, based on our strong performance across similar programs.

Ms. SCHOLTEN. Thank you.

And I yield back.

Mr. BEAN. Thank you very much.

Members, what a great day it is been in small business. I want to thank all the Members on behalf of Chair Williams for coming prepared. I think we all had a great deal. Everybody here did their homework.

I want to thank Ms. Guzman. Administrator, thank you so much for being here. Over 2 hours, 15 minutes.

Members, a reminder we have 5 days, if there is no objection, 5 legislative days to submit additional materials, written questions to the Chair, which will be forwarded to the witness, and then she will do her homework and bring it back.

So on behalf of Chair Williams, thank you so much.

And there is no other business before us.

[Whereupon, 4:13 p.m., the committee was adjourned.]

**A P P E N D I X****Congressional Testimony Prepared for SBA Administrator Isabella Guzman  
U.S. House Committee on Small Business  
March 23, 2023**

Chairman Williams, Ranking Member Velazquez, and distinguished members of the committee, thank you for the opportunity to discuss the U.S. Small Business Administration's impact and continued progress in achieving its mission of providing support to help America's small businesses and innovative startups grow.

The entrepreneurial spirit of the American people and their trademark grit, perseverance, and adaptability have made small businesses our nation's most important driver of sustainable job growth, market competition, and innovation.

America's entrepreneurs have not only helped deliver an incredible economic expansion—with 12.4 million new jobs since 2021—they are also powering a surge in new businesses. In 2021 and 2022, nearly 10.5 million Americans applied to start a new business—the most in any two-year span on record.

We are already seeing those businesses grow. Last month in Houston, Texas—a state where the pace of new business applications has doubled from pre-pandemic levels—I met Tramell Kukoyi who used an SBA loan to purchase a new warehouse for her shipping company—an expansion that she expects will quadruple the number of workers she employs.

Tramell is one of the thousands of small business owners I have met over the past two years as I have traveled all over the country hearing about the opportunities they are pursuing and their challenges and successes.

I have seen firsthand that small businesses continue to grow, hire, and retain their employees as they pivot to adapt to remaining supply chain challenges, inflationary pressures, and a tight labor market. They consistently outline that funding their growth is one of their biggest challenges, especially as we see they are facing rising interest rates and tightening credit standards at commercial banks. That is why helping small businesses access affordable capital is as important today as ever.

Capital is the lifeblood of any business and critical to helping small businesses grow, hire, acquire, and innovate. SBA delivered more than \$43 billion across our capital programs in 2022 and finally reversed a 10-year pattern of decline in small dollar lending, but we continue to see large gaps in the availability of loans under \$150,000.

Significant gaps in access to capital have persisted across generations for many underserved communities—and these gaps have significant downstream consequences and opportunity costs.

A lack of smaller loans has disproportionate consequences for the smallest of the small businesses, including minority, veteran, rural and other businesses that are already historically underserved by SBA's core programs.

Effectively addressing this market gap means that the SBA must pursue improvements that streamline our programs in order to better deliver on our mission and reach underserved businesses.

First, the credit markets need more competition and capacity to serve small businesses. That is why we proposed expanding our distribution networks by revitalizing the Small Business Lending Company (SBLC) program. First and foremost, the SBLC Rule will give permanence to the over one hundred nonprofit, mission-oriented lenders, who have been effectively lending to underserved communities through the Community Advantage Pilot Program. It will also offer new licenses, called Community Advantage SBLC licenses, to increase the number of these nonprofit lenders.

The rule also lifts a cap on regular SBLC licenses, enabling SBA to admit new lenders aligned with the agency's mission. SBA will begin by issuing three additional SBLC licenses to lenders with demonstrated historical performance of safety and soundness, and a strong regard for borrower financial health and protection. In doing so, SBA's objective is to increase the number of lenders serving the hardest-to-reach small businesses, including women, minorities, veterans, and rural firms, at no cost to the taxpayer.

Second, we are listening to the concerns of small businesses who want to utilize SBA loans, but struggle with red tape and complexity in our programs. Based on extensive feedback from our lending partners and community advocates, we are streamlining affiliation rules and simplifying the process for lenders to make an SBA loan to align with existing lender best practices.

Maintaining the core integrity and oversight of SBA's lending programs will always be my top priority, and I strongly believe we can both improve our support for underserved communities and strengthen program integrity at the same time.

Third, we are easing business transitions and expanding access to employee ownership, as many of the members of this committee have supported, by allowing SBA products to finance partial buyouts. Previously 7(a) loans could only be used in three specific types of ownership changes which were simply not workable for many small businesses. This added use-case will make it easier for employers to get equity out of their businesses. And, just as importantly, it provides an opportunity for employees to purchase equity in the business they work for, easing business transitions and enabling employees to become business owners themselves over time.

Finally, a bipartisan interest of this committee has been to attract more private capital to the innovative startups critical to our national economic competitiveness. That's why we have proposed a rule modifying the Small Business Investment Company (SBIC) program to incentivize patient, early-stage investments and growth strategies—with a new "Accrual SBIC"



license—and to diversify portfolios to make sure SBIC funds expand investment opportunities in rural and underserved communities.

Together these improvements will help SBA more effectively address critical gaps in the capital market, providing access to credit for borrowers who cannot find it elsewhere.

At the same time as we move forward with these updates to our programs, we continue to build on the lessons learned through managing the biggest disaster response in our agency's history during the recent pandemic. The SBA's COVID-Economic Injury Disaster Loan (EIDL) loans and advances, the Paycheck Protection Program (PPP), SBA Debt Relief, Shuttered Venues Operators Grant (SVOG), and Restaurant Revitalization Fund (RRF) were important lifelines that helped millions of small businesses navigate the crisis, preserve jobs, and recover quickly.

These programs had to scale quickly to deliver aid as directed by Congress. The agency has now transitioned to ensuring small businesses continue to be supported through ongoing loan servicing, grant reporting, or PPP forgiveness processing.

For example, the COVID-EIDL program concluded last year after providing \$390 billion in relief to 4 million small businesses across the country. We continue to work with appropriators in Congress to ensure the agency has the necessary resources to service the COVID-EIDL portfolio and support our small business customers.

In partnership with our lending network, we have processed full or partial forgiveness for more than 99.6% of the 10.6 million submitted PPP forgiveness applications.

And we continue our priority effort to combat pandemic fraud. From day one, the Biden-Harris Administration prioritized pandemic fraud prevention. We instituted standard fraud controls such as income tax verification and checking Treasury's Do Not Pay databases, while ensuring that we delivered pandemic relief funds with both speed and certainty. It was under my leadership that SBA implemented the GAO recommendations to improve SBA operations by putting in place best practices for fraud prevention, detection and response.

We also continue to prioritize strong support for recovery of stolen funds. We identify cases of suspected fraud and work closely with the Inspector General as well as other law enforcement agencies to investigate and prosecute the fraudsters who took advantage of the crisis to defraud the American people and steal funds and resources.

As a result of our new fraud framework, aggressive actions and investments, the SBA is more strongly positioned to combat fraud, waste and abuse in its longstanding capital and other programs.

SBA's mission goes beyond capital as we recognize that small businesses need to also strengthen their balance sheets with revenue growth opportunities. The SBA is committed to helping America's small businesses access the largest marketplace through federal contracting opportunities. Last year, the federal government met President Biden's contracting goal for

small disadvantaged businesses, and SBA is driving toward the President's goal of 15% for SDBs by 2025.

Earlier this year the SBA successfully launched VetCert, our new Veteran Small Business Certification Program—an authority we assumed and transitioned successfully from the Department of Veterans Affairs at Congressional direction in the 2021 National Defense Authorization Act. We built this platform to be the gold standard in customer service to take more veterans on the pathway to federal government contracting. With VetCert and the launch of new Veteran Business Outreach Centers, we are increasing SBA's footprint in underserved states and regions and across the country in support of our veterans.

We also recently completed the second stage of the realignment and strengthening of the newly reorganized Office of Disaster Recovery and Resilience (ODR&R). The transformation of our SBA disaster enterprise to align all of our capital programs will help ensure disaster survivors can easily and swiftly connect to vital financial relief. Layering support for recovery and resilience will also help strengthen small businesses and communities to better prepare for and manage the disruptive impacts to their lives and livelihoods caused by increasing extreme weather events.

I'm proud of the work we have done to create a strong, customer-centric, technology-forward SBA that is helping small businesses take advantage of the unprecedented opportunity created by President Biden's economic agenda that is investing billions of dollars in local economies and communities across the country.

The Infrastructure Investment and Jobs Act is giving small businesses access to contracts to build and revitalize our nation's infrastructure.

The CHIPS and Science Act will bolster small businesses in supply chains and support them as they develop next generation technologies manufactured right here in the United States.

The Inflation Reduction Act will lower health care costs for small businesses and their employees, and it also creates opportunities for developing a new clean energy economy, and building a more sustainable future.

And, a new three-year bipartisan reauthorization of the Small Business Innovation Research and Small Business Technology Transfer Programs will help innovative small businesses commercialize their cutting-edge discoveries and innovative technologies that have always been key to America's global competitiveness.

At the SBA, we want to make sure small businesses are leading these initiatives—and have the capital, tools and resources they need to fully leverage every growth opportunity.

The Biden-Harris Administration has made great progress at the SBA and across the federal government, building the economy from the bottom-up and the middle-out. Now we are

working to finish the job and foster strong, sustainable growth and resilience for all of our small businesses.

Thank you again for this opportunity to share some of the great work our mission-driven SBA team has been doing. I look forward to working with the new Congress to ensure our nation's small businesses get the support they need to launch, grow and build resilience to achieve their American Dream.

**House Committee on Small Business Hearing  
“Oversight of the Small Business Administration”  
March 23, 2023  
SBA Responses to Questions for the Record**

**Questions from Chairman Williams**

**7(a) Lending**

**1. Over the last ten years what is the charge-off percentage for regular 7(a) loans, 7(a) Express loans, and the Community Advantage (CA) Pilot Program? Please separate out the CA Pilot from regular 7(a).**

See “House QFRs - Data file.xlsx” (attached) and below.

**Cumulative Charge Off by Program\***

Approval Fiscal Year	Reg 7(a) (<=\$350k)	Reg 7(a) (>\$350k)	SBA Express (Revolver)	SBA Express (Term)	Community Advantage
2013	3.9%	1.8%	4.5%	3.3%	8.7%
2014	4.6%	1.6%	4.9%	2.5%	8.3%
2015	5.3%	1.5%	5.0%	3.2%	8.1%
2016	6.4%	1.0%	4.5%	2.8%	8.0%
2017	6.2%	0.8%	4.0%	3.1%	7.6%
2018	5.4%	0.4%	3.3%	2.7%	8.7%
2019	3.5%	0.2%	2.0%	1.4%	4.5%
2020	0.9%	0.0%	0.6%	0.4%	1.2%
2021	0.2%	0.0%	0.1%	0.1%	0.5%
2022	0.0%	0.0%	0.0%	0.0%	0.0%
2023	0.0%	0.0%	0.0%	0.0%	0.0%

\* Cumulative Charge Off = (Gross Charge Off Amount) / (Gross Approval Amount on Disbursed Loans)

**2. Over the last ten years what is the charge-off percentage for regular 7(a) loans made by traditional financial institutions and credit unions, as well as the charge-off percentage made by Small Business Lending Companies over the same period?**

See “House QFRs - Data file.xlsx” (attached) and below.

**Cumulative Charge Off by Lender Type**

Approval Fiscal Year	Bank, CU, or S&L	SBLC
2013	2.3%	2.7%
2014	2.1%	3.2%
2015	2.2%	1.5%
2016	1.8%	1.4%
2017	1.7%	0.7%
2018	1.2%	0.9%
2019	0.7%	0.2%
2020	0.1%	0.0%
2021	0.0%	0.0%
2022	0.0%	0.0%
2023	0.0%	0.0%

\* Cumulative Charge Off = (Gross Charge Off Amount) / (Gross Approval Amount on Disbursed Loans)

**3. Do you anticipate the SBA making any changes to the requirement that borrowers prove they could not acquire credit elsewhere before getting a 7(a) loan?**

“Credit not available elsewhere” is a statutory requirement under 15 USC 636(a)(1)(A) and 697(b)(2). SBA will continue to require that the Lender certifies that the borrower does not have credit elsewhere. See 13 CFR 120.101 which is unchanged.

**4. Can you please cite the authorization the SBA has to make the CA Pilot permanent?**

Pilots are authorized in the Small Business Act for the 7(a) Program (15 USC 636(a)(25)), and by definition, are temporary. See also 13 CFR 120.3. While the Pilot Program itself will sunset, SBA made the program a permanent part of the 7(a) program by creating a new Community Advantage Small Business Lending Company (CA-SBLC) license and allowing existing CA pilot program lenders to grandfather into CA SBLC licenses. SBA is making corresponding regulatory and policy changes within the 7(a) program to facilitate what was previously mission-based lending in the CA pilot.

**SBICs**

**1. Does the SBA consider the Environmental, Social, and Governance (ESG) investment strategies of Small Business Investment Companies (SBICs) before licensing them?**

ESG investment strategies are not a licensing factor.

**a. If so, how exactly do these strategies weigh into the licensing decision?**

N/A

**2. How many SBICs currently use ESG investment strategies?**

In completing the agency's required forms, SBA does not require SBIC licensed fund managers to provide data related to whether SBIC licensed funds:

- a. Maintain a formal ESG policy; or
- b. Market their investment strategy as an "ESG" strategy.

**3. The SBA congressional budget justification indicates the Rulemaking for the SBIC Investment Diversification and Growth Rule will become effective this year. There are several, significant changes proposed to the SBIC program. When can we expect the rule to be published?**

The final SBIC Investment Diversification and Growth Rule has concluded OIRA review and will be published soon.

**a. Is SBA concerned with potential risk associated with the proposed Accrual Debenture which will allow for deferring interest and principal repayments for 10 years?**

Risks in private investing come in many forms including illiquidity risk, duration risk, volatility risk, concentration risk, credit risk, and tail-event risk. Over several decades, SBA has found that illiquidity risk, duration risk, and strategy concentration risk correlate with the highest risk of overall program losses. The proposed Accrual Debenture instrument combined with the portfolio diversification rules address these three primary risk considerations through improved cash flow matching, duration and repayment management with longer time-horizon investment strategies that do not have a semi-annual cash distribution component usually only occurring in credit-oriented investment strategies. The proposed regulations and design of the Accrual Debenture instrument also include guardrails to prevent the overall program from over-concentrating in more volatile 'risk-on' strategies, if necessary. As with all private fund investments, proper investment and operational due diligence and ongoing portfolio monitoring as essential to safeguarding capital.

**b. What losses does SBA anticipate from this new type of SBIC and Debenture?**

SBA does not anticipate losses as a result of the new debenture instrument. All funds which apply for the Accrual Debenture must meet SBA's underwriting standards to be licensed and approved for a leverage commitment to ensure the program continues to maintain a zero-subsidy rate.

**3. Thorough and timely information is vital to this Committee carrying out its oversight duties. For the SBIC program, however, the quarterly reports lack the specificity to understand trends in investment and are published months after the data is collected by SBA. As you know, loan data for the 7(a) and 504 programs are published in near real time on a weekly basis and until 2018 SBIC data was released every 30 days. Is SBA considering taking action to improve the timeliness and details of SBIC reports?**

Yes, SBA is currently modernizing the Office of Investment and Innovation (OII) data infrastructure and reporting systems to ensure timely reporting of currently reported metrics. Additionally, the proposed SBIC rulemaking includes the addition of industry standard investment metrics which have not been collected or reported historically.

**a. What improvements to SBA's SBIC IT system are planned?**

Building upon IT investments already made to protect the security of sensitive financial and other information the SBA maintains, SBA is making investments to improve the reporting, analysis, and oversight to continue to minimize program defaults and maximize financial recoveries. These investments will increase productivity by increasing transparency where possible, enable automation of select data ingest functions, decrease complexity of data review and data entry, and provide better analytical tools for trend analyses allowing the program to attract new applicants and investors, including those serving underserved markets.

**Disaster Loans**

**1. What do you anticipate the average annual cost of administering and servicing the COVID-Economic Injury Disaster Loan program will be over the next ten years to the SBA?**

Currently, SBA estimates yearly COVID EIDL servicing costs to be around \$370 million a year based on projected workload. We are continuing to assess COVID EIDL servicing workload as all loans come off deferment and enter full repayment status and expect to better refine long-term COVID EIDL servicing cost estimates based on workload requirements.

**2. In February 2023, the SBA announced a major restructure of the way disaster loans are managed. SBA's direct disaster loans were moved away from the Office of Disaster Assistance and to the Office of Capital Access (OCA). Additionally, ODA was renamed. The SBA claimed that these changes will strengthen small business support during disaster. What performance metrics will SBA track to identify the effectiveness of these changes?**

In FY2023, the Office of Disaster Recovery & Resilience (ODR&R) will track the following metrics related to the disaster response and recovery mission: disasters having field presence within 5 days (%); disasters having Business Recovery Center (BRC)/Disaster Loan Outreach Center (DLOC) outreach within 10 days (%); number of outreach events to underserved communities; and number of loans that include mitigation measures.

**a. How will the new Office of Recovery & Resilience limit duplicating existing disaster recovery efforts performed by resource partners?**

ODR&R and SBA's resource partners provide inherently different services to disaster survivors. Once a disaster is declared, ODR&R notifies SBA's district offices, which help to mobilize SBA resource partners. Simultaneously, ODR&R leverages public partners such as FEMA and state, local, tribal, and territorial officials to promote the program and establish Disaster Recovery Centers (DRCs). DRCs are a vital component of the recovery process as they increase customer service and provide support to survivors by answering questions and helping individuals and businesses apply for a disaster loan and/or close an approved loan. FEMA often provides support in the DRC process; however, SBA must procure space for Business Recovery Centers (BRCs) in Presidential declarations. These centers are solely focused on supporting the needs of business owners recovering from a disaster. SBA resource partners, such as the SBDCs, assist the ODR&R Field Operations Centers with locating space for BRCs, often for little or no fee. At both BRCs and DRCs, ODR&R staff inform business applicants of the resource partner counseling and advisor services available.

If SBA is unable to approve a business loan application due to lack of repayment ability, unsatisfactory credit history or insufficient information, SBA directs the applicant to a resource partner for additional help and support. Resource partners shepherd business owners through alternative options to a disaster loan, if denied, and provide the necessary counsel and advise to help a business owner overcome the disaster impact on their operations, marketing, financials, accounting, workforce, supply chain, etc. After a disaster, resource partners also help reconstruct business records, provide cash flow forecasts and marketing analysis. This counsel is so vital that SBA's decline letter includes a resource partner referral for further assistance. These services are provided free of charge.

**b. How was this restructure enacted (e.g. an approved 606, etc...?).**

It was approved in a 606 that was submitted to the Committee in the last Congress. We can provide documentation to your staff.

**i. Please provide those documents to the Committee.**

**c. What entities outside of SBA, if any, were consulted on this change?**

As part of the 606 process, the House and Senate Appropriations Committees were consulted and notified.

**d. Why and how was the Associate Administrator position changed from a career position to a political appointment?**

The Associate Administrator for the Office of Disaster Assistance was previously a Career Senior Executive Service position. In January 2022, SBA changed the AA/ODA to a Presidential political appointee. The reason for the change was to bring ODA into parity with other program



offices at SBA and around the federal government in emergency management with political leadership.

### **Contracting**

**1. SBA's contracting Scorecard is supposed to be a valuable tool that promotes transparency and encourages greater competition for small business contracts. Unfortunately, the Scorecard data is often unreliable and inflated. This creates the illusion that government agencies are awarding many more contracts to small businesses. The FY23 NDAA required SBA's contracting Scorecard to include the number and total dollar amount of contracting awards for certain set-aside programs. What is the status of this implementation?**

**a. When will SBA complete these changes?**

SBA will include this data starting in the FY2023 scorecard release. SBA is coordinating with GSA, which prepares the data for the scorecard, to provide the number and total dollar amount of contracting awards for set-aside programs for FY2023.

**b. Is SBA concerned with potentially inflated Scorecard numbers?**

SBA believes that the scorecard accurately reflects dollars awarded to small and socioeconomically prime contractors. Moreover, the scorecard serves the dual purposes of transparency—i.e., reporting to the public what the government has awarded to small business—and incentivizing action—i.e., encouraging agencies to set aside more procurements for small businesses. Although SBA does not collect the data used for the scorecard (it comes from GSA), SBA is not aware of any potentially inflated figures.

**2. The number of small businesses seeking to do business with the federal government has been declining. The number of small businesses receiving prime contracts in 2022 dropped by half since 2010. SBA's data shows that there were over 4,000 fewer small business contractors in 2021 than in the prior year. Witnesses in this Committee have previously questioned whether pursuing access to SBA's contracting programs was worth it. What is SBA doing to show the value of all of SBA's contracting programs?**

Last July, SBA released the FY2021 Small Business scorecard to showcase each agency's performance in achieving the Congressionally mandated small and socioeconomic business goals. The FY2021 Small Business Scorecard release showed that the federal government reached record levels of contracting with small businesses, including Service-Disabled Veteran-owned firms, Small Disadvantaged Businesses, and HUBZone firms. This is an indication that federal contracting programs continue to invest in small businesses at historic rates. To ensure these efforts are matched going forward with an expanded small business supplier base, we worked with OMB on guidance and benchmarking tools that agencies can use to increase their attention to the diversity and depth of socioeconomic and other small businesses in their base, including the number of new entrants. See [OMB Memorandum M-23-11, Creating a More Diverse and Resilient Marketplace through Increased Participation of New and Recent Entrants](#).

These efforts, coupled with changes in category management scoring practices and actions to disincentivize bundling, are designed to increase the likelihood that a small business will receive work, whether through an existing contract or a new stand-alone contract. We will continue to work with OMB, the Domestic Policy Council, and others to ensure that government contracting practices are in line with the Administration's small business priorities and that agencies maximize their use of small business friendly practices when using currently existent multiple award contracts, such as small business set-asides, more collaboration with SBA's PCRs, and use of on-ramps.

- a. Even with potentially inflated data, SBA's Scorecard shows that the government did not meet two of its prime small business contracting goals. Additionally, it missed three subcontracting goals. What specific steps will SBA take to improve these numbers?**

SBA reviews contracts through SBA's Procurement Center Representatives (PCRs) to encourage set-asides within the HUBZone and WOSB programs, which are the two prime contracts that have goal deficits. SBA is currently leading an interagency initiative to ensure that PCRs are engaged far earlier in the acquisition planning process on contracts (rather than in the final 30 days alone) so that they have greater opportunities to promote set-aside awards with small and socioeconomic firms. Similarly, SBA's Commercial Market Representatives (CMRs) perform compliance reviews of prime contractors to see that they are reporting subcontracting reporting correctly and to investigate why they might be missing their subcontracting goals. These reviews will continue to analyze the subcontracting activities on many of the government's largest contracts each year to hold large primes accountable to hitting their small business subcontracting goals.

- b. An A is an exceptional grade. A score of 100% means everything was done completely and entirely. With that in mind, does SBA think it is appropriate to give the federal government a Scorecard score of 109.58% when fewer small businesses engage in federal contracting and not all contracting goals were met?**

The scorecard weighs the overall small business goal more than all the other goals, comprising 60% of the prime contracting grade. The remaining four goals (small disadvantaged business, service-disabled veteran owned, HUBZone, and women-owned small business) each account for 10% of the prime contracting grade. Because the government reached its highest-ever small business achievement (over 27%) and far surpassed the 23% goal, the government's scorecard resulted in an 'A' grade.

- 3. The Administrator stated that she intends to streamline SBA's certification processes in an effort to attract more small businesses to government contracting. What streamlining efforts will the SBA undertake?**

In addition to changes made over the past year to SBA's certification applications to use plain-language standards and additional in-application instructions to guide applicants through the process, SBA has undertaken a review of its certification applications to see where they could be

shortened while staying true to statute. On April 3, 2023, SBA rolled out a streamlined 8(a) Business Development Program application, consolidating and/or removing questions to reduce the number of “touchpoints” within the application by more than 50%, improving the overall feel of the application to cut down on the time and resources that firms currently need in order to apply. Among the major changes to the 8(a) application, SBA has:

1. Significantly reduced the financial statement upload requirement, which had previously required 3 years of financial statements and 5 years of tax returns.
  - a. This change is expected to have the largest impact since most submissions returned to applicants have incomplete financial statements.
2. Greatly increased the accepted lifespan on financial documents so that personal financial statements can be up to 90 days old at the time of submission and business financial statements can be up to 180 days old.
  - a. Previously, both sets of financial statements had to be less than 30 days old at the time of submission.
  - b. This longer timeline will cut down on firms needing to spend additional time and money to produce updated statements for their application.
3. Removed over a dozen no-longer-necessary questions related to ownership, business size, company character, and general eligibility.
4. Eliminated almost 30 questions previously used to gather demographic and business information on the applicant owner’s spouse, as well as 50 questions related to the finances of any non-disadvantaged business partners.

**a. What other efforts will SBA undertake to attract small businesses to government contracting?**

SBA continues to work with OMB to track the number of new entrants entering the federal marketplace each year, by agency, to hold contracting officials accountable to expanding the domestic supplier base—a graded component of the SBA scorecard. The recent release of a governmentwide new entrant tracking system, as well as SBA’s government-wide sharing of lists of certified socioeconomic firms who have not yet received a contract, will help reverse the downward trend in federal small business vendors.

**4. In Report 22-08, the SBA Inspector General recommended several actions pertaining to the 8(a) program. SBA indicated it planned to update Standard Operating Procedure 80 05 808 by 12/1/2022. What is the status of that update?**

After further internal discussion on the changes that would lead to the recommendation’s closeout, SBA and OIG have agreed that the Standard Operating Procedure (SOP) 80 05 8 will be updated by December 31, 2023. SBA has long since established a working team to review and make updates to the SOP ahead of the new timeline.

**a. What steps has SBA taken to improve the measuring of the development of firms in the 8(a) program?**

SBA has clarified and enhanced the established annual review of business plans to institute a process for regular assessment of an 8(a) participant's achievement of its business goals designed to advance their growth and ability to compete through stronger business knowledge and capability. In August 2021, SBA added multiple questions in its Business Opportunity Specialist (BOS) Annual Review Workbook that target specific aspects of the participant's business plan including any updates, progress toward short-term and long-term goals, and feasibility to support business growth and profitability of operations following the participant's completion of the 8(a) program.

SBA produced a new Business Plan workbook guide for 8(a) Program Participants to outline their objectives and goals for their 9-year program term. The Business Plan is linked to the new FY2023 Annual Review Workbook. The vision is to develop standard business processes so that SBA can measure outcomes and progress of 8(a) Program Participants in meeting their business plan goals.

SBA also implemented a new business development-focused annual review that includes evaluation and tracking of government contracting goals, financial condition, sales trend, marketing, human resources, and management experience. This review is documented in the Annual Review Workbook and rolled up into a dashboard that will benchmark the portfolio health after the completion of FY2023.

**5. In Report 23-01, the SBA Inspector General stated that "as of May 31, 2022, the Women Owned Small Business (WOSB) Program has approved 5,780 firms into the program and denied 214. Additionally, as part of SBA's review process, 12,000 applications were screened and returned to the applicant for more information." Can you confirm that these 12,000 applications were adequately screened?**

SBA can confirm that these 12,000 applications were adequately screened. SBA reviews all information provided by an applicant in support of their application. When SBA returns an application, it provides the applicant with a formal response outlining the information, including any additional documentation, needed to resubmit a complete application.

To enhance the customer experience and increase processing efficiencies, the WOSB Program continually assesses and modifies procedures, as needed, for application screening and engagement with applicants. Efforts have included (1) clarifying application documentation requirements, (2) hosting monthly meetings for applicant that have had their applications returned, and (3) hosting webinars for firms interested in applying for WOSB status.

Currently, there are over 8,600 approved firms participating in the program. For FY2023, SBA has approved over 2,100 applications equaling a 47% approval ratio of the total number of unique applications submitted this fiscal year.

**a. What is the cause of the SBA's slow review of these applications?**

SBA reviews all certification applications as expeditiously as possible. Factors such as missing or incomplete documentation can lead to longer application review periods. SBA continually evaluates certification process metrics to improve the application process benefiting the small business applicant.

**b. What is the telework status of those responsible for reviewing WOSB applications?**

Following current SBA guidelines for a hybrid work environment, SBA staff must work from their duty station offices at least twice per pay period, with the option to work from home or from the office for the remainder of the pay period. WOSB personnel who are telework eligible follow the agency's telework policies and guidance, as required by SBA.

**c. What is the telework status of WOSB analysts?**

Following current SBA guidelines for a hybrid work environment, SBA staff must work from their duty station offices at least twice per pay period, with the option to work from home or from the office for the remainder of the pay period. WOSB personnel who are telework eligible follow the agency's telework policies and guidance, as required by SBA.

**d. What is the telework status of the program director?**

Following current SBA guidelines for a hybrid work environment, SBA staff must work from their duty station offices at least twice per pay period, with the option to work from home or from the office for the remainder of the pay period. WOSB personnel who are telework eligible follow the agency's telework policies and guidance, as required by SBA.

**e. How will SBA insure only eligible women-owned businesses become certified?**

The WOSB Program has created a robust internal control framework, within SBA's broader oversight efforts, to verify that WOSB Program applicants meet the Program eligibility requirements so that only small business concerns owned and controlled by women benefit from the WOSB Program. SBA established its WOSB Program certification process based on the requirements of the National Defense Authorization Act of 2015 (NDAA 2015) and carefully follows statute and regulations regarding verifying representations of size.

**6. SBA recently launched the new Service-Disabled Veteran Owned Small Business certification portal. In FY23 the SBA requested an additional \$20M to support the launch. Now, SBA has again requested additional funds to support this portal. How much funding does SBA anticipate requesting to service the SDVOSB certification?**

The President's 2024 Budget requests \$20.5 million to support the certification of small business concerns owned and controlled by veterans or service-disabled veterans.

**a. What specifically will the SBA do with the newly requested \$20M?**

SBA will use the funding to support program operations, including FTE salary and benefits; contracts for certification processing, outreach and training, customer support, and risk assessment; hearings and appeals, and IT overhead, including for the VetCert portal and call center.

**7. A HUBZone program rule includes Opportunity Zones to be considered as Governor-Designated Covered Areas, thus becoming a HUBZone itself. What efforts has SBA undertaken to educate Governors that Opportunity Zones can be included as Governor-Designated Covered Areas?**

In order to spread the word to Governors about the HUBZone Governor-Designated Covered Areas program, SBA engaged in a fruitful outreach campaign over the past year, including (1) three presentations to National Governors Association representatives; (2) preparing a kit for every state that included a list of all census tracts and counties that would qualify for the designation to make it easier for the states to select area for their “petition” to SBA; and (3) informing SBA District Offices and SBDC network and other stakeholders about the effort more generally to communicate locally.

SBA does want to note, however, that Section 1701 of the National Defense Authorization Act for FY2018 articulated a formula that was intended to be utilized to identify rural communities available for HUBZone designation under the new “Governor-Designated Covered Areas” category, and this formula from Congress does not guarantee that Opportunity Zones will be in the designated Covered Areas.

The term “Covered Area” defined by Congress means an area in a State (1) that is located outside of an urbanized area, as determined by the Bureau of the Census, (2) with a population of not more than 50,000, and (3) for which the average unemployment rate is not less than 120 percent of the average unemployment rate of the United States or of the State in which the covered area is located, whichever is less, based on the most recent data available from the American Community Survey conducted by the Bureau of the Census. Any Opportunity Zone that meets this definition may be proposed as a Governor-Designated HUBZone.

**a. How many states have had Opportunity Zones that were designated as HUBZones through Governor-Designated Covered Areas?**

In summary, 6 census tracts and 23 counties containing Opportunity Zones have been added to the HUBZone map through Governor-Designated Covered Areas. Thus far, 10 of the 13 states with approved Governor-Designated HUBZone petitions have included census tracts or counties that include Opportunity Zones, as follows: Colorado, Illinois, Louisiana, Mississippi, North Carolina, Texas, Idaho, Wyoming, Wisconsin, and West Virginia.

**b. How many states currently have Opportunity Zones that are designated as HUBZones through Governor-Designated Covered Areas?**

Please see the answer to Question 7 part a above.

**Resource Partners**

**1. SBA is finally updating the Resource Partner’s database, previously called EDMIS. What specific client data will this database collect?**

The EDMIS Next Generation (EDMIS-NG) system will be replaced with a new Salesforce system called Nexus in October 2023. The EDMIS-NG system (and the Nexus system) will collect the following client data:

- a. Client full name
- b. Client mailing address
- c. Client telephone number
- d. Client email address
  - a. Optional Demographics:
    - i. Race and ethnic affiliation, veteran status, disability status, sexual orientation, and gender

**a. How will SBA better inform Resource Partner clients that data shared on SBA’s Form 641 is voluntarily disclosed?**

A resource partner client is informed at the time of registration with an SBA Resource Partner that their data will be disclosed to SBA. This notification is included on Section 11 of the 641 form. A client may opt out of receiving notifications from SBA, but they do not have the option to opt out of providing client information since this information is required to receive services from an SBA Resource Partner. The demographics questions regarding race and ethnic affiliation, veteran status, disability status, sexual orientation, and gender are optional.

**b. How will SBA use data collected through this new EDMIS Next-Gen system?**

The data collected in the EDMIS-NG system is used primarily for aggregated reporting on Resource Partner performance toward annual performance metrics and goals. The detailed data is collected and stored in third-party systems operated on behalf of the Resource Partners or entered directly in EDMIS-NG (future state Nexus). This detailed session data is used to validate Resource Partner activities performed through SBA grants.

**2. The SBA has undertaken another attempt at a “one-stop shop” online hub called MySBA. Customer service should be a top priority, as is ensuring taxpayers’ dollars are not wasted. We face increasing cyber threats from adversaries like China. Data must be**

**protected. SBA staff committed to regularly briefing this Committee on MySBA. What safeguards are in place and are planned to protect data on MySBA?**

MySBA will use Government standard security practices including 800-53 controls, FISMA, and FEDRAMP to ensure that safeguards are in place to protect data on MySBA.

**a. What program performance metrics will be available from MySBA?**

The MySBA loan portal was launched in February 2023. Program performance metrics will be determined.

**i. How will SBA use these performance metrics to improve programs?**

The goal is to increase the level of customer service and optimize program delivery to efficiently serve our small businesses throughout the country.

**b. What CRM platforms are being considered for integration into MySBA?**

MySBA has not selected a CRM platform yet. SBA intends to select an industry standard CRM platform.

**c. Has the SBA updated its system development policy as recommended by the OIG in October 2022?**

SBA is updating its IT investment governance framework, which will include improved controls for software purchase, design, and implementation. The initial phase of this framework revision is currently in the agency clearance process. Additional policies and processes are currently being developed.

**i. If not, when does the SBA anticipate making this update?**

The anticipated completion date for the governance framework revision is Q1 2024.

**Responsiveness**

- 1. The Agency has been delayed in responding to requests from this Committee. We have a duty to the American taxpayers to conduct oversight and ensure their government is functioning properly. Will you commit to demanding that Agency personnel provide timely and responsive answers to this Committee's inquiries?**

Yes.

**Staff**



**1. With the COVID pandemic over, it is time to get back to work. How many Agency personnel work in their office 5 days a week (excluding sick leave, personal time off, or holidays)?**

SBA has fully returned to the workplace last year, and we are working in a hybrid environment. In office presence is mission-driven and those employees' whose work requires 5 days a week are in 5 days a week. Many of our employees are out in the communities we serve meeting directly with our customers. As discussed at the hearing, employees are focused on our mission using a hybrid-work model that allows both in-person and telework.

**a. What is the current number of vacancies at the SBA?**

As of beginning of April 2023, SBA has a total of 322 vacancies that have been reported across the agency, including our Disaster Recovery vacancies.

**i. How many of those are vacancies in the field?**

The Office of Field Operations has reported 48 vacancies as of the beginning of April 2023.

**2. SBA's Office of Rural Affairs is vital to ensuring rural entrepreneurs have access to small business programs. Who is currently leading the SBA's Office of Rural Affairs?**

Terri Billups

**a. Where is this person located?**

Michigan

**b. What is their telework status?**

Situational ad-hoc telework.

**c. What activities are planned to improve rural entrepreneurship and service rural small businesses?**

Entrepreneurship education courses (Rural Ascent) are being deployed and taught by the Office of Rural Affairs and district offices across the country. The Path to Prosperity Road tours continue to offer resources to rural entrepreneurs in collaboration with other federal agencies including USDA and FDIC. Access to capital programs for rural and agriculture-based businesses is an ongoing focus to expand SBA loan program access via regional and community/mission-based lenders.

**Questions from Rep. Van Duvne**

**1. While the self-certification process from the Small Business Administration (SBA) is intended to provide small businesses with a simpler path to participate in government**

**contracting programs, the lack of safeguards in place can hurt small businesses. Some businesses, including foreign-based companies, may falsely self-certify as meeting the eligibility requirements for these programs, giving them an unfair advantage over other small businesses that are legitimately eligible and hurting America's small business owners in the process. What action, if any, is the SBA taking to ensure overseas businesses are not skirting the requirements set in place for self-certification regarding Made in the United States?**

SBA's certification programs (Women-owned Small Business Program, Veteran Small Business Certification Program, 8(a) Business Development Program, and HUBZone Program) are all formal certifications (not self-certifications), each of which includes some level of analysis on the firm's size. For all small businesses looking to do business with the federal government, SBA requires that a small business identify its U.S.-based location in order to qualify as small.

SBA will note that "Made in the United States" and "Made in America" are designations specified through the Federal Trade Commission (FTC). Moreover, OMB has established the Made in America Office to monitor and track when agencies use waivers to attain products that do not meet the current Administration's heightened standards for product components being "Made in America." Since that Office's inception, SBA has not had any such waivers to report.

#### **Questions from Rep. Bean**

##### **1. Administrator Guzman, with regard to PPP loans;**

- a. Why didn't the Agency require private sector lenders get tax transcripts for the tax documents submitted by applicants, in order to compare those and significantly limit fraud?**

Controls on SBA's lending programs were lowered by Congress in the CARES Act in order to expedite relief. As has been analyzed by the GAO, Inspector General, and other investigative bodies, that decision helped open the SBA's temporary pandemic relief programs to fraud. Under my leadership, the SBA restored important controls—including the use of tax returns and checking Treasury's Do Not Pay database—in order to protect taxpayer dollars from waste, fraud, or abuse.

##### **2. The SBA announced that it will not be collecting any outstanding PPP loans under \$100,000 because it will cost the government more money to collect the loans than the loans are worth.**

- a. Did the SBA conduct a cost-benefit analysis before coming to this decision, and if you didn't conduct an analysis, can you please explain exactly how SBA was able to ascertain that it would cost more to collect?**

SBA is committed to protecting taxpayer dollars and we completed a thorough analysis before reaching this decision. Please see our March 22, 2023 response letter to Chairman Williams on this issue for more detail.

**3. SBA needs lenders to participate in their 7(a) and 504 loan programs, yet the questioning now of private sector lenders' behavior during PPP and the threat of reversing PPP forgiveness decisions is clearly damaging the trust between the Agency and lenders.**

**a. How do you propose repairing this damage so experienced SBA lenders don't leave the program and a reduction of access to capital occurs?**

SBA is responsible for protecting taxpayer dollars by ensuring that all lenders who participate in our programs comply with Loan Program Requirements (13 CFR 120.10). I am committed to ensuring that every eligible entity receives the forgiveness to which they are entitled, but SBA must continue to conduct oversight to ensure that forgiveness is applied consistently and equally for all borrowers.

We continue to see great demand to participate in SBA's loan programs by both bank and nonbank lenders. To enhance lender participation and increase capital availability for small business borrowers, the Agency has finalized rules to streamline and simplify the SBA's lending processes.

**4. Thorough and timely information is vital to this Committee carrying out its oversight duties. However, for the SBIC program the quarterly reports lack the specificity to understand trends in investment and are published months after the data is collected by SBA. As you know, loan data for the 7(a) and 504 programs are published in near real time on a weekly basis and until 2018 SBIC data was released every 30 days.**

**a. Can you commit to work with us to improve the timeliness and detail of those SBIC reports?**

Yes. We are committed to this and actively taking steps to increase transparency into industry standard investment metrics and improve speed of information delivery.

**5. With regard to PPP;**

**a. Why was there such little guidance, resources, or training given to private sector lenders to protect against fraud from the beginning of the program?**

The PPP was designed to provide emergency funds on an expedited basis to small businesses and non-profits negatively impacted by the COVID-19 pandemic. The majority of PPP lenders were federally regulated institutions that already had strong Bank Secrecy Act (BSA) / Know Your Customer (KYA) / Customer Identification Program (CIP) policies and procedures in place to avert fraud. The nonbank lenders that were approved to participate as PPP lenders certified to SBA and Treasury that they had bank-level BSA/KYC/CIP programs in place to mitigate the potential for fraud. SBA issued

guidance throughout the PPP using Interim Final Rules (IFRs), held webinars, and published FAQs to facilitate lender knowledge and program compliance.

**6. Why are private sector lenders – who were the delivery mechanism to get PPP funds out the door – now being judged for a program that was rolled out in stages, with conflicting and/or changing regulations and procedures, and no fraud guidance or training given... yet SBA's EIDL program seems to have incurred a much higher fraud rate (e.g. some estimates put the figure at over 30%)?**

SBA implemented both programs and applied the prescribed requirements for oversight to both the PPP and the EIDL programs. As published in the First IFR:

*b. What do lenders have to do in terms of loan underwriting? Each lender shall: i. Confirm receipt of borrower certifications contained in Paycheck Protection Program Application form issued by the Administration; ii. Confirm receipt of information demonstrating that a borrower had employees for whom the borrower paid salaries and payroll taxes on or around February 15, 2020; iii. Confirm the dollar amount of average monthly payroll costs for the preceding calendar year by reviewing the payroll documentation submitted with the borrower's application; and iv. Follow applicable BSA requirements: ... ." (85 FR 20811, 20815, April 15, 2020)*

**7. Per your press release announcing an investigation into the lenders mentioned in last Congress' House Select Subcommittee, you stated that, "SBA launched a full investigation of the lenders... in the report," but I understand only 8 of the 29 lenders named were investigated.**

- a. What was your basis for limiting this investigation to only these 8 lenders?
- b. How did you make that decision (i.e. to only investigate a handful)?
- b. Are you now going to investigate the other 21 lenders?

**Answer to Questions 7 a-c:** The Office of Credit Risk Management has an ongoing PPP lender review process in place that assesses lender compliance with PPP loan requirements including BSA/KYC/CIP.

**8. Regarding the recently Proposed Rules on lifting the Small Business Lending Company (SBLC) license moratorium.**

- a. How do you expect to oversee additional SBLCs without increasing costs and burdens on the Agency?

SBA's Office of Credit Risk Management (OCRM) worked closely with the Associate Administrator, Office of Capital Access (AA/OCA) and Deputy AA/OCA to determine what resources would be required to conduct oversight of additional SBLCs. For the 3 new SBLCs

anticipated in 2023, no additional staff will be necessary. OCRM will oversee the new SBLCs in the same way that existing SBLCs are monitored. Community Advantage Lenders that will transition to Community Advantage-SBLCs are already overseen by OCRM, so there will not be an increase in costs or burden to oversee those lenders.

- b. And if there will be increased costs, what justifies these, given that there are already nearly 2,000 participating SBA lenders in the market?**

N/A

**9. SBA's own data indicates that nearly half of all 7(a) loans made in FY22 were for \$150k or less and 68% of all 7(a) loans made in FY22 were for \$350k or less. Per SBA data, these results are continuing this year and actually getting even more pronounced.**

- a. What data are you looking at that specifically supports your assertion that certain areas and/or minority groups are not being served by the currently participating SBA lenders and/or that small SBA loans aren't being made at an appropriate level?**

In FY2007, SBA lenders approved 79,144 7(a) loans for \$150k or less; in FY2022, SBA lenders approved 22,245 7(a) loans for \$150k or less, a drop of 72%. In FY2007, the average 7(a) loan size was \$143,486; in FY2022, the average 7(a) loan size was \$538,903, an increase of 276%. Small business surveys consistently show that minority owned businesses, non-employer businesses, and businesses with fewer employees are less likely to receive the financing they seek:

- <https://www.fedsmallbusiness.org/-/media/project/smallbizcredittenant/fedsmallbusinesssite/fedsmallbusiness/files/2021/2022-sbcs-employer-firms-report.pdf>
- [https://www.fedsmallbusiness.org/-/media/project/smallbizcredittenant/fedsmallbusinesssite/fedsmallbusiness/files/2022/2022-sbcs-nonemployer-firms.pdf?sc\\_lang=en&hash=72E038B7A92A51CE35ADBD66C8DBEB12](https://www.fedsmallbusiness.org/-/media/project/smallbizcredittenant/fedsmallbusinesssite/fedsmallbusiness/files/2022/2022-sbcs-nonemployer-firms.pdf?sc_lang=en&hash=72E038B7A92A51CE35ADBD66C8DBEB12)

**10. Per that House Select Subcommittee Report from the last Congress, at least two Fin-Techs perpetuated fraudulent loans.**

- a. Why do you now feel comfortable in allowing Fin-Techs the opportunity to become 7(a) lenders?**

SBA is focused on increasing access to capital through expanding non-depository institutions in the SBLC program. The report you referenced cited two financial technology firms, Womply and BlueAcorn, who were software and service providers to non-bank lenders and financial

institutions who participated in PPP. Those firms were not lenders in any SBA programs and would not meet the eligibility criteria to participate in the 7(a) program as an SBLC.

**11. During your appearance before the House Committee on Small Business, I asked you about SBA employees showing up to work. Your response was that 1% of the full-time permanent staff were fully remote, but that the rest of SBA staff was in “Mission Based Remote.”**

**a. What exactly does “Mission Based Remote” mean?**

SBA’s remote work arrangements are mission-based. For example, the current temporary remote workforce was hired as remote workers in response to the pandemic. The remote workforce will fluctuate with attrition and the surge hiring from disaster events across the nation. SBA’s mission-based staffing model aligns with M-21-25, Integrating Planning for A Safe Increased Return of Federal Employees and Contractors to Physical Workplaces with Post-Reentry Personnel Policies and Work Environment, which states that agency decisions on post-reentry personnel policies and the work environment “must be guided by how they can most effectively achieve their respective missions.”

**b. Do you think it is appropriate that while small business owners show up to work every day, the SBA, they’re main advocate in the federal government, is still not showing up to the office every day?**

**Answer to Question 11 a-b:** The SBA’s talented workforce is showing up each day for small businesses, delivering a range of assistance from technical training to access to capital, leveraging technology to expand outreach efforts, and improving the customer experience. Many of our employees are out in the communities you serve meeting directly with our customers. As discussed at the hearing, employees are focused on our mission using a hybrid-work model that allows both in-person and telework.

#### Questions from Ranking Member Velazquez

**1. The SBA has established a new COVID EIDL servicing center to service the more the approximately 3.9 million loans. Administrator Guzman, can you provide a detailed update on the center’s operations, and is the center fully staffed?**

Yes. We are fully staffed and operational. We are happy to provide a briefing to your staff.

**2. To assist borrowers struggling to repay their COVID EIDL the agency provides a hardship accommodation to allow eligible borrowers to pay a minimum of 10% of their monthly payments for 6 months. How many businesses have enrolled in this program? Are there any concerns that there could be a significant amount of borrowers that may default on their loans? If so, how does the agency plan to address that issue?**

99,147 total enrollments (as of April 19, 2023).

SBA is consistently reaching out to Borrowers via email, automated phone calls, paper mail and messages through the Borrower loan portal to remind Borrowers to make payments and avoid defaulting on their loans. In addition, SBA has made it easier for Borrowers to make payments via the Borrower loan portal and will be offering a new pay by phone feature in the coming weeks.

**3. We heard concerns that some small businesses were unable to qualify for a 7(a) loan because the lender has deemed them too much of risk due to the losses they suffered during the COVID pandemic. What outreach has SBA undertaken to educate lenders that the underwriting standards can be adjusted to consider unforeseen impacts, such as the pandemic, on small businesses?**

SBA provides a regular cadence of outreach and training for lenders that, during the pandemic, included discussions on how to consider extraordinary events and considerations in underwriting where projection-based revenue could be appropriate for businesses that survived the pandemic. In fact, often SBA lending increases following economic downturns as lenders seek to continue making loans but need to mitigate risk in unstable markets.

**4. In FY 2022, the average 7(a) loan amount made by an SBLC is more than \$600,000. Why does the agency believe that the new SBLC licensees will make smaller dollar loans to underserved businesses when there is no mandate in the rule to do so and the figures show that the current SBLCs are not meeting that demand?**

SBA is focused on expanding access to capital, lifting the SBLC moratorium to enable borrowers to have additional options when they are seeking funding. SBA will provide additional written guidance in SOPs regarding small dollar loans that impact lending to underserved markets.

**5. With the amount of PPP fraud associated with loans facilitated with fintechs were there any concerns or objections raised by agency staff, in particular the Office of Credit Risk Management, that the same fraud would occur in the 7(a) program if the new SBLC licenses were issued to these firms?**

SBA does not believe the fraud risk in SBLC program is comparable to PPP. The SBLC program builds on SBA's tested business lending framework and lessons learned from the COVID-19 lending programs. SBA leadership and career staff worked diligently to ensure the SBLC program has appropriate fraud controls.

**6. Currently, federally regulated 7(a) lenders partner with lender service providers to reach new borrowers. Rather than lift the moratorium on SBLC's does it make more sense to look at ways to expand the use of LSP's so borrowers in underserved areas are connected with federally regulated 7(a) lenders?**

Lender Service Providers serve different roles. Additionally, Lender Service Providers are unregulated agents whose standards and quality of services vary as a result. SBLCs are

authorized and regulated by SBA and bound by the same rules of lending as all program participants.

**7. Does SBA plan to streamline the process to allow the new SBLCs to take part in SBA's preferred lender program? And if so, can you explain the reason for allowing that in light of the fraud we saw around fintechs in PPP?**

New SBLCs can take part in SBA's preferred lender program and can apply through the same process as other SBA lenders, once the new SBLCs meet SBA's qualifications for initial PLP consideration. SBA will publish additional information on the PLP program in SOP 50 56.

**8. In the rule, it mentions that the agency plans to add new SBLC lenders from "time to time?" What does that mean and can you share a more detailed long-term plan with the Committee?**

We are happy to brief your office on plans as we implement the rule's changes.

**9. It is estimated that new SBLCs make approximately 420 loans a year. With automation, the number of actual loans made would be significantly higher. Please provide in detail how SBA developed this estimate?**

SBA estimates that a newly licensed SBLC would make 425 loans over the next 4 years. This estimate is based on actual historical performance of new SBA 7(a) Lenders over a four-year period of fiscal years 2018 through 2022.

**10. The goal of the SBLC rulemaking is to help entrepreneurs and start-up businesses in underserved areas, Administrator Guzman, with that said, can you commit to not allowing any new SBLC's that will not loan to businesses that have been existence for less than two years?**

SBA intends to ensure that lenders in our programs are serving all businesses, especially the record number of new-start small businesses.

**11. As part of the proposed elimination of the principle of control in the affiliation rules the SBA also indicated that it intends to stop publishing the franchise directory. As you know, SBA loans are an important source of startup capital for franchisees and about 20% of SBA lending goes to franchising. What do you believe the impact of these changes will be on prospective franchisees access to SBA loans?**

These changes are supported by franchise organizations because they realize that it will make it even easier to secure an SBA-backed loan with streamlined rules and regulations.

- a. **Follow-up: There historically have been a number of issues with data regarding default rates on SBA loans to franchise brands. Are you concerned that the proposed elimination of the franchise directory will jeopardize the progress SBA has made on this front?**



No.

**12. At the Committee’s March 23, 2023 hearing, the Administrator mentioned that the agency has conducted an analysis that the Office of Credit Risk Management (OCRM) has enough employees to allow more non-depository institutions to participate in the 7(a) program. Can you please share that analysis with the Committee?**

As discussed at the hearing, SBA utilizes OCRM staff as well as multiple contracts to oversee our lender participants and monitor risk in the loan portfolio. OCRM also utilizes best practices including technology to monitor risk to the agency.

**13. Can you please address the concerns raised in the SBA OIG’s March 21, 2023 report titled “White Paper: 7(a) Loan Program During SBA’s Response to the COVID-19 Pandemic,” which found that the staff reduction in OCRM “could affect SBA FY 2023 goal for oversight reviews, which help ensure lender compliance with program requirements”?**

OCRM staffing levels fell over the course of the pandemic. Under my leadership, SBA has prioritized filling the vacancies and augmenting existing capacity. OCRM currently has 29 FTEs with additional hiring actions underway. In the interim, we have an assigned Presidential Management Fellow (PMF), detailees from the Office of Field Operations (OFO), experienced contractors from staff augmentation firms, and 7 contracts that we manage to support OCRM’s mission.

In terms of results, OCRM performed a record number of risk-based reviews and safety and soundness exams during FY2021-22. We are on track to match or exceed that number in FY2023.

**14. Both CFPB and Treasury have raised concerns about the potential risks of new underwriting approaches that use new technologies and their impact on consumers. With that in mind, how will the agency ensure that the use of artificial intelligence or machine learning by a fintech, that may become a SLBC, will not be biased against low-income and minority borrowers?**

Academic studies have shown that technology can be used to reduce biases in credit access. For example, a November 2022 report published by the National Bureau of Economic Research titled “Lender Automation and Racial Disparities in Credit Access” found that “process automation reduces racial disparities in credit access through enabling smaller loans, broadening banks’ geographic reach, and removing human biases from decision-making.”

**15. Can you please expound on the rationale for your statement that SBA needs statutory authority to remove the personal guarantee requirement for loans to Co-ops?**

When Congress included co-ops in sections 7(a)(15) and 7(a)(35) of the Small Business Act in the National Defense Authorization Act of 2018, they included in the statute that if the seller

remains an owner of the co-op/business (after a change of ownership transaction), regardless of percentage of ownership, the seller must provide a personal guaranty. See Sec. 7(a)(15)(B)(iv).

**16. While 70 percent of traditional private investment goes to businesses in just 5 large metropolitan areas, the SBIC program has a proven track record investing in areas that are often overlooked. What is SBA doing to help expand the SBIC program into more underfunded communities across the country?**

SBA continues to seek SBIC applicants focused on investing in small businesses in underserved communities, under-capitalized industries, and those located in under-licensed and below-median-financed states. SBA promotes outreach events to increase awareness of the SBIC program with a focus on underrepresented private equity and private credit funds and funds focused on investing in underserved markets. In FY2022, these outreach and development efforts yielded a diverse pipeline of prospective SBIC funds and over 60% of the funds SBIC licensed included a principal from an underserved gender or racial group. In October 2022, SBA also published the Notice of Proposed Rulemaking for the SBIC Investment Diversification and Growth Rule. Now nearing final publication, the rule is designed to reduce barriers to program participation for new SBIC fund managers and funds investing in underserved communities and geographies, capital intensive investments, and technologies critical to national security and economic development. The rule introduces an additional type of SBIC (“Accrual SBICs”) to increase program investment diversification and patient capital financing for small businesses and to modernize rules to minimize financial barriers to program participation. With the new rule, the SBA intends to increase efforts to support more underserved small businesses by promoting the SBIC program to investors in underserved communities and industries who, in turn, are more likely to invest in small businesses owned and managed by underserved individuals.

**17. One benefit of the new accrual debenture license will be allowing existing SBICs to deploy new investment strategies in areas and communities they currently don’t reach. However, the family of funds leverage limit could be a barrier to reaching the full potential of the program if they must offset new investments in underdeveloped markets by cutting off their current successful operations elsewhere. Do you think it would be prudent to provide SBA with the authority to waive the leverage limit in instances where seasoned SBIC managers receive one of the new accrual licenses?**

The new accrual debenture instrument expands possibilities for fund managers to manage a wider array of funds with distinctive investment strategies. While this is a possibility today with the “Traditional” debenture instrument, the investment strategies are more limited to mezzanine and private credit strategies. SBA anticipates fund managers may, overtime, launch opportunity or growth funds as follow-on to earlier stage funds to be supportive of portfolio companies as they scale. Additionally, some fund managers with equity strategies aligned with the Accrual debenture may launch complimentary debt strategies, particularly with credit tightening in the banking sector.

**18. For the SBIC program, you are asking Congress to increase the leverage limit for individual funds to \$200 million and to \$400 million for a family of funds. Can you explain what benefit this has for the small businesses seeking to partner with SBICs?**

Increasing the leverage limits for new funds will make more public and private funding available to more small businesses and potentially increase the attractiveness of SBIC licensed funds to the private investors (pensions, endowments, foundations, individuals) who consider investing in SBIC licensed funds, which in turn increases the private capital flowing to U.S. small businesses. Combined with SBA's request for authority to increase the overall SBIC commitment level to \$6 billion up from \$5 billion in FY2022, SBA will continue to grow the number of private funds licensed as SBICs, funds dedicated to mission of providing long term equity and debt investment in US small businesses, which in turn will grow the number of small businesses financed by SBICs. In addition, SBA's Notice of Proposed Rulemaking for the SBIC Investment Diversification and Growth Rule will become effective in FY2023. With the new rule and the additional debenture commitment authority, the SBA intends to increase efforts to support more underserved and undercapitalized small businesses by promoting the SBIC program to investors in underserved communities and undercapitalized industries vital to our national security and economic prosperity who, in turn, are more likely to invest in small businesses owned and managed by underserved individuals.

**19. Currently, all the contracting certification programs are housed in different IT platforms. What is SBA's plan to have a single and effective IT platform for all the certification programs?**

Under the MySBA concept of a single entry into SBA's services by small businesses, SBA is developing and deploying a unified customer-centric certification and recertification system that enables small businesses to apply for and maintain all SBA government contracting certifications in one place. Key features of SBA's unified certification management approach are:

- i. One log-in
- ii. One common application/set of questions
- iii. One document repository
- iv. Common terminology
- v. Common standards for requirements (timeframes, documentation)
- vi. Streamlined review process
- vii. Unified customer service support

Accordingly, SBA is integrating the Certification Management function of each Program's current technology stack into a single, integrated technology stack with a system Minimum Viable Product (MVP) completion target of June 2024. The baseline technology stack is that which was used successfully to deploy the Veteran Certification application (<https://veterans.certify.sba.gov>).

**20. In the budget briefing that took place on March 17, 2023, SBA stated that the timeline for having one IT platform servicing all the certification programs was 18-24 months. Is that still the case?**

Yes, the 18–24-month timeline remains in place for the unified MySBA IT platform establishment.

**a. Follow up: Will the migration of certification programs happen in phases and if so, what programs will be migrated first?**

SBA does not anticipate migrating the certification programs in phases. Rather, we intend to deploy a single, Unified Certification Management system in place of the other Programs' current systems all at one time. We will begin with a Minimum Viable Product (MVP) that intakes new applications with a target date of June 2024 and add periodic re-certification of existing certifications soon thereafter.

**21. How much will it cost to integrate all the certification programs into a single IT platform?**

**a. Follow-up (if its currently unknown): Could SBA please commit to developing a cost estimate and providing Congress the details?**

**22. One of the objectives of Certify.gov was to offer SBA officials reporting and analytical tools to adequately oversee the contracting programs. What IT tools, if any, does SBA plan to offer its personnel to meet this goal?**

SBA intends for the new Unified Certification Management system to produce reporting and dashboards for tracking of certifications. Integration of that data with other contract award tracking will occur in a modernized Dynamic Small Business Search (DSBS) market research tool.

**a. Follow-up: In what platform will those tools reside?**

SBA projects that those tracking tools will be available across several platforms, including the unified certification platform, DSBS, and customized dashboards created for the contracting programs.

**Answer to Questions 19-22:** SBA is working to migrate all of our certification programs to one platform within the next 18-24 months. We are available to brief your team.

**23. According to a recent OIG report, Beta.Certify -the platform used for the WOSB certification program- has a number of issues that require constant fixes and patches.**

**Could you please expound on the status of this system and how much it costs to maintain it annually?**

At the beginning of the OIG audit engagement in May 2021, SBA informed OIG of initial reporting limitations within Beta.Certify (now called WOSB Certify) and data reliability issues with the legacy Dynamic Small Business Search (DSBS) system that the agency had identified. SBA shared with the OIG the corrective actions the agency had already taken, as well as its ongoing monitoring measures, to provide Federal contracting officers with the most recent and accurate certification information while system fixes were pending.

The data reliability issues that the OIG report referenced were mitigated in December 2021, following SBA's transition of vendor support for both DSBS and WOSB Certify. Technical procedures for both systems were updated and fully documented so that both technical teams were able to deliver solutions that remedied the data sharing feed between the two systems.

SBA has also implemented procedures to validate data transmission from WOSB Certify to DSBS. These procedures are conducted every six months and enable the program to further monitor data reliability and identify and immediately address any system concerns.

As WOSB Program determinations (initial application and continuing eligibility) are made, system updates are scheduled to occur daily to accurately reflect a firm's certified or decertified status. The WOSB Certify system sends nightly updates to DSBS that are processed by 9:00 a.m. ET the next morning. The information in DSBS for WOSB Program participants is up-to-date and the agency has procedures in place for monitoring.

SBA awarded a contract for O&M Services on November 18, 2021 at the following cost:

Base Year	\$1,410,276.00
Option Year 1	\$1,099,798.51
Option Year 2	\$982,693.17
Option Year 3	\$818,399.79

**24. The OIG, in its report about Certify (Report 20-17), states that SBA awarded a \$3.5 million contract in 2019 to replace the Dynamic Small Business Search. Was that contract ever awarded?**

**Follow-up: What is the status of that replacement?**

The SBA update to the Dynamic Small Business Search referenced in this IG Report was postponed for future development by the previous Administration, which this Administration has taken on and moved forward with to improve our market research tool. In February 2023, SBA moved DSBS from legacy, on-premises hardware to a cloud infrastructure, greatly improving speed, usability, and reliability of the site. SBA is now in the process of transitioning the DSBS Supplemental Pages to cloud infrastructure as well. Throughout this year, DSBS will continue to see IT improvements in line with SBA's overall unified certification system improvements.

**25. The budget request seeks funding for mission critical employees. How many of these employees will be assigned to the contracting programs?**

We will evaluate our contracting operations and staffing levels based upon our FY2024 appropriation.

**26. According to information provided by SBA, there are at least 17 Procurement Center Representative (PCR) positions currently vacant due to funding constraints. Does the budget request support filling all 17 PCR positions? If not, why not?**

The President's 2024 Budget supports 444 PCR positions. SBA will leverage these PCRs to support the 24 CFO Act Agencies in meeting the government-wide statutory goals. The Budget reflects the Administration's commitment to providing opportunities for underserved small businesses and maximizing small business participation,

**27. As required in statute, SBA launched the Veteran Small Business Certification Program in January of this year. Can you please provide us with a status update of the program and if there are any milestones that still need to be completed?**

The Veteran Small Business Certification Program (VetCert Program) launched to the public on January 9, 2023 and is actively processing applications within the VetCert platform. As of June 28, 2023, 5,189 applications have been fully submitted. SBA has issued 5,112 determinations (4,878 approvals and 234 declines) with an average processing time of 34 days from submission to decision. As for significant milestones still in progress, SBA is working on a system enhancement to accommodate recertification applications, which will be operational by Fall 2023.

**a. Follow-up: How many applications have been fully submitted and how many application determinations has SBA issued so far?**

Please see the above answer to Question 27 part a.

**28. According to the FY 2024 budget request, \$20.5 million is being requested for the Veteran Small Business Certification Program, which is more than the \$20 million requested from Congress to stand up the program. Can you please explain why an increased amount is being requested?**

The increased amount is associated with the requirement to expand the Office of Hearing and Appeal's VetCert case processing function to account for increased volume with the program going governmentwide.

**a. Follow-up: Can you please break down how will this funding be used?**

i. Full Time Support GS salary and benefits: \$5.3 million

- ii. Office of Hearing and Appeals case processing: \$0.5 million
- iii. Contracts:
  - 1. Certification processing: \$8.5 million
  - 2. Call Center: \$1.5 million
  - 3. Verification Support: \$0.5 million
  - 4. Risk program: \$2.5 million
  - 5. IT Overhead: \$1.7 million
- iv. Total \$20.5 million

**b. Follow-up: Will the \$20.5 million be a yearly request moving forward?**

SBA anticipates continuing to request funding through the annual appropriations process to support the cost of certifying veteran and service-disabled veteran-owned small businesses.

**Additional Answer to Questions 28-29:** We have scheduled a briefing with your staff to provide an update on the completed CVE transfer.

**29. Recently, the SBA OIG noted that the WOSB certification process did not require applicants to submit documentation to ensure businesses met SBA size standards. Could you please explain why SBA is not requiring this information, which is necessary to determine program eligibility?**

The WOSB Program has created a robust internal control framework, within SBA's broader oversight efforts, to verify that WOSB Program applicants meet the Program eligibility requirements so that only small business concerns owned and controlled by women benefit from the WOSB Program. SBA established its WOSB Program certification process based on the requirements of the National Defense Authorization Act of 2015 (NDAA 2015) and carefully follows statute and regulations regarding verifying self-representations of size.

Since SBA began certifying women-owned small businesses (WOSBs) and economically-disadvantaged women-owned small businesses (EDWOSBs) to participate in the WOSB Program in 2020, it has implemented processes and procedures to confirm that applicants meet program eligibility requirements (i.e., that they are small businesses that are at least 51% owned and controlled by one or more women who are U.S. citizens). Specifically, WOSB Program analysts confirm an applicant's self-representation of size by reviewing the applicant's profile in the System for Award Management (SAM.gov) and comparing that profile to the information and supporting documentation provided by the applicant in WOSB.Certify.sba.gov (WOSB Certify), formerly beta.Certify.sba.gov. WOSB Certify requires the applicant to confirm their revenue data and the North American Industry Classification System (NAICS) codes in which the firm reports doing business. If a program analyst is unable to confirm an applicant's size representation, they are instructed to reach out to the appropriate Area Office to request a formal size determination.

- a. **Follow-up: Allowing small businesses to self-certify their size is inconsistent with the mandate to formally certify WOSB program participants. Can SBA please commit to remedying this situation, ensuring that all eligibility criteria for the WOSB program is verified? Please provide a detailed description of how this situation will be addressed.**

Please see the above answer for information on the WOSB Program's current process for meeting its statutory requirement to certify WOSB Program participants. The WOSB Program is updating its application system so that SAM.gov data on size representation from the applying firm is automatically pulled into the application for the firm's review and confirmation. With this change, SBA will continue to improve on its effective controls to confirm applicants' eligibility.

SBA also has a detailed process for status protests for WOSB and EDWOSB set-aside procurements. SBA's effective oversight of the protest processes was highlighted in the OIG's most recent report on size and status protests. OIG noted that SBA's protest process, "builds trust in the small business protest process and helps ensure the process works to prevent ineligible offerors from benefiting from contracting opportunities."<sup>11</sup> Eligibility for specific awards is determined at the procurement, sale, or order level,<sup>12</sup> and status protests can be filed by SBA, a procuring agency, or an offeror on a specific award. The majority of WOSB Program status protests are filed by unsuccessful offerors for WOSB and EDWOSB set-aside awards. Small businesses are well-incentivized to detect and address their competitors' potential eligibility issues. Consequently, the protest processes are useful tools for identifying firms that receive WOSB or EDWOSB set-aside contracts for which they are not eligible.

<sup>11</sup> SBA's Protest Process, OIG Report Number 22-24, September 30, 2022.

<sup>12</sup> 13 CFR 121.404(a)(1)(i)(A)

**30. Please provide data on the utilization and performance of the Socioeconomic Small Business Tier 2 since it was implemented in OMB Memorandum M-22-03.**

According to data from the Category Management Program, Tier 2 socioeconomic small businesses received \$42.2 billion in FY2022 Category Management spending that was not accounted for in the other Category Management Tiers. That accounts for approximately 12% of the \$342.6 billion spent under category management in FY2022.

**31. OMB Memorandum M-22-03 states that the SBA will work with multiple entities including OMB to "identify possible increases in the floor for spending on WOSBs, SDVOSBs, and HUBZone contractors for FY 2023." What is the status of this initiative and when will these increases be set?**

While the annual socioeconomic small business goal requirements for WOSBs, SDVOSBs, and HUBZone firms are set by Congress, SBA has continued to work with OMB and partner agencies to further reform contracting practices that would expand opportunities for



socioeconomic firms, especially for the categories in which federal agencies continue to fall short (i.e., WOSB and HUBZone). Chief among these efforts has been an SBA-led initiative to reduce the amount of contract bundling, which impacts WOSBs more than any other group. By ensuring that the Rule of Two is followed in federal procurement practices, both on the open marketplace and for the placement of orders on multiple award contract vehicles, with limited exceptions, federal agencies will have to conduct market research to identify firms that could do the work, increasing the possibilities for set-asides for socioeconomic firms.

**32. How can SBA's Resource Partners best contribute to the development of an equitable entrepreneurial ecosystem?**

SBA's Resource Partners help service hundreds of thousands of businesses each year and SBA works closely with them to ensure that every entrepreneur can access the training and technical assistance they need to grow and thrive.

**33. How would the House Republican Leadership's plan to cap Fiscal Year 2024 discretionary spending at FY 2022 levels affect the SBA?**

Please see our response to Rep. Rosa DeLauro, which is available on the Appropriations Minority Website.

**34. The FY24 budget proposal requests \$30 million for the Community Navigator Pilot Program, how do you plan to use these funds?**

President's 2024 Budget request of \$30 million would ensure that the Hub and Spoke network can continue to provide business technical assistance services to underserved communities that have limited or no access to SBA resources.

**35. How does SBA ensure Community Navigators work with the Resource Partners to eliminate duplication of services?**

Navigators complement other Resource Partners by expanding SBA's coverage and network into rural and under-represented small business communities and those small businesses who may not be aware of what services are available at any level or do not have access to culturally competent support. Resource Partners who are also Navigators are enhancing their existing efforts by supporting small businesses that have not been reached previously due to deeper collaborations with trusted community partners. Resource Partners that are also Navigators are aware of the importance of keeping separate accounting for each grant source. Navigators also submitted a signed commingling statement at the outset of the program where they acknowledged other SBA funding they received and that they would not commingle funds between sources.

SBA Program Office conducts quarterly budget reviews to help prevent duplicative spending: instances of duplicative spending would be disallowed and come out of the grantee's next payment.

**36. The SBA is implementing a new information management system for the Resource Partners called NEXUS. Can you please share with the Committee the added capabilities of this new data collection system and are you working closely with the Resource Partners on its implementation?**

Nexus will be a common data repository to report performance and collect training and counseling data from SBA's Office of Entrepreneurial Development (OED) Resource Partners including the Small Business Development Centers (SBDC), Women's Business Centers (WBC), and SCORE. Nexus is being developed collaboratively across all internal and external stakeholder groups including the Resource Partners. Nexus will bring numerous benefits to the SBA including greater transparency, improved oversight, and cost savings. The Resource Partners will benefit from more efficient business processes, ad-hoc reporting, and improved goals management.

**37. This Committee is historically skeptical of unauthorized pilot programs. The Cybersecurity for Small Business Pilot program received \$3 million in Fiscal Year 2021 and FY 2022. How were these grant funds awarded, and how have states used the funds?**

SBA issued press releases on the awards of these funds in both FY2021 and FY2022 which are on our website. We are happy to brief your staff.

**38. The Committee supports significant investment in IT security systems and processes that will protect against cybersecurity threats and reduce the risks of fraud in current and future SBA programs. Which IT investments have made the most impact in 2022, and which upgrades will be prioritized next year?**

The President's 2024 Budget Justification lists our technology plans including the priority upgrades we need to make. The risk for fraud in SBA's core programs is relatively low because of the control environment that did not exist for temporary pandemic programs.

**39. After years of level funding, the SBA budget proposes to increase funding for the salaries and expense account by \$68 million. Despite the increase, the District Offices, which play key roles as the point of delivery for many SBA programs and services, have seen their operation pared back over the years. How will you fill the critical shortfall at the district level?**

Please see our March 2023 report that we have submitted to the Appropriations Committee on District Staffing levels and funding.

**40. The Biden's Administration anti-fraud proposal supports legislation that would raise the administrative claims cap from \$150,000 to \$1 million to ensure that all remedies are available to recapture large, six figure fraud that might otherwise fall below the prioritization threshold for prosecution. This proposal is also supported by the PRAC and GAO. Has the agency determined how it would implement this legislation if approved by**

**Congress? How many administrative actions has the agency taken against claims under \$150,000?**

Currently, the Agency rarely uses the CFRA in part because of the low dollar threshold that makes recoveries not cost effective in terms of manpower and expense. However, raising the threshold to \$1 million will remedy this problem and make it more cost effective to pursue those borrowers that illegally took advantage of the SBA's loan and procurement programs.

**41. The SBA recently announced it would expand the WBC program to 160 locations. However, this was not included in the FY 2024 budget request and no additional funds were requested. Can you elaborate on this plan, including how SBA plans to stretch a limited amount of dollars for WBCs and whether each territory will now have a WBC?**

The FY2023 appropriation for WBCs increased from \$22.6 million to \$27 million. This increase of \$4.4 million will support the implementation of additional WBC as President Biden announced during the SBA's 2<sup>nd</sup> Annual Women's Business Summit. SBA plans to increase the number of WBCs to 160 by funding 15 new centers which will allow more women entrepreneurs from underserved communities to receive entrepreneurial development services. This funding cycle will also prioritize WBCs in U.S. Territories. Currently, Puerto Rico is the only U.S. territory that has a WBC.

**42. How many WBC grant reimbursements are pending for each quarter of FY 2023?**

WBC grant reimbursements are not issued quarterly; rather, they are issued semi-annually, at the end of Quarters 2 and 4.

For FY2023, OWBO has issued 105 advances. There are three pending advances for the first half of 2023. The pending advances are linked to the three remaining Q4 payments (related to an unresolved reporting errors). The first semi-annual reporting cycle ends on March 30th, and reports are due on April 30th. This cycle OWBO will review and disburse 145 payment requests.



**Statement for the Record from the  
Financial Technology Association**

**Before the  
U.S. House Committee on Small Business  
hearing on**

**Oversight of the Small Business Administration  
March 23, 2023**

Chairman Williams, Ranking Member Velázquez, and members of the committee, thank you for the opportunity to submit a statement for the record in support of the Small Business Administration's (SBA) recent efforts to expand participation in the 7(a) program. The Financial Technology Association (FTA) represents industry leaders shaping the future of finance. We champion the power of technology-centered financial services and advocate for the modernization of financial regulation to support access, inclusion, and responsible innovation. Our members include consumer and business financial services providers, domestic and international payments companies, data aggregators, Buy Now Pay Later providers, earned wage access providers, AI-driven credit underwriting solutions, income verification providers, digital investment advisors, and low-cost investment platforms.

FTA believes that customer choice, trust, and protection is the cornerstone of financial services. By using technology like digital platforms, machine learning, automation, and other modern technologies, financial technology companies are improving efficiency and transparency, broadening equity, access, and inclusion, reducing costs, and increasing choice and opportunities for small businesses. Fintech solutions have emerged as critical tools to bridge physical and virtual activities as people have become increasingly accustomed to digital access.

FTA supports the SBA's proposal to lift its moratorium to license new Small Business Lending Companies (SBLC) to participate in its 7(a) Loan Program.<sup>1</sup> Since the 1980s, the number of SBLC licenses available to non-depository lending institutions, authorized by the SBA and subject to "certain prescribed standards,"<sup>2</sup> has been limited, and we agree with the agency that expanding the number of licenses, in line with SBA oversight resources, can "accomplish the goal of expanding

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<sup>1</sup> 87 Fed. Reg. 66963

<sup>2</sup> 46 Fed. Reg. 41523.

capital opportunities to underserved businesses.”<sup>3</sup>

Innovative fintech products and services provide convenient and expanded access points into the financial system for small businesses. These services range from mobile banking services and payments to access to digital applications for securing small-dollar loans. For example, a 2022 research paper documents that finance companies and fintech lenders increased lending to small businesses after the 2008 financial crisis. By 2016, nonbank lenders had a market share of close to 60 percent which coincided with a reduction in traditional bank lending.<sup>4</sup> Lifting the moratorium on the SBA’s non-bank licensing capacity and creating a viable pathway, subject to SBA resources, for additional lenders to participate in the program will expand small business access to much needed capital. This is especially true for those that have been un- or underserved by legacy players in the financial system.

***Leveraging Technology and Nontraditional Data, Fintechs Can Better Serve Small Business Borrowers***

Financial technology companies are uniquely positioned to leverage innovative technology and nontraditional data to facilitate additional access to SBA programs. For example, the borrower application process for SBA lending can be protracted and difficult. Micro-businesses do not have the time or staff support to compile business financial history, tax returns, and the plethora of other documentation required to obtain a 7(a) loan. Instead, fintechs can leverage technology to bring efficiency to the application process.<sup>5</sup> Many fintechs use APIs to enable applicants to directly, quickly, and securely share their cash-flow data from their bank with lenders, which in turn can streamline the application process. By expanding the number of non-banks in the program, the SBA can leverage innovation to provide a more streamlined application process, which reduces complexity and time-to-completion for small businesses.

In addition, fintechs can introduce efficiencies into the underwriting process by making it easier for underserved small businesses to obtain funding by automating access to additional funds while eliminating many of the friction points associated with traditional lenders or banks. Traditional lenders and banks typically underserve many small businesses because the companies have been in business for less than two years and therefore lack the revenue or credit history to gain access to the capital they need. However, by leveraging sophisticated analyses and automated processes that better assess a business’s health and credit worthiness, fintech companies are able to have a more complete view of a small business. This helps open up funding for underserved businesses

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<sup>3</sup> 87 Fed. Reg. 66964.

<sup>4</sup> Gopal, M. & Schnable, P. (2022). The Rise of Finance Companies and FinTech Lenders in Small Business Lending, *The Review of Financial Studies*, 35 (11), 4859–4901. <https://doi.org/10.1093/rfs/hhac034>.

<sup>5</sup> One way that the SBA could further reduce the threshold to obtaining SBA financing is by segmenting or correlating required information for a loan with the size of the loan. This will ensure the smallest lenders will be actively participating in 7(a) and therefore, serving the customers that need these loans the most.

that likely would not qualify for capital elsewhere through traditional determinations.

A recent working paper from the Federal Reserve Bank of Philadelphia found that fintech platforms' internal credit scores were able to predict future loan performance more accurately than the traditional approach to credit scoring.<sup>6</sup> Ultimately, by leveraging technology and additional data sources, fintechs are able to use data-backed risk models to enable the youngest and smallest firms to access credit, which can be further amplified if the SBA increases, in line with its resources, the number of Small Business Lending Company licenses it grants.

### ***Fintechs Are Subject to Robust Regulatory Oversight***

Fintechs that directly engage in small business lending are subject to certain state licensing and registration requirements, with state regulators conducting examinations, imposing capital and liquidity requirements, defining permissible investments, and enforcing laws that protect customers. For those that offer services through partner banks, they are overseen by their bank partners and are subject to the third-party risk management guidance issued by the federal banking agencies. In these scenarios, the bank partner, as the lender, provides an additional layer of oversight for compliance with applicable federal and state laws. Furthermore, under the 7(a) program, SBLCs are subject to "specific regulations regarding formation, capitalization, and enforcement actions" and enter into a written agreement with the SBA imposing control and funding expectations.<sup>7</sup> Finally, the SBA's Office of Credit Risk Management provides additional oversight to SBLCs by managing program credit risk, monitoring lender performance, and enforcing lending program requirements. These state and federal regulatory requirements create strong guardrails for any fintech that may become an SBLC under an expanded program and differ from expectations set forth under other programs.<sup>8</sup> While not all fintechs are the same, those with robust controls and governance processes and strong bank partner oversight relationships, will be the strongest candidates for participating in any SBA program. In addition, the longstanding state and federal guardrails will provide the credit and compliance parameters necessary to ensure the safety and soundness of the SBA's 7(a) program, while reaching additional small businesses and streamlining the application and underwriting process.

<sup>6</sup> Cornelli, G., Frost, J., Gambacorta, L., & Jagtiani, J. (2022). The Impact of Fintech Lending on Credit Access for U.S. Small Businesses, *Federal Reserve Bank Philadelphia*, WP 22-14. <https://doi.org/10.21799/frbp.wp.2022.14>

<sup>7</sup> *Supra* n. 2 and 13 CFR § 120.470.

<sup>8</sup> While the SBA's 7(a) program and PPP are significantly different, it is important to note that fintech participation in PPP was critical to ensuring that underserved customers, who banks either could not or would not serve, were able to access PPP funds. In particular, independent research shows that participating fintechs' use of technologically advanced techniques and alternative data in PPP increased access for underserved small businesses. See Howell, S., Kuchler, T., Snitkof, D., Stroebel, J., & Wong, J. (2022). Lender Automation and Racial Disparities in Credit Access. <http://dx.doi.org/10.2139/ssrn.3939384>. The paper finds that (i) the automated loan vetting and processing systems used by fintechs significantly improved approval rates for Black borrowers during PPP and (ii) fintech lenders were responsible for 53.6 percent of PPP loans to Black-owned businesses, while only accounting for 17.4 percent of all PPP loans.

***Conclusion***

Fintechs play an important role in filling the credit access gap for small businesses, especially when no other options are available, and support the SBA's efforts to expand 7(a) program participation. We believe that by leveraging technology and nontraditional data, fintechs can better serve small business borrowers while maintaining the high credit and compliance standards set by established participants. Thank you for the opportunity to submit this statement.



**National Association of Development Companies (NADCO) Statement for the Record**

*Oversight of the Small Business Administration*

House Committee on Small Business  
March 23, 2023

The National Association of Development Companies (NADCO) represents the Certified Development Company (CDC) industry whose economic development mission is realized through delivery of the Small Business Administration's (SBA's) 504 Loan Program, Community Advantage Loan Program (CA), Microloan Program, and a myriad of other federal, state, and local programs.

NADCO shares the CDC industry perspective and support for the SBA's proposed rule titled, "Affiliation and Lending Criteria for the SBA Business Loan Programs," released on October 26, 2022. The proposed rule streamlines SBA's current lending criteria from nine metrics to three, incorporates the use of credit scoring in the underwriting process, and simplifies affiliation principles to ease understanding and compliance by lenders and borrowers. To provide further detail outlining our support for these proposed rule changes (with noted caveats), NADCO offers the following commentary:

1. NADCO supported SBA's streamlining of lending requirements for the Community Advantage Loan Program in April 2022 and supports extending the simplification and modernization of its lending requirements to the 504 Loan Program, while also embracing new technology to allow generally acceptable commercial credit analysis processes and procedures, including loan scoring models, to streamline underwriting. However, we also strongly encourage SBA to continue its focus on prudent lending standards while balancing program access with portfolio performance and program integrity.
2. For 504 Loan Program purposes, NADCO specifically supports SBA removing the requirement to consider character and reputation because as SBA stated in the proposed rule, "the lending industry commonly uses the terms character and credit history interchangeably." Credit history is a more objective, empirical measure than the amorphous concepts of "character" and "reputation." SBA's proposed change would focus more appropriately on current conditions more indicative of creditworthiness rather than minor infractions in an applicant's past.
3. There are a few caveats to NADCO's support for the proposed changes to lending criteria. First is the concern that SBA may implement a minimum credit score for all loans – we recommend SBA make clear in SOP guidance that CDCs are able to use mitigating factors when a credit score is impaired for explainable reasons. NADCO also recommends that SBA retain the consideration of "experience and depth of management" in its lending criteria, as this is particularly important for start-up or new businesses –



while management strength can be implied by the financial performance of existing businesses, it should be a separate consideration for start-up or new businesses where underwriting is based in part on management skills and projections.

SBA's proposed rule also seeks to streamline SBA's affiliation criteria for its business loan programs, including 504. SBA proposes to specifically remove the principle of control of one entity over another as a separate basis for finding affiliation because the concept of control has proven particularly burdensome for applicants and lenders to understand and implement. The current level of complexity has led to inconsistent interpretation and implementation by all parties in the loan approval process. SBA's proposal would create a "bright line" test that CDCs and small businesses can easily understand and implement.

Program simplification that makes it easier for borrowers, CDCs, and SBA has long been a pillar of NADCO's advocacy with SBA and Congress with the belief that the modernizing and streamlining impact of this rule will be felt most by borrowers. A more efficient 504 program means more time for borrowers to focus on their business growth and in a fluctuating interest rate environment, it means more savings since the 504 borrower's interest rate is set for the life of the loan at the time of funding, not application. This is the real-world impact we expect to see as a result of these changes, all while CDCs and banking partners continue due diligence and SBA continues rigorous oversight of CDCs to ensure compliance with SBA requirements.

Of note, the affiliation changes made in this rule do not supersede the underlying SBA monetary parameters for loan eligibility of \$15 million net worth and \$5 million net income, SBA industry-based size standards, and the SBA requirement that any individual or entity who holds 20 percent ownership of the applicant business must be a guarantor on the loan, which identifies affiliated businesses (including a six-month "look back" to capture changes of ownership and ensure all required owners are guarantors on the loan).<sup>1</sup>

With respect to the individual revisions to affiliation principles –

1. NADCO supports SBA's proposed revisions to affiliation based on ownership (**removing principal of control**). The underlying parameter of guarantors, including any individual or entity with 20 percent ownership, remains in place. The rule also includes a NAICS code determination of affiliation, which will augment the 20 percent rule.
2. NADCO supports SBA's proposed revisions to affiliation based on stock options, convertible securities, and agreements to merge (**removing principal of control**). The 20 percent ownership rule would also apply to this affiliation determinant; these items will have a present effect on ownership of the entity.
3. NADCO supports SBA's proposed elimination of affiliation based on management. NADCO also supports SBA's statement that "it [SBA] should not interfere in a business owner's right to enter into a service agreement with a management company." To the extent that SBA requires review and approval of management agreements for loan program requirements (i.e., passive business

<sup>1</sup> [SOP 50 10 6](#)

activity), NADCO expects SBA will continue its current guidance established in existing Standard Operating Procedures (SOP).

4. NADCO supports SBA's proposed elimination of affiliation based on identity of interest. NADCO agrees with SBA that the existing requirement is "inherently unfair and impractical" when a close relative is not a principal of the applicant business. This affiliation determinant is cumbersome, inconsistently applied, while offering no measurable risk mitigation.
5. NADCO supports SBA's proposed elimination of affiliation based on franchise and license agreement; however, NADCO does not support elimination of the SBA Franchise Directory if SBA intends to shift franchise business model eligibility determinations to the CDC that are beyond the scope of current SOP guidance on ineligible business types. To the extent that any additional burden will be shifted to the CDC, keeping SBA involvement will assure consistency, avoid second guessing through SBA's oversight activities, and provide transparent assurance to CDCs, third party lenders, and small business applicants.

NADCO appreciates the opportunity to share the CDC industry perspective and support for the SBA's "Affiliation and Lending Criteria for the SBA Business Loan Programs" proposed rule and we look forward to working with Chairman Williams, Ranking Member Velázquez, and members of the Committee to improve access to capital to small businesses nationwide.

Sincerely,



Rhonda Pointon  
President & CEO  
National Association of Development Companies (NADCO)



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**National Association of Federally-Insured Credit Unions**

March 22, 2023

The Honorable Roger Williams  
Chairman  
Committee on Small Business  
U.S. House of Representatives  
Washington, DC 20515

The Honorable Nydia Velázquez  
Ranking Member  
Committee on Small Business  
U.S. House of Representatives  
Washington, DC 20515

**Re: Tomorrow's Hearing: "Oversight of the Small Business Administration"**

Dear Chairman Williams and Ranking Member Velázquez:

I write to you today on behalf of the National Association of Federally-Insured Credit Unions (NAFCU) to share our thoughts on issues of importance to credit unions ahead of tomorrow's hearing, "Oversight of the Small Business Administration (SBA)," with SBA Administrator Isabella Guzman. NAFCU advocates for all federally-insured not-for-profit credit unions that, in turn, serve over 135 million consumers with personal and small business financial service products. We are pleased to see the continuing support for the SBA in the President's budget proposal. We would also like to thank you for this opportunity to provide input on other matters relating to oversight of the SBA.

As champions of financial inclusion, credit unions have been at the forefront of efforts to increase access to personal and small business financial services for underserved communities. Credit unions have grown their overall business lending portfolio by more than 20 percent this past year, which is nearly identical to the growth rate over the past five years. At the same time, NAFCU has worked tirelessly to ensure that non-depository financial institutions such as fintechs operate on a level playing field with credit unions to protect consumers and small businesses by instituting appropriate financial safeguards and compliance processes. Unfortunately, we are concerned that two recent actions by the SBA may end up running counter to both of these efforts by opening the programs to more underregulated competition.

On October 26, 2022, the SBA published the Affiliation Proposed Rule that would loosen affiliation standards, lending criteria, and loan conditions in the SBA's 7(a) Loan Program and 504 Loan Program. Shortly thereafter, on November 7, 2022, the SBA issued a proposed rule that would rescind the agency's decades-long moratorium on the licensing of new Small Business Lending Companies (SBLCs), in effect allowing fintech lenders that are only supervised by the SBA's Office of Credit Risk Management to participate in the 7(a) Loan Program (SBLC Proposed Rule). While these two proposals were issued separately, they would have the combined effect of loosening 7(a) lending standards at the same time as opening that program to entities already proven to be more susceptible to fraud than traditional depository institutions overseen by federal prudential regulators. It may be appropriate to reduce 7(a) lending standards for institutions already bound to follow underwriting requirements set by their prudential regulator, but any newly licensed SBLCs would have no such processes to fall back on. Fintechs

The Honorable Roger Williams  
The Honorable Nydia Velázquez  
March 22, 2023  
Page 2 of 2

would then be participating in an unfamiliar-to-them lending program with few established standards to follow, and subject only to oversight from the SBA that does not include supervision for compliance with Bank Secrecy Act and anti-money laundering requirements, concentration caps, safety and soundness parameters, stress test parameters, and other regulatory criteria to promote prudent lending.

Allowing fintechs to participate in 7(a) lending on those grounds would place credit unions and other traditional lenders at a severe competitive disadvantage. Non-depository SBLC lenders implementing less stringent underwriting requirements, and with significantly less regulatory compliance cost, would expend fewer resources to offer SBA loans and would therefore be able to offer these loans at more favorable terms. Small businesses would gravitate toward these riskier lenders, reducing demand for SBA loans from depository institutions and gradually reducing the number of depository institutions participating in SBA lending. With a greater reliance on fintech lenders, SBA lending programs would be at increased risk of fraud, credit losses, and reputational risk. This risk was clearly demonstrated in the early stages of the pandemic when fintechs participating in the Paycheck Protection Program experienced much higher levels of fraud compared to regulated financial institutions.

The economics of smaller dollar business lending are challenging and a lack of comprehensive regulation and supervision over fintechs makes them prone to fraud. Fintechs streamline processes and increase efficiencies by assessing creditworthiness with business credit scoring models and leveraging AI and big data analytics to speed up loan approval processes. This faster, less costly approach to lending may appear to be beneficial; however, there are reasons behind many of the regulations governing traditional financial institutions and every new approach to lending has trade-offs. As the Committee conducts its oversight over the SBA, we urge you to call on the agency to reconsider these proposals and the impacts that they may have on community lenders.

We thank you for the opportunity to share our thoughts and look forward to continuing to work with you on improving the SBA's lending programs. Should you have any questions or require any additional information, please contact me or Lewis Plush, NAFCU's Senior Associate Director of Legislative Affairs, at (703) 258-4981 or [lplush@nafcu.org](mailto:lplush@nafcu.org).

Sincerely,



Brad Thaler  
Vice President of Legislative Affairs

cc: Members of the U.S. House Committee on Small Business



Statement for the Record

U.S. House Committee on Small Business hearing:  
"Oversight of the U.S. Small Business Administration"

Bridget Weston, Chief Executive Officer, SCORE

April 5, 2023

Chairman Williams and Ranking Member Velázquez, on behalf of approximately 10,000 SCORE volunteers nationwide in 1,500 local communities, we respectfully submit this statement for the record as it concerns the Small Business Administration's proposed FY 2024 budget, which includes a nearly 40% cut to SCORE's budget. This is a **devastating proposal** that if enacted would have a profound, negative impact on small business creation and job creation, even as we are seeing a 14% increase in SCORE services.

The proposed cut would reduce our program's impact by at least 50%, because we would have to terminate entire programs, with underserved businesses, who are already struggling, suffering the most. The projected impact of this budget cut over a one-year period is:

- 15,000 fewer small businesses launched
- 56,000 fewer total jobs created
- 139,000 fewer mentoring sessions
- 219,000 fewer business owners served through national and online workshops

The last few years have been challenging for small business owners and small business formation, but SCORE has met, if not exceeded, our ability to meet the moment. In the early days of the COVID-19 pandemic, we quickly provided SCORE clients with important and timely resources to support them as we navigated unprecedented times. We launched the Small Business Resilience Hub, which has served almost a **MILLION small business owners**. The Hub is an important example of how SCORE, with **existing resources and infrastructure**, was able to develop timely and necessary tools to support its customers. We were successful despite not receiving additional federal funding that was provided under the CARES Act, nor a Community Navigator grant. Even without additional resources specifically geared to supporting small businesses and the ecosystem that supports them, SCORE was able to support and ensure that 90% of SCORE clients stayed in business throughout FY22.

Not only has SCORE continued to adapt, adjust, and evolve, to ensure we are meeting the expectations of the current climate, we continue to show year over year impact return on investment that is simply unmatched across the federal government. SCORE remains the most **efficient, effective business formation and job creation engine** funded by the federal government. In FY22, SCORE helped support the creation of **30,453 new businesses** and support the facilitation of 112,570 total jobs.

SCORE is mindful of the current fiscal climate, and conscientious stewards of our federal dollars. As we have previously shared with this committee, **SCORE clients returned \$41.98 in new federal tax revenue for every \$1 appropriated to SCORE. (\$587.7 million in total)**. This tremendous return on investment comes from new tax revenue from new businesses started and jobs created.

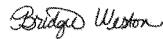
At every turn, SCORE has proactively looked towards the future, ensuring we have the resources in place to support our clients. The diversity of SCORE clients truly demonstrates our vision that business ownership be attainable, regardless of the gender, race, beliefs or background of the entrepreneur. In 2022, **64% of SCORE's clients were women, 46% identified as minorities, 13% people with disabilities, and 9% were veterans**. We are proud that SCORE continues to make investments in supporting all business owners, but also recognize how important it is to ensure our SCORE mentors and resources represent our diverse client base. This is why we continue to create specialized resource hubs tailored towards Rural Entrepreneurs, Veteran Entrepreneurs, Women Entrepreneurs, Black Entrepreneurs, Hispanic Entrepreneurs and AAPI Entrepreneurs.

*(continued on next page)*

As we look to the FY24 budget and appropriations process, SCORE will work with its champions in the Senate and House to ensure that SCORE's budget is restored and increased as we are delivering on our mission, "*foster vibrant small business communities through mentoring and education.*" We worked effectively in FY23 to increase our budget by \$3M to account for the increased demand for SCORE services and we will certainly look to this committee and its members to further validate the need to ensure SCORE is able to continue to exceed its goals for supporting small business owners through the life of their business.

For nearly 60 years, SCORE has been a trusted advisor to **11 million small business owners**. Following our 2017 OIG audit, we adapted, recalibrated, and reformed our organization, leadership team and operations to ensure that we are laser-focused on delivering our mission with the strongest possible culture of compliance. Today, our data show not just our success but our continued value to the small business ecosystem. We are disheartened by the Small Business Administration's budget proposal, as it overlooks the hard work of the SCORE chapter and mentors, but we will not be deterred. We thank this committee and its members for their support, and we will continue to work with each of you and the Small Business Administration to restore and advocate for increased funding for SCORE.

Respectfully,



Bridget Weston  
Chief Executive Officer  
SCORE



**Update to the Assessment of  
Contracting Outcomes for Small Disadvantaged  
Businesses**

**Daniel Chow, Senior Economist  
Minority Business Development Agency  
U.S. Department of Commerce**

**February 7, 2022**





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### Abstract

My name is Daniel Chow, and I currently serve as a Senior Economist in the Office of Policy Analysis and Development (OPAD) of the Minority Business Development Agency (MBDA) at the Department of Commerce. OPAD is the research program of the MBDA, which produces analyses related to programs that support minority business enterprises (MBEs). A copy of my CV is attached to this report (Attachment 1).

This expert report was prepared for the Department of Justice in conjunction with its representation of the Small Business Administration and the United States Department of Agriculture in the matter of *Ultima Servs. Corp. v. U.S. Dep't. of Agric.*, No. 2:20-cv-00041 (E.D. Tenn.).<sup>1</sup> The Department of Justice asked me to review data on government contracting to assess the relationship between contracting outcomes for small businesses and the type of ownership of the businesses. This study focuses on federal contracting and the probability of certain classifiable businesses' attainment of federal contracts in a specific period, including minority-owned businesses and small disadvantaged businesses (including businesses that participate in the Small Business Administration's Section 8(a) business development program). I have not been compensated beyond my government salary for this report.

My analysis is modeled after an original study conducted in 2012 by Robert N. Rubinovitz, Ph.D., the former Deputy Chief Economist at the U.S. Department of Commerce, Economics and Statistics Administration.<sup>2</sup> In that study, Dr. Rubinovitz analyzed data on government contracts for small businesses for FY 2012 and looked at whether firms that were "small disadvantaged businesses" (SDBs) were more or less likely to win federal prime contracts relative to other small businesses, holding constant various factors that might influence the award of a contract.<sup>3</sup> The study found the odds of winning contracts for SDBs not participating in the Small Business Administration's (SBA) 8(a) business development program are estimated to be roughly 11 percent lower relative to the odds of winning contracts by firms that were not identified as SDBs.<sup>4</sup> The difference was statistically significant at the 95 percent significance level. Minority-owned firms (which include minority-owned small businesses, SDBs that are minority-owned and minority-owned 8(a) participants) had roughly 30 percent lower odds of winning a contract than other small firms.

In 2013, Dr. Rubinovitz provided a subsequent analysis in the *Rothe Development, Inc. v. Department of Defense* case.<sup>5</sup> Using an identical method as in his original 2012 study, the subsequent analysis looked at the relationship between contracting outcomes for non-8(a) minority-owned SDBs compared to all other

<sup>1</sup> The views expressed in this expert report do not necessarily represent the views of the Department of Commerce, the Minority Business Development Agency, or the United States.

<sup>2</sup> See Report of Robert N. Rubinovitz at 2, *Rothe Dev., Inc. v. Dep't of Defense, et al.*, No. 1:12-cv-00744-KBJ (D.D.C. Jan. 31, 2014), ECF No. 45-2 (hereinafter "Rubinovitz Report"), a copy of which is attached to this report (Attachment 2).

<sup>3</sup> SDBs are defined as (1) businesses that are 51% or more owned and controlled by one or more disadvantaged persons; (2) the disadvantaged person or persons must be socially disadvantaged and economically disadvantaged; and (3) the firm must be small, according to SBA's size standards. See SBA SDB Definitions, available at <http://www.sba.gov/contracting/government-contracting-programs/small-disadvantaged-businesses>. As shown in Table 1 below, the vast majority of SDBs during the time period relevant to this study are minority-owned.

<sup>4</sup> Some SDBs may be eligible to participate in the SBA's 8(a) Business Development program, which is for certain small businesses that are at least 51% owned and controlled by U.S. citizens who are socially and economically disadvantaged. See SBA 8(a) Business Development program, available at <https://www.sba.gov/federal-contracting/contracting-assistance-programs/8a-business-development-program>. The complete eligibility criteria for the 8(a) program are set out in Title 13 Part 124 of the Code of Federal Regulations.

<sup>5</sup> See Rubinovitz Supplemental Report, *Rothe Dev., Inc. v. Dep't of Defense, et al.*, No. 1:12-cv-00744-KBJ (D.D.C. June 16, 2014), ECF No. 64-11.



small businesses. He found that, in virtually all cases, on an industry-by-industry basis, the odds of non-8(a) minority-owned SDBs winning contracts, all other factors being equal (size, age, legal organization, level of government clearance), were lower than the odds of other small firms winning contracts, to a statistically significant degree.

Following the methodology utilized by Rubinovitz in his 2012 study, I studied data on government contracts for small businesses and factors that might influence the award of a contract to determine whether SDBs were more or less likely to win federal prime contracts relative to other small businesses. Using data from April 2019 to August 2020, I considered the impact on the “odds ratio” of small firms winning contracts, holding other factors constant.

My analysis of the data found that the odds of winning contracts for SDBs not participating in the 8(a) business development program are estimated to be roughly 37 percent lower relative to the odds of winning contracts by firms that were not identified as SDBs. The difference was statistically significant at the 95 percent significance level. Minority-owned firms (which include minority-owned small businesses, SDBs that are minority-owned, and minority-owned 8(a) participants) had roughly 15 percent lower odds of winning a contract than other small firms.

#### Methodology

The Rubinovitz study constructed a database of firms that were reasonably expected to compete for federal contracts, along with information on which of these firms won contract awards, firm characteristics, and whether firm owners belonged to a specially identified group for which the federal government has contracting goals. The SBA provided data on firms in its 8(a) and/or HUBZone<sup>6</sup> programs and which were matched to the Federal Procurement Data System (FPDS). In addition, the Rubinovitz study obtained from Bloomberg Government an extract of FPDS data for contracts covered by federal contracting goals for specially defined groups. These sources provided data elements about the form of organization, contract awards, level of security clearance, registration dates, SDB status, industry, race and ethnicity of the registrant (or with which the registrant is affiliated), and ownership type (minority, woman, service-disabled veteran, or other veteran).

Rubinovitz used the logit model of regression to analyze the odds of an event occurring, in this case the odds of being awarded a federal contract. A logit model of regression estimates the relationship between a variable to be explained (the “dependent” variable) and one or more explanatory variables (the “independent” variables). The resulting estimated relationship between the dependent and independent variables is called the odds ratio, which is expressed by the general logit model:  $Y = \exp(\beta \cdot X + \epsilon)$ . As expressed in this model,  $Y$  is the dependent variable;  $X$  is one or more independent variable(s) that might explain  $Y$ ;  $\beta$  is the unknown parameter(s) to be estimated (which measures the degree to which the independent variable(s) is related to the dependent variable);  $\epsilon$  is the error term (which represents statistical “noise” of other elements that influence the dependent variable); and  $\exp()$  is the exponential function. The model was run to obtain estimated odds ratios for winning contract awards in various industries and for a number of different variables.

As in the Rubinovitz study, the independent variables I use are the ownership of the firm (minority-owned, women-owned, and veteran-owned); the type of organization (whether the firm is a corporation, a

<sup>6</sup> SBA’s HUBZone program provides federal contracting assistance for qualified small businesses located in historically underutilized business zones in an effort to increase employment opportunities, investment, and economic development in such areas. See SBA’s HUBZone Program, available at <https://www.sba.gov/federal-contracting/contracting-assistance-programs/hubzone-program>. The complete eligibility criteria for the HUBZone program are set out in Title 13 Part 126 of the Code of Federal Regulations.



partnership, or some other type); other firm characteristics (size, in terms of numbers of employees and revenues, level of security clearance of the firm, and firm age); and whether the firm identifies itself as a SDB and if so, whether the firm is part of the SBA's 8(a) program.

This study follows, to the maximum extent possible, the same methodology and techniques used in Rubinovitz's 2012 analysis. However, my analysis encountered some changed circumstances since Rubinovitz completed his study nine years ago, such as changes in agency data collection and data availability, as well as my independent efforts. This study also uses more updated statistical programming codes that were developed after the Rubinovitz analysis.

### Key Elements in the Present Study

#### Data Availability

Data provided by the SBA originated from the System for Award Management (SAM) for registered companies containing firm-level information such as size, employment, location, dates of operation, industry, and Dunn and Bradstreet data universal numbering system (DUNS) numbers. SBA also provided two datasets from the Federal Procurement Data System (FPDS) for contract awards: one each for small businesses and for non-small businesses. Both the small and non-small business files contain information about business type, organizational type, ownership, dollars awarded, SDB status, and DUNS numbers. The data for registrants and awards were extracted for firms registered in SAM, or that had recorded transactions, from April 2019 to August 2020.

From the original raw datasets, I compiled a list of relevant variables from both SAM registrants' data (7,466,447 observations and 42 variables) and FPDS awards (5,104,224 observations and 55 variables).

SAM registrant data contains reported six-digit North American Industry Classification System (NAICS)<sup>7</sup> codes and DUNS numbers. Size standards were based on the parent company's six-digit NAICS code as reported in the SAM database. Each company was designated as "small" in each industry if it was small in any of its corresponding six-digit NAICS codes.<sup>8</sup> Firms were designated "not small" if they were not flagged as small in their six-digit NAICS codes. As in the Rubinovitz study, industry-level comparisons were at the three-digit NAICS level.<sup>9</sup> Unique observations for SAM registrants were identified by DUNS number and collapsed by three-digit NAICS code. A given DUNS number may have more than one NAICS code, indicating a firm may register in SAM to compete in one or more industries. Merging and removal of redundant and extraneous observations by DUNS number resulted in a combined file of 5,659,740 registration observations and 64 variables.

Bloomberg Government data, utilized in the Rubinovitz study, were not needed here because the FPDS datasets provided by SBA included the necessary obligations amounts, contract details, three-digit NAICS codes, and business characteristics. For Official Use Only (FOUO) and Freedom of Information Act (FOIA) data were not needed because SBA datasets have the necessary 8(a) and HUBZone (also by

<sup>7</sup> NAICS is a numbering system developed for use by statistical agencies for the collection, analysis, and publication of statistical data related to the U.S. economy. NAICS codes classify business establishments by type of economic activity, process, or production. A NAICS code indicates aggregation levels by the number of digits (2 digit Sector, 3 digit Subsector, 4 digit Industry Group, 5 digit Industry, and 6 digit National Industry).

<sup>8</sup> Size standards vary by industry and are generally based on the number of employees or the amount of annual receipts the business has. See <https://www.sba.gov/federal-contracting/contracting-guide/size-standards>.

<sup>9</sup> As noted in the Rubinovitz Report, as more digits are added to the code, the industry classifications become more narrowly defined and data become sparser. Using three-digit NAICS codes provides a compromise between having sufficient data in each industry grouping with the recognition that firms can switch production within the broader three-digit category. See Rubinovitz Report at 4.



DUNS number) identifiers to indicate participating firms in these programs. A separate list of excluded firms was also not necessary because firms excluded from doing business with the federal government were flagged in the SAM dataset and dropped from the analysis.

As in the prior method used by Rubinovitz, I accounted for firms' expiration and renewal dates for registration in SAM. Unlike the previous study, which covered a single fiscal year, here the expirations/renewals spanned portions of two fiscal years, FY2019 and FY2020, as I included firms that were registered in SAM between April 2019 and August 2020. The maximum value of continuous variables was chosen if a firm belonged to a particular group in either year.

Several NAICS industry groups were excluded from the Rubinovitz study because of incomplete data, irrelevance, or because data issues in a given NAICS code prevented the regression model from producing reliable estimates. Among those, three industries were not included in this study for the reasons explained in Table 2: 521 (Monetary Authorities-Central Bank), 814 (Private Households), and 921-928 (Public Administration). The balance of industry groups that were excluded from the prior study were eligible for inclusion in this update because they had one or more non-8(a) SDB firm(s) winning a contract (see Table 2 for these re-included industries).

Table 1 summarizes the owner characteristics of the 32,038 recorded SDBs used in this study. About 88% of SDB owners are self-identified as minority, with roughly equal percentages as non-minority female and non-minority male.

**Table 1**  
**Owner Characteristics Among All Small Disadvantaged Businesses**

	<b>Number of SDBs</b>	<b>Percent of SDBs</b>
Grand Total	32,038	100.0%
Total Minority*	28,325	88.4%
Black	7,573	23.6%
Hispanic	3,138	9.8%
Asian Pacific	8,623	26.9%
American Indian or Alaska Native	4,490	14.0%
Asian Subcontinent	3,135	9.8%
Not classified	1,366	4.3%
Non-Minority Female-Owned	1,877	5.9%
Non-Minority Male-Owned	1,836	5.7%
Non-Minority Male-Owned in Other Special Categories**	404	1.3%
Non-Minority Male-Owned not in Other Special Categories	1,432	4.5%

\*Minority categories may overlap.

\*\*Firms in Other Special Categories are those located in HUBZones, Service Disabled Veteran-Owned, or Other Veteran-Owned



Table 2

**Three-digit NAICS Codes Not Included In Analysis:\***

<u>Code</u>	<u>Description</u>	<u>Reason Dropped</u>
521	Monetary Authorities-Central Bank	This industry only consists of one entity—the Federal Reserve System
814	Private Households	No SBA small business definition
921-928	Public Administration	No SBA small business definition

\* The re-included industries in this study are: 221 Utilities, 482 Rail Transportation, 486 Pipeline Transportation, 487 Scenic Sightseeing Transportation, 491 Postal Service, 522 Credit Intermediation, 525 Funds, Trusts, and Other Financial Vehicles, 533 Lessors of Nonfinancial Intangible Assets, and 551 Management of Companies and Enterprises.



## Regressions

As noted in the Rubinovitz study, because some degree of error exists in regression models, it is necessary to measure the degree of uncertainty between the dependent and independent variables and whether their relationships are statistically significant or not. In the logit regression, which analyzes probabilities rather than continuous values, a statistically significant<sup>10</sup> estimate is one in which the odds ratio is different from the value 1.0. At 1.0, the odds ratio for winning is essentially equal between, for example, a non-8(a) SDB and an 8(a) SDB. An estimate that is not statistically significant indicates the odds ratio cannot be distinguished as being different from the odds of winning a contract with another variable.

Regression analysis using the logit model, plus a variant procedure applied in the previous study called firthlogit, produced odds ratios in similar manner as the original study when using the more recent data. Firthlogit is a variant of the logit model that mitigates problematic situations in which an independent variable is perfectly associated with only one outcome value of the dependent variable.<sup>11</sup> Firthlogit adjusts for possible estimation biases for industries that have a very low contract win rate and in cases where winning or not winning a contract is perfectly or nearly perfectly equal to a linear function of one of the control variables (for example, in industries where no women-owned businesses won any contracts). The firthlogit method minimizes the generation of the extremely large standard errors or highly inflated coefficients that might occur from these perfectly associated relationships during logistic regression estimation.

Pseudo R-squared results are not reported because the firthlogit procedure used in this updated study does not produce them.<sup>12</sup> Pseudo R-squared methodologies vary widely for different purposes. The Pseudo R-squared is one class of R-squared statistics which are measures of the proportion of variance for a dependent variable that is explained by the independent variable(s) in a regression. R-squared values do not measure model adequacy and higher or lower values alone do not fully measure the fit of the model and data. The presence or lack of a Pseudo R-squared or an R-squared does not alter the accuracy or validity of regression results.

<sup>10</sup> The statistical significance of odds ratios is determined by calculating their p-values. A p-value is a test for whether a coefficient is equal to zero or not equal to zero. A low p-value (less than or equal to 0.5) indicates the coefficient is not equal to zero and so a statistically significant relationship exists between the response and predictor variable(s). A high p-value (greater than 0.5) indicates changes in the predictor(s) are not associated with changes in the response variable, and are not statistically significant.

<sup>11</sup> See Firth, D. 1993, "Bias reduction of maximum likelihood estimates." *Biometrika* 80:27-38; Heinze, G. and Schemper, M. 2002, "A solution to the problem of separation in logistic regression," *Statistics in Medicine* 21:2409-19. I used the firthlogit Stata module written by Joseph Coveney to make these estimates. (<http://econpapers.repec.org/software/bocbocode/s456948.htm>).

<sup>12</sup> R-squared is an equation that measures the proportion of the total percentage of variance attributed to all the independent variables. An R2 value is between 0 (the regression model does not explain any variation in the dependent variable) and 1 (the regression model explains all the variation in the dependent variable).



### Overview of Results

As in the prior study, the ultimate question of interest is whether the data show differences in the odds of contracts being won by minority-owned small businesses, especially those identified as SDBs and those participating in the 8(a) program, compared to other small businesses. I used the logit regression analysis that was implemented in the earlier study to produce odds ratios for the same set of independent variables. The odds ratio is the estimated relationship between the dependent variable (whether a firm wins or does not win a contract) and the independent variables (such as ownership type, type of organization, and firm characteristics).

Table 3 shows that woman-owned, minority-owned, and other veteran-owned firms have lower odds than other firms to win a contract, all else being equal. Most of the standard errors (17 out of 18) in Table 3 are small relative to their estimated odds ratios. The odds of winning a contract for SDBs who do not participate in the 8(a) program is about 37 percent less than for other firms, and this result is statistically significant. Firms in the 8(a) program, in a certified HUBZone, or owned by service-disabled veterans have statistically significant and larger odds of winning a contract. The firm size and age ratios favor the larger and older firms, reflecting their greater likelihood at competing for and thus winning contracts. Among ownership types, partnership, corporate not-tax exempt, and corporate tax-exempt firms had lower odds and were statistically significant. Sole proprietorship was the only group that had odds that were not statistically significant. The type of security clearance held by a firm had a strong positive effect on the firm's odds of winning a contract, which is understandable because clearances are often prerequisites for competing for many types of government contracts.

Table 4 summarizes the results when the same model is estimated separately for each three-digit NAICS code (Table 5 is a more detailed list of the industry estimates and Table 6 defines the NAICS codes used in Table 5). In about 90% of industries, accounting for over 99% of contracts, non-8(a) SDB firms' odds of winning contracts are lower, all else equal, than other firms. In 50% of industries, representing over 93% of contracts, the odds of winning are statistically significantly lower.

Table 4a shows the same information for minority-owned firms. Minority-owned firms' odds of winning contracts are lower in about 67% of industries, representing over 50% of contracts. In about a quarter (23.6%) of industries, the odds of winning are statistically significantly lower, accounting for 16.8% of contracts.

One reason that industry regressions might change categories from the Rubinovitz study relates to sample size. The number of observations<sup>13</sup> is a key factor in the size of a standard error, which is used in determining if an estimate is considered to be sufficiently precise to be considered statistically significant.<sup>14</sup> With the large number of observations in this study, the data very likely reflects the odds of winning.

<sup>13</sup> The Rubinovitz study had a total of 765,163 industry observations compared to the current study of 1,171,497 industry observations.

<sup>14</sup> Statistical significance occurs when the point estimate of the odds ratio, plus or minus the standard errors, are sufficiently far from one. The formula for computing standard errors is inversely proportional to the square root of the number of observations, which means that there is a direct inverse relationship between a larger number of observations and smaller standard errors. Also note that the closer the point estimate of the odds ratio is to one, the smaller the standard errors need to be for the range defined by the point estimate and standard errors to not include one.





One way to see this relationship is to split the industry regression into groups by the number of observations in that industry regression. In Table 5, there are 31 three-digit NAICS code industries with at least 9,000 observations (and up to 177,411 observations). In 27 of these 31 industries with a larger sample size, the estimate for the odds ratios of SDBs is statistically significant (the estimates range between 0.326 and 0.803 and have p-values between 0 and 0.019). Among the industry regressions with smaller sample sizes, there are 17 three-digit NAICS code industries with fewer than 2,000 observations, and in only one of these is the odds ratio on the SDB variable statistically significant (p-value of 0.011, and the estimate of the odds ratio is less than 0.5).

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**Table 3**  
**Pooled Regression Results**

	Odds Ratios
SDB not 8(a)	0.632*** (0.0100)
8(a)	2.606*** (0.1013)
woman-owned	0.899*** (0.0147)
minority-owned	0.858*** (0.0163)
hubzone	1.746*** (0.0662)
service-disabled veteran	1.215*** (0.0320)
other veteran	0.902*** (0.0242)
log age	1.167*** (0.0085)
log employment	1.037*** (0.0045)
log receipts	1.055*** (0.0028)
sole proprietor (omitted: "other" orgs)	1.030 (0.0318)
partnership	0.753*** (0.0237)
corporate not tax-exempt	0.820*** (0.0217)
corporate tax-exempt	0.530*** (0.1166)
government non-classified	1.630*** (0.0310)
government confidential	1.993*** (0.1011)
government secret	1.841*** (0.0590)
government top secret	2.186*** (0.0591)
constant	0.00229*** (0.0001)
No. Observations	504,819

Standard errors in parentheses: (\*\*\*) p<0.01, (\*\*) p<0.05, (\*) p<0.1)



**Table 4**  
**Summary Results from Industry Regressions: Difference in Odds of Non-8(a) SDB's\*  
 Winning Contracts**

	Contracts		Awards		Industries	
Lower odds statistically significant	278,492	93.6%	\$47,513,256,560	91.6%	45	50.6%
Lower odds not statistically significant	17,790	6.0%	\$4,250,817,536	8.2%	35	39.3%
Higher odds statistically significant	0	0.0%	\$0	0.0%	0	0.0%
Higher odds not statistically significant	1,253	0.4%	\$112,927,496	0.2%	9	10.1%
Totals	297,535	100.0%	\$51,877,001,592	100.0%	89	100.0%

\*SDBs are counted once for each industry in which they are registered or won contracts. Percents may not sum to 100% due to rounding.

**Table 4a**  
**Summary Results from Industry Regressions: Difference in Odds of Minority-Owned  
 Businesses\* Winning Contracts**

	Contracts		Awards		Industries	
Lower odds statistically significant	50,249	16.9%	\$18,453,358,912	35.6%	21	23.6%
Lower odds not statistically significant	103,510	34.8%	\$19,657,230,336	37.9%	39	43.8%
Higher odds statistically significant	21,195	7.1%	\$8,289,815,552	16.0%	1	1.1%
Higher odds not statistically significant	122,581	41.2%	\$5,476,597,760	10.6%	28	31.5%
Totals	297,535	100.0%	\$51,877,002,560	100.0%	89	100.0%

\*Minority Owned Businesses are counted once for each industry in which they are registered or won contracts. Percents may not sum to 100% due to rounding.



Table 5: Industry Specific Regression Results

	111	112	113	114	115	211	212	213	221	236	237
SDB not 8(a)	0.933 (0.835)	0.601 (0.257)	0.637 (0.311)	0.648 (0.459)	0.800*** (0.000)	0.778 (0.832)	0.936 (0.811)	0.180*** (0.000)	0.506*** (0.000)	0.760*** (0.002)	0.781*** (0.006)
8(a)	5.515 (0.116)	1.907 (0.705)	2.825 (0.336)	0.405 (0.630)	0.636 (0.144)	583.2* (0.056)	1.939 (0.260)	0.225* (0.096)	0.498* (0.098)	5.340*** (0.000)	3.748*** (0.000)
woman-owned	0.472 (0.116)	1.255 (0.705)	0.788 (0.336)	0.731 (0.630)	0.748*** (0.000)	2.956 (0.056)	0.867 (0.260)	2.299*** (0.000)	0.945 (0.098)	1.233** (0.000)	0.878 (0.000)
minority-owned	0.327 (0.116)	0.891 (0.705)	0.891 (0.336)	1.180 (0.630)	0.696*** (0.000)	0.712 (0.056)	0.680 (0.260)	1.780* (0.096)	0.926 (0.098)	0.858 (0.134)	0.844*** (0.000)
hubzone	1.432 (0.100)	0.610 (0.610)	0.115 (0.894)	0.894 (0.894)	1.766*** (0.000)	0.848 (0.056)	0.283 (0.283)	0.095 (0.095)	0.704 (0.704)	2.076*** (0.000)	2.887*** (0.000)
service-disabled veteran	0.916 (0.721)	0.956 (0.956)	0.716 (0.716)	8.519* (0.083)	0.487 (0.487)	1.837 (0.083)	0.794 (0.271)	0.804 (0.871)	1.154 (0.459)	2.986*** (0.000)	1.381*** (0.000)
other veteran	0.891 (0.171)	0.359 (0.258)	0.290 (0.388)	0.365 (0.517)	0.670** (0.021)	3.106 (0.499)	0.987 (0.268)	0.850 (0.748)	0.748 (0.394)	1.174 (0.342)	0.946 (0.747)
log age	1.513** (0.077)	0.990 (0.177)	1.698** (0.027)	0.672 (0.177)	1.371*** (0.000)	2.658 (0.118)	1.209 (0.209)	1.258 (0.133)	1.008 (0.915)	1.240*** (0.000)	1.171*** (0.001)
log employment	0.852* (0.204)	1.209* (0.647)	1.279* (0.828)	1.086 (0.729)	0.886*** (0.000)	0.586 (0.104)	0.812* (0.045)	1.063 (0.865)	0.727*** (0.000)	0.919*** (0.000)	0.893*** (0.000)
log receipts	1.079 (0.204)	0.976 (0.647)	0.913* (0.054)	1.774*** (0.006)	1.032** (0.028)	1.320 (0.256)	1.073 (0.229)	1.099 (0.153)	1.203*** (0.000)	1.176*** (0.000)	1.045*** (0.008)
sole proprietorship (omitted: "other" eqs)	0.998 (0.998)	0.950 (0.946)	1.177 (0.828)	5.729 (0.270)	1.085 (0.595)	0.038 (0.104)	0.638 (0.403)	0.805 (0.865)	0.836 (0.592)	0.589** (0.003)	0.705** (0.048)
partnership	0.358 (0.884)	0.884 (0.884)	1.106 (0.965)	0.370 (0.573)	0.817 (0.914)	0.030* (0.028)	0.331 (0.620)	0.465 (0.545)	0.724 (0.755)	0.536*** (0.000)	0.537*** (0.000)
corporate not tax-exempt	0.703 (0.540)	0.684 (0.577)	0.965 (0.958)	5.073 (0.278)	0.914 (0.540)	0.238* (0.027)	0.620 (0.207)	0.620 (0.120)	0.545 (0.262)	0.646*** (0.000)	0.644*** (0.000)
corporate tax-exempt	5.318 (0.307)	13.130 (0.154)	6.983 (0.275)	44.38* (0.094)	0.635 (0.760)	0.000 (0.000)	2.071 (0.648)	4.278 (0.370)	2.008 (0.641)	0.0450** (0.030)	0.0940* (0.099)
government non-classified (omitted: "other" reported)	1.233 (0.754)	1.135 (0.879)	0.945 (0.393)	7.435*** (0.001)	0.989 (0.409)	2.165 (0.498)	0.784 (0.292)	2.538*** (0.001)	3.016 (0.001)	1.579*** (0.000)	1.132 (0.147)
government confidential	5.079 (0.277)	2.740 (0.492)	2.579 (0.537)	8.195** (0.021)	0.997 (0.996)	140.100 (0.153)	1.681 (0.545)	2.420 (0.204)	3.213*** (0.001)	2.269*** (0.000)	0.860 (0.671)
government secret	0.391 (0.325)	5.725* (0.082)	0.454 (0.593)	3.214 (0.296)	0.302* (0.054)	0.446 (0.123)	0.898 (0.943)	0.278 (0.173)	0.869 (0.773)	1.671*** (0.002)	1.094 (0.893)
government top secret	0.810 (0.810)	0.664* (0.064)	0.599 (0.599)	0.299 (0.299)	0.589 (0.589)	0.920 (0.920)	0.131 (0.131)	0.334 (0.334)	0.120 (0.120)	0.0013*** (0.000)	0.00284*** (0.000)
Constant	0.00621*** (0.00000)	0.0150*** (0.00013)	0.000328*** (0.00000)	3.874-08*** (0.00000)	0.0187*** (0.00000)	0.03520 (0.21100)	0.0130*** (0.00011)	0.000151*** (0.00000)	0.00365*** (0.00000)	0.00013*** (0.00000)	0.00284*** (0.00000)
Observations	3,771	2,444	2,894	734	8,969	198	3,384	4,296	13,160	41,199	35,596



Table 5: Industry Specific Regression Results

	311	312	313	314	315	316	321	322	323	324
SDB not 8(a)	0.704*** (0.006)	0.474 (0.208)	0.564** (0.011)	0.000 (0.000)	0.543*** (0.000)	0.899 (0.779)	0.695 (0.118)	0.782 (0.220)	0.419*** (0.001)	0.753 (0.191)
8(a)	3.804** (0.000)	0.861 (0.370)	0.189 (0.189)	0.044 (0.241)	0.188 (0.188)	0.227 (0.227)	0.584 (0.584)	0.809 (0.809)	0.294 (0.294)	0.123 (0.123)
woman-owned	1.011 (0.843)	2.055 (0.185)	1.121 (0.577)	0.996 (0.305)	0.851 (0.305)	0.840 (0.632)	1.090 (0.710)	1.110 (0.578)	0.743 (0.196)	0.668 (0.528)
minority-owned	0.680*** (0.000)	0.313* (0.085)	0.835 (0.485)	0.987 (0.468)	0.861 (0.468)	0.547 (0.233)	0.525** (0.045)	0.677* (0.090)	1.082 (0.781)	1.110 (0.657)
husband	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)
service-disabled veteran	1.982*** (0.000)	0.713 (0.271)	0.813 (0.132)	0.785 (0.122)	0.004 (0.669)	0.984 (0.374)	0.693 (0.240)	1.100 (0.994)	0.583 (0.440)	0.583 (0.089)
other veteran	1.042 (0.873)	1.020 (0.983)	0.749 (0.497)	0.724 (0.121)	0.658 (0.172)	0.467 (0.254)	0.974 (0.947)	1.008 (0.982)	0.436 (0.134)	0.210** (0.016)
log age	0.001 (0.001)	0.001 (0.467)	0.174 (0.174)	0.994 (0.038)	0.000 (0.000)	0.843 (0.843)	0.166 (0.166)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
log employment	1.030 (0.109)	0.826** (0.013)	0.810** (0.005)	0.975 (0.609)	0.845*** (0.002)	1.348*** (0.004)	0.677*** (0.000)	0.813*** (0.003)	0.778*** (0.007)	0.904* (0.098)
log receipts	1.064*** (0.000)	0.934 (0.222)	1.157*** (0.004)	1.182*** (0.000)	1.195*** (0.000)	1.016 (0.670)	1.282*** (0.000)	1.168*** (0.000)	1.263*** (0.002)	1.080** (0.015)
sole proprietorship	0.823* (0.016)	0.782 (0.104)	0.280 (0.278)	0.344 (0.070)	0.000 (0.000)	0.000 (0.000)	0.514 (0.514)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
(omitted: "other" size)	0.823* (0.080)	0.702 (0.092)	0.257* (0.203)	0.574* (0.064)	0.569* (0.064)	0.361* (0.089)	0.603 (0.056)	0.404** (0.012)	0.159*** (0.006)	1.004 (0.503)
corporate not tax-exempt	0.841* (0.061)	0.280* (0.056)	0.741 (0.398)	0.852 (0.502)	0.608** (0.043)	0.345** (0.021)	0.718 (0.315)	0.386*** (0.001)	0.252*** (0.000)	0.734 (0.312)
corporate tax-exempt	0.841* (0.061)	0.280* (0.056)	0.741 (0.398)	0.852 (0.502)	0.608** (0.043)	0.345** (0.021)	0.718 (0.315)	0.386*** (0.001)	0.252*** (0.000)	0.734 (0.312)
government non-classified (omitted: no security reported)	1.666*** (0.000)	1.235 (0.889)	1.471 (0.114)	1.905*** (0.000)	1.510** (0.022)	1.313 (0.539)	1.644* (0.061)	1.849*** (0.003)	2.210*** (0.002)	1.294 (0.311)
government confidential	1.732*** (0.000)	3.880 (0.000)	4.430*** (0.000)	1.166 (0.713)	1.071 (0.000)	3.543 (1.961)	1.130 (0.150)	0.584 (0.237)	1.947 (0.460)	2.254 (0.177)
government secret	1.444*** (0.004)	3.261 (0.012)	3.136 (0.778)	0.551 (0.449)	0.356 (0.356)	0.509 (0.509)	2.175 (0.175)	0.627 (0.057)	0.871 (0.100)	0.871 (0.871)
government top secret	0.967 (0.810)	1.123 (0.905)	6.156** (0.017)	2.347** (0.047)	0.0733* (0.067)	1.873 (0.525)	1.353 (0.722)	1.818 (0.348)	1.064 (0.917)	0.875 (0.818)
Constant	0.08163*** (0.0000)	3.69700 (0.0000)	0.0232*** (0.0001)	0.00737*** (0.0000)	0.00739*** (0.0000)	0.01642*** (0.0000)	0.00378*** (0.0000)	0.01552*** (0.0000)	0.00568*** (0.0000)	0.03350*** (0.0000)
Observations	82,747	1,503	1,897	4,404	4,171	1,513	4,549	2,949	5,527	2,228



Table 5: Industry Specific Regression Results

	325	327	331	332	333	334	335	336	337	339	423
SDN not 8(a)	0.527*** (0.000)	0.488*** (0.000)	0.583*** (0.000)	0.464*** (0.000)	0.568*** (0.000)	0.594*** (0.000)	0.498*** (0.000)	0.554*** (0.000)	0.618*** (0.000)	0.609*** (0.000)	0.634*** (0.000)
8(a)	0.156 (0.156)	0.145 (0.145)	0.131 (0.131)	0.100 (0.100)	0.101 (0.101)	0.091 (0.091)	0.091 (0.091)	0.091 (0.091)	0.091 (0.091)	0.091 (0.091)	0.091 (0.091)
woman-owned	0.535 (0.523)	1.080 (0.668)	1.396* (0.065)	1.497* (0.092)	1.037 (0.559)	0.972 (0.604)	1.091 (0.271)	1.064 (0.363)	1.094 (0.447)	0.853** (0.017)	1.110 (0.234)
minority-owned	0.888 (0.310)	1.045 (0.832)	1.286 (0.113)	1.078 (0.369)	1.094 (0.227)	0.908 (0.110)	1.110 (0.253)	1.200** (0.023)	0.863 (0.312)	0.962 (0.602)	0.949 (0.613)
hubzone	0.474 (0.811)	0.226 (0.226)	0.144 (0.144)	0.074 (0.074)	0.078 (0.078)	0.020 (0.020)	0.020 (0.020)	0.084 (0.084)	0.349 (0.349)	0.840 (0.840)	1.000 (1.000)
service-disabled veteran	1.112 (0.435)	1.059 (0.814)	0.840 (0.448)	1.097 (0.314)	1.046 (0.630)	0.921 (0.305)	0.876 (0.260)	0.883 (0.245)	1.288* (0.098)	1.287*** (0.003)	1.011 (0.937)
other veteran	0.889 (0.517)	0.951 (0.873)	0.674 (0.133)	1.007 (0.336)	1.046 (0.621)	0.842** (0.038)	0.716* (0.058)	0.957 (0.664)	0.768 (0.267)	0.968 (0.747)	0.722* (0.050)
log age	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
log employment	0.772*** (0.000)	0.797*** (0.001)	0.814*** (0.000)	0.803*** (0.000)	0.884*** (0.000)	0.917*** (0.000)	0.909*** (0.000)	0.853*** (0.000)	0.767*** (0.000)	0.960*** (0.000)	0.841*** (0.000)
log receipts	1.234*** (0.000)	1.218*** (0.000)	1.162*** (0.000)	1.082*** (0.000)	1.124*** (0.000)	1.108*** (0.000)	1.081*** (0.000)	1.084*** (0.000)	1.286*** (0.000)	1.119*** (0.000)	1.174*** (0.000)
sole proprietorship (limited "other" corp)	0.044 (0.538)	0.044 (0.538)	0.044 (0.538)	0.044 (0.538)	0.044 (0.538)	0.044 (0.538)	0.044 (0.538)	0.044 (0.538)	0.044 (0.538)	0.044 (0.538)	0.044 (0.538)
partnership	0.677*** (0.000)	0.677*** (0.000)	0.677*** (0.000)	0.677*** (0.000)	0.677*** (0.000)	0.677*** (0.000)	0.677*** (0.000)	0.677*** (0.000)	0.677*** (0.000)	0.677*** (0.000)	0.677*** (0.000)
corporate not tax-exempt	0.592*** (0.003)	0.762 (0.282)	0.648** (0.043)	0.785*** (0.009)	0.755*** (0.002)	0.717*** (0.000)	0.828 (0.119)	0.733*** (0.002)	0.785 (0.222)	0.750*** (0.004)	0.747** (0.037)
corporate tax-exempt	0.325 (0.466)	0.325 (0.466)	0.325 (0.466)	0.325 (0.466)	0.325 (0.466)	0.325 (0.466)	0.325 (0.466)	0.325 (0.466)	0.325 (0.466)	0.325 (0.466)	0.325 (0.466)
government non-classified (limited: no security reported)	1.623*** (0.002)	2.433*** (0.000)	1.520*** (0.000)	1.808*** (0.000)	1.372*** (0.000)	1.243*** (0.000)	1.518*** (0.000)	1.265*** (0.000)	1.428*** (0.000)	1.386*** (0.000)	1.719*** (0.000)
government confidential	2.675*** (0.000)	1.377 (0.867)	1.582 (0.118)	1.885*** (0.000)	1.391** (0.014)	1.275* (0.053)	2.148*** (0.000)	1.330* (0.063)	0.772 (0.063)	1.560** (0.019)	2.245*** (0.001)
government secret	2.180*** (0.000)	2.894*** (0.000)	1.718 (0.116)	2.124*** (0.000)	1.721*** (0.000)	1.239*** (0.003)	1.948*** (0.000)	1.401 (0.461)	1.551*** (0.000)	1.551*** (0.000)	1.719*** (0.008)
government top secret	0.530 (0.792)	4.778*** (0.002)	2.186* (0.090)	1.201 (0.172)	1.064 (0.641)	0.767*** (0.000)	1.394** (0.042)	0.702*** (0.001)	0.824 (0.813)	0.971 (0.866)	3.080*** (0.000)
Constant	0.0001*** (0.0000)	0.00146*** (0.0000)	0.0139*** (0.0000)	0.0114*** (0.0000)	0.0134*** (0.0000)	0.0107*** (0.0000)	0.0116*** (0.0000)	0.0085*** (0.0000)	0.0069*** (0.0000)	0.0069*** (0.0000)	0.00305*** (0.0000)
Observations	14,579	4,653	3,620	31,295	27,081	33,320	14,334	18,763	6,517	23,588	58,281



Table 5: Industry Specific Regression Results

	424	425	441	442	443	444	445	446	447	448	451
SDS not 8(a)	0.716* (0.098)	0.611 (0.274)	0.520** (0.037)	1.039 (0.927)	1.015 (0.927)	0.326*** (0.000)	1.638 (0.843)	0.635 (0.303)	0.980 (0.591)	0.315* (0.075)	0.589 (0.424)
8(a)	1.722 (0.283)	9.444** (0.632)	0.695 (0.709)	0.654 (0.783)	1.568 (0.824)	0.112** (0.015)	321.400 (0.102)	0.269 (0.391)	10.630 (0.311)	0.461 (0.684)	1.072 (0.566)
woman-owned	0.968 (0.368)	0.724 (0.231)	0.891 (0.272)	0.868 (0.266)	0.799 (0.270)	0.729*** (0.000)	1.084 (0.884)	0.689** (0.020)	0.745 (0.707)	0.562** (0.022)	1.792* (0.084)
minority-owned	0.724 (0.174)	0.169** (0.020)	1.289 (0.488)	0.833 (0.697)	1.760 (0.254)	1.108 (0.665)	0.803 (0.944)	0.848 (0.733)	0.962 (0.994)	0.147** (0.043)	1.449 (0.624)
hispanic	1.207 (0.657)	0.501 (0.643)	3.865** (0.014)	1.319 (0.758)	2.208 (0.270)	0.956 (0.912)	15.650 (0.347)	3.828* (0.066)	11.140 (0.294)	7.417** (0.042)	0.795 (0.883)
service-disabled veteran	0.824 (0.413)	0.556 (0.556)	0.786 (0.266)	0.478 (0.478)	0.408 (0.408)	0.903 (0.001)	6.243 (0.521)	0.642 (0.613)	2.345 (0.613)	0.161 (0.726)	1.188 (0.259)
other veteran	0.590 (0.622)	0.891 (0.445)	0.868 (0.266)	0.799 (0.270)	1.568** (0.048)	0.729*** (0.000)	1.084 (0.884)	0.689** (0.020)	0.745 (0.707)	0.562** (0.022)	1.792* (0.084)
log age	0.956 (0.622)	0.891 (0.445)	0.868 (0.266)	0.799 (0.270)	1.568** (0.048)	0.729*** (0.000)	1.084 (0.884)	0.689** (0.020)	0.745 (0.707)	0.562** (0.022)	1.792* (0.084)
log employment	1.218*** (0.049)	0.972 (0.600)	1.047 (0.402)	1.043 (0.138)	1.000 (0.160)	1.212*** (0.000)	0.910 (0.958)	1.105 (0.153)	0.847 (0.135)	1.053 (0.021)	1.423** (0.049)
log receipts	0.000 (0.000)	0.586 (0.344)	0.344 (0.344)	0.344 (0.344)	0.344 (0.344)	0.344 (0.344)	0.344 (0.344)	0.344 (0.344)	0.344 (0.344)	0.344 (0.344)	0.344 (0.344)
sole proprietorship (omitted: "other" orgs)	1.086 (0.843)	0.218 (0.107)	0.284** (0.025)	0.587 (0.314)	0.938** (0.032)	0.359** (0.017)	0.385 (0.672)	0.390 (0.267)	0.666 (0.857)	0.318 (0.350)	0.225 (0.349)
partnership	0.815 (0.716)	0.267*** (0.103)	0.340*** (0.003)	0.559 (0.623)	0.169 (0.169)	0.603* (0.001)	0.142 (0.484)	0.573 (0.157)	0.111 (0.540)	0.892 (0.778)	0.593 (0.533)
corporate not tax exempt	0.815 (0.495)	0.267*** (0.007)	0.340*** (0.001)	0.559 (0.359)	0.169 (0.003)	0.603* (0.063)	0.142 (0.102)	0.573 (0.343)	0.111 (0.135)	0.892 (0.904)	0.593 (0.475)
corporate tax exempt	1.349 (0.840)	1.876 (0.740)	2.183 (0.708)	2.302 (0.706)	2.550 (0.610)	8.844 (0.197)	4.552 (0.629)	22.30* (0.087)	1.110 (0.373)	4.32*** (0.000)	107.5** (0.034)
government not classified (omitted: no security reported)	1.054 (0.054)	0.00178*** (0.00000)	0.0230*** (0.00011)	0.26100 (0.33300)	0.0678* (0.07450)	0.0128*** (0.00000)	0.00708 (0.05060)	0.000355*** (0.00000)	0.51400 (0.85700)	0.21100 (0.48800)	0.000957*** (0.00010)
government confidential	2.476 (0.164)	1.655 (0.731)	3.203 (0.174)	2.107 (0.609)	4.706* (0.095)	9.160*** (0.000)	24.350 (0.280)	2.933 (0.461)	11.790 (0.369)	28.27** (0.034)	4.181 (0.353)
government secret	2.678* (0.929)	0.500 (0.629)	3.196* (0.069)	2.045 (0.629)	2.161 (0.629)	22.09*** (0.000)	8.058 (0.730)	4.685 (0.629)	13.040 (0.629)	7.941* (0.034)	3.128 (0.429)
government top secret	0.725 (0.401)	0.254 (0.348)	0.576 (0.252)	4.292 (0.168)	0.193** (0.047)	37.63*** (0.000)	12.730 (0.499)	3.410 (0.181)	9.738 (0.734)	14.020 (0.127)	5.654 (0.267)
Constant	0.000178*** (0.00000)	0.00152*** (0.00000)	0.0230*** (0.00011)	0.26100 (0.33300)	0.0678* (0.07450)	0.0128*** (0.00000)	0.00708 (0.05060)	0.000355*** (0.00000)	0.51400 (0.85700)	0.21100 (0.48800)	0.000957*** (0.00010)
Observations	18,368	3,718	5,720	3,229	2,041	9,013	1,222	4,457	484	2,606	2,382



Table 5: Industry Specific Regression Results

	452	453	454	481	482	483	484	485	486	487	488	
SDB not (a)	4.309 (0.261)	0.594 (0.116)	2.089 (0.178)	0.974 (0.519)	0.927 (0.953)	0.936 (0.863)	0.936 (0.863)	0.654** (0.048)	0.425*** (0.000)	0.374 (0.139)	0.194 (0.179)	0.395*** (0.000)
8(a)	1.656 (0.042)	0.679 (0.373)	0.752 (0.571)	0.824 (0.904)	0.626 (0.543)	0.626 (0.543)	0.626 (0.543)	0.626 (0.543)	0.626 (0.543)	0.626 (0.543)	0.626 (0.543)	0.626 (0.543)
woman-owned	0.104 (0.231)	1.269 (0.423)	0.797 (0.669)	0.878 (0.669)	1.190 (0.911)	0.669 (0.445)	0.669 (0.445)	0.815 (0.370)	0.789 (0.243)	0.847 (0.823)	0.901 (0.644)	1.195 (0.167)
minority-owned	0.164 (0.239)	1.618 (0.151)	0.655 (0.499)	0.218*** (0.003)	1.393 (0.449)	0.445* (0.096)	0.445* (0.096)	1.227 (0.375)	0.304*** (0.000)	0.517 (0.397)	0.350 (0.330)	1.124 (0.451)
hubzone	0.587 (0.587)	0.963 (0.963)	0.133 (0.133)	0.066 (0.066)	0.963 (0.963)	0.963 (0.963)	0.963 (0.963)	0.963 (0.963)	0.963 (0.963)	0.963 (0.963)	0.963 (0.963)	0.963 (0.963)
service-disabled veteran	0.206 (0.403)	1.158 (0.750)	0.191 (0.238)	0.526 (0.415)	1.628 (0.779)	0.272 (0.130)	0.272 (0.130)	0.967 (0.312)	0.842 (0.513)	1.153 (0.864)	1.185 (0.240)	0.779 (0.240)
other veteran	0.613 (0.830)	1.352 (0.525)	1.081 (0.964)	1.223 (0.498)	2.505 (0.670)	0.104 (0.113)	0.104 (0.113)	0.699 (0.349)	0.895 (0.707)	0.388 (0.400)	2.724 (0.327)	0.936 (0.794)
log age	0.397 (0.179)	0.793 (0.122)	1.082 (0.731)	1.057 (0.900)	0.940 (0.940)	0.360 (0.360)	0.360 (0.360)	1.000 (0.000)	1.000 (0.000)	0.794 (0.794)	1.294 (0.794)	1.804** (0.009)
log employment	0.564 (0.238)	0.728*** (0.005)	0.731* (0.069)	1.057 (0.496)	0.929 (0.902)	0.880 (0.224)	0.880 (0.224)	0.976 (0.715)	0.957 (0.853)	1.047 (0.757)	1.131 (0.708)	0.939 (0.106)
log receipts	0.992 (0.965)	1.865*** (0.002)	1.087 (0.379)	1.020 (0.674)	0.981 (0.908)	1.034 (0.538)	1.034 (0.538)	1.094** (0.034)	0.973 (0.235)	0.966 (0.612)	0.894 (0.295)	1.189*** (0.000)
sole proprietorship (limited liability)	0.096 (0.104)	0.635 (0.635)	0.724 (0.246)	0.815 (0.651)	0.815 (0.651)	0.762 (0.315**)	0.762 (0.315**)	0.995 (0.709)	2.628** (0.004)	0.187 (0.873)	0.187 (0.873)	0.932 (0.618)
partnership	0.0371* (0.065)	0.655 (0.399)	0.349 (0.244)	0.383** (0.048)	1.716 (0.923)	0.315** (0.036)	0.315** (0.036)	0.709 (0.383)	0.625 (0.224)	0.0134*** (0.005)	0.873 (0.740)	0.618* (0.047)
corporate not tax exempt	0.0665** (0.044)	0.395** (0.034)	0.513 (0.288)	0.500** (0.049)	0.433 (0.689)	0.317*** (0.002)	0.317*** (0.002)	0.754 (0.337)	0.434** (0.010)	0.157*** (0.004)	0.557 (0.731)	0.697** (0.049)
corporate tax exempt	0.443 (0.443)	0.443 (0.443)	0.443 (0.443)	0.443 (0.443)	0.443 (0.443)	0.443 (0.443)	0.443 (0.443)	0.443 (0.443)	0.443 (0.443)	0.443 (0.443)	0.443 (0.443)	0.443 (0.443)
government non-classified (limited: no security reported)	1.068 (0.968)	2.237** (0.045)	2.074 (0.304)	0.716 (0.372)	3.225 (0.519)	1.700 (0.723)	1.700 (0.723)	3.002*** (0.000)	0.726 (0.330)	4.141** (0.010)	1.302 (0.948)	1.816*** (0.000)
government confidential	60.380 (0.400)	3.785 (6.654**)	5.466 (0.487)	2.216 (0.258)	8.674 (0.418)	5.336** (3.974*)	5.336** (3.974*)	5.005*** (2.329*)	2.746 (0.107)	4.879 (0.189)	2.1640 (0.174)	1.524 (0.740)
government secret	39.030 (0.140)	6.654** (0.000)	5.524* (0.057)	0.532* (0.475)	0.488 (0.418)	3.974* (0.000)	3.974* (0.000)	2.329** (0.036)	0.107 (0.333)	0.189 (0.957)	0.174 (0.447)	0.740 (0.666)
government top secret	4.614 (0.413)	3.321** (0.046)	5.067 (0.113)	1.234 (0.582)	6.266 (0.447)	2.303 (0.178)	2.303 (0.178)	1.308 (0.440)	1.884 (0.192)	1.446 (0.822)	3.490 (0.655)	0.857 (0.451)
Constant	1.65300 (0.84400)	0.057*** (0.0099)	0.0235* (0.0480)	0.09148*** (0.0090)	0.33300 (0.3200)	0.0365** (0.0085)	0.0365** (0.0085)	0.006546*** (0.0000)	0.1252** (0.0090)	0.01631** (0.0065)	0.06070 (0.2060)	0.020463*** (0.0000)
Observations	424	7,117	3,383	2,927	404	1,587	15,302	4,871	992	901	16,219	





Table 5: Industry Specific Regression Results

	491	492	493	511	512	515	517	518	519	522	523
SDB not 8(a)	11.47* (0.86)	0.27 (0.35)	0.495** (0.094)	0.478*** (0.000)	1.045 (0.86)	0.868 (0.931)	0.657** (0.023)	0.537*** (0.006)	0.368*** (0.000)	0.162* (0.074)	0.502 (0.285)
8(a)	0.089 (0.059)	0.657 (0.25)	0.000 (0.131)	0.000 (0.001)	0.001 (0.001)	0.411 (0.41)	0.765 (0.765)	0.489 (0.489)	0.800 (0.800)	0.151 (0.151)	0.535 (0.535)
woman-owned	0.612 (0.670)	1.961 (0.865)	0.658*** (0.000)	0.658*** (0.000)	0.463** (0.025)	0.317 (0.141)	0.833 (0.338)	0.540*** (0.007)	0.710 (0.148)	1.693 (0.500)	0.445 (0.237)
minority-owned	0.101 (0.130)	0.666 (0.238)	1.076 (0.828)	0.678*** (0.001)	0.166*** (0.002)	0.596 (0.295)	0.485*** (0.001)	0.664* (0.076)	0.389*** (0.002)	0.959 (0.961)	0.189* (0.072)
hispanic	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
service-disabled veteran	0.896 (0.938)	1.744 (0.139)	1.880 (0.872)	1.004 (0.406)	0.004 (0.129)	0.318 (0.181)	0.974 (0.510)	0.601 (0.123)	0.747 (0.429)	2.009 (0.475)	0.438 (0.359)
other veteran	0.871 (0.943)	1.609 (0.359)	1.084 (0.872)	0.961 (0.817)	1.324 (0.578)	0.441 (0.37)	0.795 (0.462)	0.998 (0.995)	0.897 (0.92)	1.571 (0.760)	0.748 (0.257)
log age	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
log employment	1.607*** (0.008)	1.153 (0.172)	0.916 (0.316)	0.876*** (0.000)	1.162* (0.082)	1.03* (0.084)	1.079 (0.145)	0.896 (0.000)	0.936 (0.000)	1.135 (0.095)	0.847* (0.064)
log receipts	0.984 (0.927)	1.082 (0.233)	1.122* (0.083)	1.134*** (0.000)	0.888 (0.808)	0.995 (0.902)	1.093*** (0.005)	1.279*** (0.000)	1.080* (0.074)	0.961 (0.983)	0.986 (0.837)
sole proprietorship	0.373 (0.373)	0.373 (0.373)	0.373 (0.373)	0.373 (0.373)	0.373 (0.373)	0.373 (0.373)	0.373 (0.373)	0.373 (0.373)	0.373 (0.373)	0.373 (0.373)	0.373 (0.373)
(omitted: partnership)	0.566 (0.675)	0.686 (0.521)	0.777 (0.547)	0.735* (0.091)	0.654 (0.491)	0.935 (0.47)	1.181 (0.550)	0.820 (0.199)	0.849 (0.260)	0.172 (0.121)	0.449 (0.330)
corporate not tax exempt	0.225 (0.242)	0.397** (0.041)	0.007 (0.007)	0.806 (0.154)	0.677 (0.429)	0.551 (0.123)	0.891 (0.622)	0.931 (0.804)	1.013 (0.960)	0.304* (0.304)	0.534 (0.264)
corporate tax exempt	0.875 (0.875)	0.875 (0.875)	0.875 (0.875)	0.875 (0.875)	0.875 (0.875)	0.875 (0.875)	0.875 (0.875)	0.875 (0.875)	0.875 (0.875)	0.875 (0.875)	0.875 (0.875)
government non-classified	4.707 (0.774)	0.754 (0.433)	1.600 (0.820)	1.109 (0.921)	2.210*** (0.009)	0.246** (0.033)	0.888 (0.448)	0.939 (0.440)	0.928 (0.279)	2.093 (0.304)	0.228 (0.282)
(omitted: no security reported)	18.31** (0.74)	1.407 (0.691)	0.561 (0.428)	0.747 (0.428)	0.384 (0.736)	0.556 (0.849)	0.416 (0.112)	0.862 (0.576)	0.737 (0.298**)	3.139* (0.61)	0.707 (4.588**)
government confidential	0.546 (0.546)	0.546 (0.546)	0.546 (0.546)	0.546 (0.546)	0.546 (0.546)	0.546 (0.546)	0.546 (0.546)	0.546 (0.546)	0.546 (0.546)	0.546 (0.546)	0.546 (0.546)
government secret	0.534 (0.774)	0.576 (0.433)	1.446 (0.820)	0.769** (0.012)	0.161*** (0.009)	0.524 (0.139)	0.597*** (0.000)	0.689** (0.038)	0.268*** (0.000)	1.055 (0.853)	3.547*** (0.009)
government top secret	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Constant	6.17e6** (0.0286)	0.00139*** (0.0000)	0.000898*** (0.0000)	0.00411*** (0.0000)	0.00654*** (0.0000)	0.0774*** (0.00617)	0.00331*** (0.0000)	0.009184*** (0.0000)	0.00471*** (0.0000)	0.00711** (0.01510)	0.0333*** (0.00596)
Observations	743	2,757	7,333	17,744	6,422	1,680	10,367	17,106	11,795	2,056	2,207



Table 5: Industry Specific Regression Results

	524	525	531	532	533	541	551	561	562	611	621
S06 not 8(a)	0.224** (0.020)	1.218 (0.878)	1.036 (0.793)	0.549*** (0.000)	0.898 (0.947)	0.000 (0.000)	0.398 (0.633)	0.646*** (0.000)	0.621*** (0.000)	0.472*** (0.000)	0.576*** (0.000)
8(a)	0.884 (0.307)	3.047 (0.307)	3.047 (0.307)	0.579 (0.579)	0.753 (0.753)	2.183 (0.000)	0.457 (0.633)	2.183 (0.000)	1.023 (0.000)	2.029 (0.000)	2.228 (0.000)
woman-owned	0.307* (0.087)	0.544 (0.696)	0.666** (0.017)	0.876 (0.380)	1.253 (0.894)	0.858** (0.000)	1.716 (0.742)	0.876** (0.004)	1.072 (0.458)	0.971 (0.741)	0.771** (0.039)
minority-owned	1.762 (0.338)	0.245 (0.379)	0.344*** (0.000)	1.228 (0.214)	1.226 (0.899)	0.837*** (0.000)	1.174 (0.914)	0.585*** (0.000)	0.646*** (0.000)	0.422*** (0.000)	0.862 (0.279)
hubzone	0.629 (0.672)	0.353 (0.353)	0.743 (0.743)	0.825 (0.086)	0.773 (0.773)	1.045 (0.045)	1.310 (0.310)	0.825 (0.086)	0.743 (0.743)	0.647 (0.346)	0.946 (0.146)
service-disabled veteran	1.952 (0.251)	3.839 (0.296)	0.491* (0.062)	1.064 (0.772)	1.750 (0.772)	0.903** (0.037)	1.814 (0.417)	1.064 (0.171)	0.903** (0.000)	1.246* (0.054)	2.143** (0.000)
other veteran	0.382 (0.500)	2.213 (0.599)	1.170 (0.485)	0.888 (0.639)	3.893 (0.398)	0.673*** (0.000)	3.244 (0.487)	1.015 (0.848)	1.078 (0.641)	1.203 (0.168)	0.856 (0.446)
log age	0.849 (0.825)	0.849 (0.825)	0.849 (0.825)	0.849 (0.825)	0.849 (0.825)	1.200 (0.000)	0.507 (0.507)	1.400 (0.000)	1.299 (0.000)	1.299 (0.000)	1.804 (0.000)
log employment	1.091 (0.435)	1.306 (0.276)	1.054* (0.061)	1.119** (0.005)	1.038 (0.917)	1.035*** (0.000)	1.305 (0.305)	1.031** (0.042)	1.005 (0.515)	0.982 (0.525)	0.805*** (0.000)
log receipts	1.075 (0.351)	0.943 (0.569)	1.037* (0.056)	1.030 (0.234)	0.966 (0.812)	1.033*** (0.000)	0.970 (0.824)	0.994 (0.434)	1.034** (0.046)	1.088*** (0.000)	1.084*** (0.000)
sole proprietorship	0.260 (0.260)	0.530 (0.530)	0.918 (0.918)	0.835 (0.835)	0.865 (0.865)	0.865 (0.865)	0.865 (0.865)	0.865 (0.865)	0.865 (0.865)	0.865 (0.865)	0.865 (0.865)
(omitted: "other" corp)	0.594 (0.426)	0.665 (0.729)	1.148 (0.515)	1.148 (0.771)	0.856 (0.945)	0.889* (0.093)	0.579 (0.638)	0.665*** (0.000)	1.162 (0.415)	0.941 (0.746)	0.627* (0.057)
partnership	0.362** (0.040)	0.377 (0.353)	1.224 (0.316)	1.026 (0.910)	0.527 (0.769)	0.989 (0.849)	0.156* (0.095)	0.717*** (0.000)	1.045 (0.793)	0.424 (0.424)	0.787 (0.231)
corporate not tax-exempt	0.940 (0.041)	0.890 (0.188)	0.940 (0.772)	0.940 (0.880)	0.940 (0.000)	0.890 (0.846)	0.940 (0.821)	0.940 (0.846)	0.940 (0.718)	0.940 (1.107)	0.940 (0.274)
corporate tax-exempt	1.036 (0.430)	0.714 (0.818)	1.333 (0.193)	1.235 (0.213)	2.440 (0.568)	1.534*** (0.000)	1.428 (0.822)	1.307*** (0.000)	1.209* (0.078)	0.975 (0.824)	1.393* (0.088)
government non-classified (omitted: no security reported)	0.746 (0.490)	3.918 (0.511)	2.651** (0.186)	1.498 (0.650)	10.880 (0.157)	1.836*** (0.000)	18.380 (0.155)	2.140*** (0.000)	1.507 (0.156)	0.972 (0.931)	1.265 (0.491)
government confidential	0.990 (0.998)	2.851 (0.566)	0.850 (0.753)	0.450 (0.328)	4.341 (0.728)	2.412*** (0.000)	1.550 (0.704)	1.550 (0.000)	0.946 (0.046)	0.888 (0.888)	0.888 (0.000)
government secret	0.583 (0.430)	0.927 (0.965)	1.014 (0.972)	0.514* (0.064)	3.484 (0.617)	2.671*** (0.000)	4.191 (0.213)	1.688** (0.000)	0.466*** (0.002)	0.852 (0.178)	1.387 (0.332)
government top secret	0.0526*** (0.0026)	0.1450 (0.3970)	0.00851*** (0.0000)	0.0617*** (0.0000)	0.4560 (0.8900)	0.03565*** (0.0000)	0.4690 (0.1360)	0.06417*** (0.0000)	0.00736*** (0.0000)	0.00162*** (0.0000)	0.00213*** (0.0000)
Constant	3.059	734	25,905	11,520	145	177,409	1,013	84,841	21,813	45,601	25,034
Observations											



Table 5: Industry Specific Regression Results

	622	623	624	711	712	713	721	722	723	811	812	813
508 not 8(a)	0.492 (0.133)	0.847 (0.393)	0.481*** (0.060)	0.307*** (0.000)	0.407** (0.015)	0.216*** (0.001)	0.733*** (0.004)	0.708** (0.064)	0.651*** (0.000)	0.577*** (0.000)	0.740 (0.235)	
8(a)	1.055 (0.045)	0.904 (0.032)	0.724 (0.241)	0.648 (0.248)	0.571 (0.203)	0.247 (0.077)	0.935 (0.023)	0.815 (0.115)	0.708 (0.086)	0.708 (0.086)	0.000 (0.000)	
woman-owned	0.886 (0.077)	0.904 (0.077)	1.020 (0.246)	0.769 (0.246)	0.769 (0.246)	0.430* (0.071)	0.996 (0.071)	1.821*** (0.001)	0.709*** (0.000)	0.539*** (0.000)	0.603 (0.351)	
minority-owned	0.479 (0.150)	0.254*** (0.066)	0.358*** (0.060)	1.178 (0.331)	1.136 (0.327)	1.022 (0.263)	0.842 (0.158)	0.754 (0.180)	0.670*** (0.000)	0.410*** (0.000)	0.663 (0.138)	
hubzone	0.479 (0.150)	0.254*** (0.066)	0.358*** (0.060)	1.178 (0.331)	1.136 (0.327)	1.022 (0.263)	0.842 (0.158)	0.754 (0.180)	0.670*** (0.000)	0.410*** (0.000)	0.663 (0.138)	
service-disabled veteran	2.129** (0.679)	0.152 (0.189)	0.412*** (0.000)	1.411 (0.355)	0.387 (0.242)	0.558 (0.384)	0.656 (0.049)	0.533 (0.193)	0.732*** (0.001)	0.714 (0.078)	0.579 (0.182)	
other veteran	1.001 (0.999)	1.172 (0.810)	0.531*** (0.001)	0.995 (0.991)	0.865 (0.998)	2.198** (0.050)	1.158 (0.079)	1.322 (0.411)	0.785*** (0.004)	0.618 (0.157)	1.110 (0.760)	
log age	0.244 (0.244)	0.174 (0.174)	0.475*** (0.000)	0.344 (0.344)	0.400 (0.400)	0.521 (0.248)	1.040 (0.000)	1.101*** (0.000)	1.022 (0.000)	1.022 (0.000)	0.933 (0.000)	
log employment	0.915 (0.372)	1.133** (0.046)	0.475*** (0.000)	0.957 (0.601)	0.775** (0.028)	1.095 (0.317)	1.085*** (0.003)	1.164*** (0.005)	1.101*** (0.000)	1.022 (0.441)	0.953 (0.441)	
log receipts	1.304*** (0.009)	1.062 (0.211)	0.983 (0.604)	0.976 (0.427)	0.980 (0.655)	1.020 (0.179)	0.996 (0.164)	0.973 (0.308)	1.040*** (0.000)	1.076*** (0.003)	0.953* (0.084)	
sole proprietorship (omitted: partnership)	0.475 (0.187)	1.059 (0.819)	0.385*** (0.000)	0.545 (0.387)	0.575 (0.445)	0.432* (0.084)	0.564 (0.200)	0.339*** (0.006)	0.786** (0.026)	0.392*** (0.003)	0.251** (0.128)	
corporate not tax-exempt	0.411** (0.040)	0.723 (0.194)	0.532*** (0.003)	1.122 (0.442)	0.504 (0.258)	0.366** (0.016)	0.935 (0.079)	0.617 (0.175)	0.782*** (0.002)	0.530** (0.013)	0.534 (0.128)	
corporate tax-exempt	0.485 (0.485)	0.967 (0.967)	1.426*** (0.009)	0.778 (0.457)	0.778 (0.457)	1.542 (0.324)	1.489** (0.047)	2.396*** (0.000)	1.283 (0.114)	1.283 (0.091)	1.679* (0.091)	
government non-classified (omitted: no security reported)	3.277 (0.875)	8.558** (0.875)	3.048*** (0.000)	1.159 (0.671)	1.304 (0.724)	2.629 (0.172)	1.266 (0.060)	0.323 (0.139)	1.072 (0.072)	0.865 (0.146)	4.404*** (0.000)	
government secret	0.895 (0.874)	5.335* (0.931)	0.066 (0.300)	0.925 (0.909)	0.925 (0.909)	0.474 (0.871)	0.809 (0.860)	0.319 (0.867)	1.707 (0.300)	1.707 (0.867)	1.445 (0.480)	
government top secret	0.461 (0.256)	0.944 (0.969)	0.706 (0.457)	0.099 (0.112)	2.080 (0.412)	0.679 (0.524)	1.442 (0.524)	0.390 (0.163)	0.460*** (0.000)	0.535 (0.261)	1.911 (0.108)	
Constant	0.009334*** (0.0002)	0.06080*** (0.0000)	0.6413*** (0.0000)	0.05616*** (0.0004)	0.06162** (0.0380)	0.01352** (0.0005)	0.08018*** (0.0000)	0.08050*** (0.0000)	0.08050*** (0.0000)	0.03909*** (0.0000)	0.03370*** (0.0000)	
Observations	2,486	4,935	15,115	7,415	2,708	3,103	12,816	6,470	36,540	10,519	9,000	



**Table 6**  
**NAICS Codes Referenced in Table 5**

111 – Crop Production	327 – Nonmetallic Mineral Product Manufacturing	492 – Couriers and Messengers
112 – Animal Production	331 – Primary Metal Manufacturing	493 – Warehousing and Storage
113 – Forestry and Logging	332 – Fabricated Metal Product Manufacturing	511 – Publishing Industries (except Internet)
114 – Fishing, Hunting and Trapping	333 – Machinery Manufacturing	512 – Motion Picture and Sound Recording Industries
115 – Support Activities for Agriculture and Forestry	334 – Computer and Electronic Product Manufacturing	515 – Broadcasting (except Internet)
211 – Oil and Gas Extraction	335 – Electrical Equipment, Appliance and Component Manufacturing	517 – Telecommunications
212 – Mining (except Oil and Gas)	336 – Transportation Equipment Manufacturing	518 – Data Processing, Hosting, and Related Services
213 – Support Activities for Mining	337 – Furniture and Related Product Manufacturing	519 – Other Information Services
221 – Utilities	339 – Miscellaneous Manufacturing	522 – Credit Intermediation and Related Activities
236 – Construction of Buildings	423 – Merchant Wholesalers, Durable Goods	523 – Financial Investments and Related Activities
237 – Heavy and Civil Engineering Construction	424 – Merchant Wholesalers, Nondurable Goods	524 – Insurance Carriers and Related Activities
238 – Specialty Trade Contractors	441 – Motor Vehicle and Parts Dealers	525 – Funds, Trusts, and Other Financial Vehicles
311 – Food Manufacturing	442 – Furniture and Home Furnishings Stores	531 – Real Estate
312 – Beverage and Tobacco Product Manufacturing	443 – Electronics and Appliance Stores	532 – Rental and Leasing Services
313 – Textile Mills	444 – Building Material and Garden Equipment and Supplies Dealers	533 – Lessors of Nonfinancial Intangible Assets
314 – Textile Product Mills	445 – Food and Beverage Stores	541 – Professional, Scientific and Technical Services
315 – Apparel Manufacturing	446 – Health and Personal Care Stores	551 – Management of Companies and Enterprises
316 – Leather and Allied Product Manufacturing	447 – Gasoline Stations	561 – Administrative and Support Services
321 – Wood Product Manufacturing	448 – Clothing and Clothing Accessories Stores	562 – Waste Management and Remediation Services
322 – Paper Manufacturing	451 – Sporting Good, Hobby, Book and Music Stores	611 – Educational Services
323 – Printing and Related Support Activities	452 – General Merchandise Stores	621 – Ambulatory Health Care Services
324 – Petroleum and Coal Products Manufacturing	453 – Miscellaneous Store Retailers	622 – Hospitals
325 – Chemical Manufacturing	454 – Nonstore Retailers	623 – Nursing and Residential Care Facilities
326 – Plastics and Rubber Products Manufacturing	481 – Air Transportation	624 – Social Assistance
327 – Nonmetallic Mineral Product Manufacturing	482 – Rail Transportation	711 – Performing Arts, Spectator Sports and Related Industries
331 – Primary Metal Manufacturing	483 – Water Transportation	712 – Museums, Historical Sites and Similar Institutions
332 – Fabricated Metal Product Manufacturing	484 – Truck Transportation	713 – Amusement, Gambling and Recreation Industries
333 – Machinery Manufacturing	485 – Transit and Ground Passenger Transportation	721 – Accommodation
334 – Computer and Electronic Product Manufacturing	486 – Pipeline Transportation of Natural Gas Industry	722 – Food Services and Drinking Places
335 – Electrical Equipment, Appliance and Component Manufacturing	487 – Scenic and Sightseeing Transportation	811 – Repair and Maintenance
324 – Petroleum and Coal Products Manufacturing	488 – Support Activities for Transportation	812 – Personal and Laundry Services
325 – Chemical Manufacturing	491 – Postal Service	813 – Religious, Grantmaking, Civic, Professional and Similar Organizations
326 – Plastics and Rubber Products Manufacturing		

**The Compelling Interest to Remedy the Effects of Discrimination in  
Federal Contracting: A Survey of Recent Evidence**

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### **Introduction**

This report summarizes recent evidence required to justify the use of race- and sex-conscious provisions in federal contracting programs. Federal programs that involve racial classifications must meet the strict scrutiny standard of review to withstand constitutional challenge.<sup>1</sup> This is the most exacting standard of review, and it requires, among other things, evidence supporting the conclusion that such measures are necessary to further the compelling governmental interest in remedying the effects of past and present discrimination. If a program contains affirmative measures based on sex, those measures are subject to the somewhat lower standard of intermediate scrutiny.<sup>2</sup> That standard demands that any gender-based preference be substantially related to an important governmental objective.<sup>3</sup>

In 2010, the Department of Justice submitted to Congress a report compiling and summarizing evidence of discriminatory barriers that racial minorities and women face that impede participation in government contracting.<sup>4</sup> The 2010 report has been cited in federal court as evidence that there is a compelling governmental interest in programs that support the ability of businesses owned by women or people of color to compete on an equal basis.<sup>5</sup> The 2010 report updated and expanded upon a 1996 Department of Justice report, which was published in the Federal Register.<sup>6</sup>

This report compiles and summarizes evidence accumulated and analyzed since 2010. A substantial body of evidence, both quantitative and qualitative, demonstrates the continued pervasiveness of discriminatory barriers that impede the full and fair participation of businesses owned by women or people of color in government contracting. The nature and breadth of the evidence discussed in this report supports the compelling interest in the continued use of federal programs that contain remedial measures to eliminate discriminatory barriers to contracting opportunities for businesses owned by women or people of color.

Section I of this report provides an overview of the legal landscape surrounding constitutional challenges to affirmative action in contracting programs that are subject to strict and intermediate scrutiny, including a discussion of some recent cases challenging various federal and state contracting programs. Section II reviews a

<sup>1</sup> *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200, 227 (1995).

<sup>2</sup> *United States v. Virginia*, 518 U.S. 515, 533 (1996).

<sup>3</sup> *Id.*

<sup>4</sup> *Compelling Interest for Race- and Gender-Conscious Federal Contracting Programs: An Update to the May 23, 1996 Review of Barriers for Minority- and Women-Owned Businesses* (2010). This report summarized 47 studies and reports and 75 disparity studies between 2000 and 2010, and 39 congressional hearings between 2006 and 2010. The report and associated studies were provided to Congress as testimony. See *Minority Contracting: Opportunities and Challenges for Current and Future Minority-Owned Business: Hearing before Subcomm. on Gov't Mgmt., Org. and Procurement of the House Comm. on Oversight & Gov't Reform*, 111th Cong., 2d Sess. (2010) (testimony of David A. Hinson, National Director, Minority Business Development Agency, U.S. Dep't of Commerce).

<sup>5</sup> *Midwest Fence Corp. v. United States Dep't of Transp.*, No. 10 C 5627, 2011 WL 2551179, at \*12 (N.D. Ill. June 27, 2011).

<sup>6</sup> *The Compelling Interest for Affirmative Action in Federal Procurement: A Preliminary Survey*, 61 Fed. Reg. 26,050 (May 23, 1996). This report summarized more than 50 documents and 30 congressional hearings between 1980 and 1996.

substantial body of statistical evidence published in the last decade, which demonstrates the existence of significant disparities in the amount of public contracting dollars going to businesses owned by women or people of color as compared to their availability for such contracts. Section III explores the various ways that discriminatory barriers can limit access to contracting markets, resulting in the statistical disparities identified in Section II. These include discrimination by procurement agencies and prime contractors, whether overt or subtle; exclusion from business networks crucial to making the connections necessary to learn about and compete effectively for contracting opportunities; and discrimination by bonding companies and suppliers. Section IV discusses stark disparities in the formation and success of businesses owned by women or people of color as compared to other businesses. Section V addresses discriminatory barriers that limit minority and female business owners' access to capital. These barriers impose a significant burden on minority- and women-owned businesses that affects both the ability to form and grow businesses in the first instance as well as the ability to compete effectively for contracts. Finally, Section VI addresses how the economic downturn that began in 2020 as a result of the COVID-19 pandemic has disproportionately affected businesses owned by women or minorities. Evidence discussed in this report, or related to the issues discussed herein, is listed in the appendices. Appendix A identifies congressional hearings from 2010-2021 that address challenges facing business enterprises owned by women or people of color. Appendix B identifies over 200 disparity studies published between 2010 and 2021. Appendix C identifies additional studies and reports pertaining to the issues discussed herein.

This report is particularly timely in light of the January 20, 2021, Executive Order On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government, which charges the federal government with “pursu[ing] a comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality.”<sup>7</sup> The Executive Order makes explicit that “[t]he Federal Government’s goal in advancing equity is to provide everyone with the opportunity to reach their full potential” and that “[c]onsistent with these aims, each agency must assess whether, and to what extent, its programs and policies perpetuate systemic barriers to opportunities and benefits for people of color and other underserved groups” in order to “better equip agencies to develop policies and programs that deliver resources and benefits equitably to all.”<sup>8</sup> Of particular relevance to this report, the Executive Order provides that “Government contracting and procurement opportunities should be available on an equal basis to all eligible providers of goods and services.”<sup>9</sup> It is thus especially appropriate for the Department of Justice to take an updated look at the barriers and challenges that businesses owned by women or people of color face today.

The Executive Order also mandates that the federal government use every available tool to ensure the equitable distribution of federal funds, including by increasing access for, and promoting the diversity of, small businesses participating in

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<sup>7</sup> Exec. Order No. 13985, 86 Fed. Reg. 7009 (Jan. 20, 2021).

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

government contracting opportunities. To that end, federal agencies are empowered to implement a broad range of programs to expand equity and diversity without triggering a heightened standard of review. In the contracting realm, these programs include race- and gender-neutral measures like the Historically Underutilized Business Zone (“HUBZones”) Program and the Service-Disabled Veteran-Owned Small Business (“SDVOSBs”) Program.<sup>10</sup> Because these programs provide preferential access to government contracting opportunities based on non-suspect classifications, if challenged, they must only survive the lowest standard of scrutiny—rational basis.<sup>11</sup> That is to say, the programs will survive challenges so long as they bear a rational relation to some legitimate end.<sup>12</sup> Because they are not subject to heightened scrutiny, the HUBZone program, the program for SDVOSBs, and other government programs that do not include race- or gender-conscious classifications fall outside the scope of this report.

## I. Legal Landscape

### A. Overview

In *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200, 227 (1995), the United States Supreme Court held that federal race-conscious classifications are subject to strict scrutiny, meaning they “are constitutional only if they are narrowly tailored measures that further compelling governmental interests.” There is no doubt that remedying discrimination and its lingering effects is a compelling governmental interest.<sup>13</sup> That compelling government interest includes a public entity’s attempt to remedy past discrimination by rectifying its own actions.<sup>14</sup> It also includes remedying a public entity’s passive complicity in private sector discrimination, as the Supreme Court has noted that “[it] is beyond dispute that any public entity . . . has a compelling interest in assuring that public dollars drawn from the tax contributions of all citizens do not serve to finance the evil of private prejudice.”<sup>15</sup> In either case, the government must demonstrate a “strong basis in evidence for its conclusion that remedial action was necessary” to further that interest.<sup>16</sup>

A “strong basis in evidence” is that which “approach[es] a prima facie case of a constitutional or statutory violation.”<sup>17</sup> The Supreme Court held in *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 500 (1989) (plurality opinion), that “[w]here there is a

<sup>10</sup> Robert Jay Dilger, Cong. Rsch. Serv., R45576, *An Overview of Small Business Contracting* 17-18 (2021), <https://fas.org/sgp/crs/misc/R45576.pdf>.

<sup>11</sup> The “mere awareness” or consideration of race in efforts to remedy discrimination and its effects does not automatically equate to a racial classification. See *Texas Dep’t of Hous. & Cmty. Affairs v. Inclusive Communities Project, Inc.*, 576 U.S. 519, 545 (2015). Public entities can undertake efforts to eliminate racial disparities through a variety of race-neutral means without triggering strict scrutiny. See *Parents Involved in Cmty. Schs. v. Seattle Sch. Dist. No. 1*, 551 U.S. 701, 789 (2007) (Kennedy, J., concurring).

<sup>12</sup> *Romer v. Evans*, 517 U.S. 620, 631 (1996).

<sup>13</sup> *Shaw v. Hunt*, 517 U.S. 899, 909 (1996).

<sup>14</sup> *Parents Involved in Cmty. Schs. v. Seattle Sch. District No. 1*, 551 U.S. 701, 741, (2007).

<sup>15</sup> *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 492 (1989) (plurality opinion); *Associated Gen. Contractors of Ohio, Inc. v. Drabnik*, 214 F.3d 730, 735 (6th Cir. 2000).

<sup>16</sup> *Croson*, 488 U.S. at 500 (1989) (plurality opinion).

<sup>17</sup> *Id.*



significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise." The evidence of discrimination must have a sufficient nexus with the proposed remedial action such that it involves more than general societal discrimination.<sup>18</sup> In recent decisions concerning race- and gender-conscious COVID-related relief efforts, courts have conveyed that the policy cannot rest on a "generalized assertion that there has been past discrimination in an entire industry."<sup>19</sup> Consequently, courts in these cases have expected statistical evidence of disparities presented in defense of race- or gender-conscious programs to describe the appropriate marketplace with specificity and to tie evidence of current disparities to discrimination in that marketplace. In cases where race- or gender-conscious government contracting programs have been successfully defended from constitutional challenges, courts have relied on disparity studies analyzing statistical and anecdotal evidence of public and private discrimination in the appropriate contracting arena. Disparity studies examine the utilization of minority-owned firms as compared to their availability in the relevant market area. These state and local disparity studies also include qualitative evidence describing discriminatory barriers that minority- and women-owned businesses face not only in participating in contracting markets, but also in forming and developing businesses in the first place.

In addition to being supported by a compelling interest, federal programs must be narrowly tailored to accomplish that interest. Courts consider several factors to determine whether a program is narrowly tailored, including: (1) the necessity for the race-conscious remedy; (2) the duration of the remedy; (3) the relationship of the numerical target of the program to the relevant labor market; (4) the flexibility of the program, including the availability of waiver provisions; (5) over-inclusiveness or under-inclusiveness of the program; and (6) the effect of the remedy on innocent third parties.<sup>20</sup>

#### **B. Constitutional Challenges to Race- and Gender-Conscious Contracting Programs**

Over the past 10 years, courts have evaluated numerous constitutional challenges to federal, state, and local contracting programs that contain race- and gender-conscious provisions. Courts have rejected facial challenges that assert such programs are per se unconstitutional. Courts have, however, found that the administration of some programs did not meet strict scrutiny standards. This is typically because the available evidence did not support the application of the program to particular government contracting industries. In addition, several recent constitutional challenges

<sup>18</sup> *Parents Involved*, 551 U.S. 701 (holding that remedying racially identifiable housing patterns did not justify race-conscious criteria for school assignments).

<sup>19</sup> *Holman v. Vilsack*, No. 1:21-cv-1085 (W.D. Tenn. Jul. 8, 2021) (citing *Vitolo*, 2021 WL 2172181 at \*2, \*8-9). As of August 2021, these cases are still in litigation, and the Department of Justice is continuing to defend the constitutionality of the programs at issue.

<sup>20</sup> *United States v. Paradise*, 480 U.S. 149, 171 (1987) (plurality and concurring opinions); *Croson*, 488 U.S. at 508 (plurality opinion).

outside of the contracting arena have been brought seeking to end the use of race- and gender-conscious measures in programs established in the American Rescue Plan Act of 2021 to provide pandemic-related relief to businesses in the restaurant and agricultural industries. While courts have granted temporary restraining orders and preliminary injunctions in these cases, litigation on the merits is ongoing as of the date of this report.

### **1. Challenges to the Small Business Act's Section 8(a) Business Development Program**

The Small Business Act establishes certain contracting preferences to aid small businesses in competing for government contracts. Among these are several programs that create contracting opportunities for certain small disadvantaged businesses. One such program, known as the 8(a) program, allows the government to prioritize the issuance of certain contracting opportunities to businesses owned by “socially and economically disadvantaged” individuals.<sup>21</sup> The statute defines socially disadvantaged individuals as “those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as a member of a group without regard to their individual qualities.”<sup>22</sup> The Small Business Administration (SBA), which administers the program, has promulgated a regulation that provides that applicants to the 8(a) program who are members of certain designated racial or ethnic groups are entitled to a rebuttable presumption of social disadvantage.<sup>23</sup> Because this regulation includes a race-conscious classification, it has been subjected to strict scrutiny when faced with constitutional challenge.

Unlike some federal programs that are limited to particular agencies, all federal departments and major independent agencies participate in the 8(a) program. In Fiscal Year 2019, the federal government awarded \$30.4 billion to 8(a) firms, more funding than any of the SBA's other small disadvantaged business programs.<sup>24</sup> Since the Department of Justice's 2010 report, the 8(a) program has survived two constitutional challenges brought by businesses alleging that the program on its face violates the guarantee of equal protection found in the Due Process Clause of the Fifth Amendment to the Constitution, and it is currently facing a third.<sup>25</sup> The courts in the two decided cases found a strong basis in evidence that the program is necessary to further the compelling governmental interest in remedying racial discrimination in the government contracting arena. In addition, the courts found that the 8(a) program is narrowly tailored to further that interest.

<sup>21</sup> 15 U.S.C. § 637(a).

<sup>22</sup> *Id.* § 637(a)(5).

<sup>23</sup> 13 C.F.R. § 124.103(b)(1). This presumption may be rebutted with “credible evidence to the contrary.” *Id.* § 124.103(b)(3).

<sup>24</sup> Robert Jay Dilger, Cong. Rsch. Serv., R45576, *An Overview of Small Business Contracting 16* (2021), <https://fas.org/sgp/crs/misc/R45576.pdf>.

<sup>25</sup> See *Ultima Servs. Corp. v. U.S. Dep't of Agric.*, 2:20-CV-00041-DCLC (E.D. Tenn. filed Mar. 4, 2020).

i. *DynaLantic Corporation v. United States Department of Defense*, 885 F. Supp. 2d 237 (D.D.C. 2012).

DynaLantic is a small business that manufactures aircrafts, submarines, ships, and training equipment. When the Navy awarded a contract to develop a flight simulator for the Huey helicopter through the 8(a) program, DynaLantic sued the Department of Defense (DOD), alleging that the 8(a) program was unconstitutional both on its face and as applied in the military simulation and training industry.

The court rejected the facial challenge, concluding that the government had articulated a compelling interest in the program and presented a strong basis in evidence to support its conclusion that race-conscious remedial action was necessary to further that interest. The court considered the evidence before Congress at the time the 8(a) program was enacted, as well as post-enactment evidence that supports the continued need for the program.<sup>26</sup> The evidence fell into “three broad categories: (1) evidence of barriers to the formation of qualified minority contractors due to discrimination, (2) evidence of discriminatory barriers to fair competition between minority and non-minority contractors, and (3) evidence of discrimination in state and local disparity studies.”<sup>27</sup> In reviewing the evidence, the court noted that it was not necessary to examine “the vast amount of statistical evidence” presented by the government in detail because the burden was on DynaLantic to show “no set of circumstances exist under which the Act would be valid” in order to succeed in its facial challenge to the program’s constitutionality.<sup>28</sup> In addition, in response to DynaLantic’s arguments that there were flaws in some of the evidence, the court found that any flaws did not rise to the level of the “credible, particularized evidence” necessary to rebut the government’s initial showing of a compelling interest.<sup>29</sup> The court explained that the government can establish a strong basis in evidence with evidence “approaching a *prima facie* case of a constitutional or statutory violation” and that it is not required to present “irrefutable or definitive proof of discrimination.”<sup>30</sup>

In addition to finding that the government articulated a compelling interest, the court considered several factors in determining that the program is narrowly tailored, including that: (1) Congress attempted to use race-neutral measures to assist minority-owned businesses for at least 25 years before incorporating a race-conscious component into the 8(a) program; (2) the program is sufficiently flexible in that it contains only aspirational goals with no penalties for failing to meet them, the presumption of social disadvantage available to certain racial and ethnic groups is rebuttable and applicants who are not presumptively disadvantaged may still demonstrate social disadvantage, and all applicants must meet the same economic disadvantage requirements; (3) the program is not over-inclusive as the government presented sufficient evidence of discrimination to justify granting the rebuttable presumption to the five groups

<sup>26</sup> *DynaLantic Corp. v. U.S. Dep’t of Def.*, 885 F. Supp. 2d 237, 253-58 (D.D.C. 2012).

<sup>27</sup> *Id.* at 258.

<sup>28</sup> *Id.* at 265 (quoting *United States v. Salerno*, 481 U.S. 739, 745 (1987)).

<sup>29</sup> *Id.* at 271 (quoting *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1175 (10th Cir. 2000)).

<sup>30</sup> *Id.* at 276 (quoting *Concrete Works of Colo., Inc. v. City and Cnty. of Denver*, 321 F.3d 950, 971 (10th Cir. 2003) (internal quotation omitted)).

identified in the regulation; (4) there are time limits on participation in the program, and participants graduate from the program earlier if they meet certain business development goals; (5) the goal for participation in the program is reasonably tied to the pool of available minority-owned businesses, taking into account that the availability of minority-owned businesses reflects discrimination that has prevented minorities from forming and developing businesses; and (6) the program includes several provisions that minimize the burden on non-minority businesses, including a waiver provision to ensure that an award will not be accepted for the program if there would be an adverse impact on small businesses operating outside the 8(a) program.<sup>31</sup>

But in evaluating the as-applied challenge, the court determined that the government failed to demonstrate a compelling interest in utilizing the 8(a) program in DOD's award of contracts for military simulators, as the government conceded that it did not have evidence of discrimination in that industry.<sup>32</sup>

ii. *Rothe Development, Inc. v. United States Department of Defense*, 836 F.3d 57 (D.C. Cir. 2016).

Just a few years after the *DynaLantic* decision, the United States District Court for the District of Columbia again upheld the constitutionality of the 8(a) program, rejecting a facial challenge brought by Rothe Development, Inc., a small business that bids on DOD contracts.<sup>33</sup> The *Rothe* district court decision relied on much of the same reasoning as the court in the *DynaLantic* opinion. On appeal, the D.C. Circuit upheld the constitutionality of the 8(a) program, concluding that the statute itself does not contain a racial classification that would subject the program to strict scrutiny.<sup>34</sup> Because Rothe challenged only the statutory provisions and not the SBA regulation, the court applied rational basis review, which requires only that the statute “bear[] a rational relation to some legitimate end,” and determined that the statute “readily survives” such review.<sup>35</sup>

## **2. Challenges to States' Implementation of the United States Department of Transportation Disadvantaged Business Enterprise Program**

For more than 30 years, the United States Department of Transportation (USDOT) has implemented variations of a program wherein states that receive federal funds for highway planning and construction must implement a state-designed, federally-approved Disadvantaged Business Enterprise (DBE) program.<sup>36</sup> In the following cases, courts examined whether a state's implementation of the federal DOT DBE program withstands strict scrutiny.

<sup>31</sup> *Id.* at 283-91.

<sup>32</sup> *Id.* at 280.

<sup>33</sup> *Rothe Dev., Inc. v. Dep't of Def.*, 107 F. Supp. 3d 183 (D.D.C. 2015).

<sup>34</sup> *Rothe Dev., Inc. v. Dep't of Def.*, 836 F.3d 57, 68 (D.C. Cir. 2016).

<sup>35</sup> *Id.* at 63, 72-73.

<sup>36</sup> See e.g., Safe, Accountable, Flexible, Efficient Transportation Equity Act, 49 C.F.R. § 26.1 (2005).

When reviewing the constitutionality of the program as applied by a particular state, courts do not require the state to demonstrate an independent compelling interest for its DBE program; instead, states may rely on the compelling nationwide interest identified by Congress in adopting the program.<sup>37</sup> Courts differ as to how they articulate the precise standard for evaluating the constitutionality of a state's DBE program, but ultimately, whether such a program can withstand heightened scrutiny depends primarily on whether there is sufficient evidence of discrimination in the relevant contracting market to support the specific race- or gender-conscious goals set by the program.

- i. *Mountain West Holding Co. v. Montana*, 691 F. App'x 326 (9th Cir. 2017) (Memorandum opinion).

The plaintiff, a subcontractor who competes to win subcontracts from prime contractors who have contracted with the Montana DOT, was denied a contract despite offering the lowest bid on the project. As a result, the plaintiff raised an as-applied challenge to Montana's DBE program under the Equal Protection Clause and also under Title VI of the Civil Rights Act, alleging that it unlawfully required prime contractors to give preference to minority- or female-owned companies.<sup>38</sup> Relying on statistical and anecdotal evidence from a Montana disparity study, the district court concluded that the program was narrowly tailored to further the compelling government interest identified by Congress when it passed the DOT DBE legislation.<sup>39</sup> The district court accordingly granted summary judgment in favor of the defendants.

On appeal, because Montana had discontinued using race- and sex-conscious goals, the Ninth Circuit dismissed the plaintiff's claim for injunctive and declaratory relief as moot.<sup>40</sup> However, as to the plaintiff's claims for damages under Title VI, the Ninth Circuit reversed the district court's grant of summary judgment in favor of Montana. The court first noted that in an as-applied challenge to a state's DBE contracting program, Ninth Circuit precedent established in *Western States Paving Co. v. Washington State Department of Transportation*, 407 F.3d 983 (9th Cir. 2005), holds that "(1) the state must establish the presence of discrimination within its transportation contracting industry, and (2) the remedial program must be 'limited to those minority groups that have actually suffered discrimination.'" <sup>41</sup> The court then concluded that the district court erred in granting summary judgment, finding genuine issues of material fact based on issues that the plaintiff's expert raised as to the validity of the defendants' disparity study.<sup>42</sup> The court also concluded that without this statistical evidence, the state could not rely on anecdotal evidence of discrimination

<sup>37</sup> See, e.g., *W. States Paving Co. v. Wash. State Dep't of Transp.*, 407 F.3d 983, 997 (9th Cir. 2005);

*Sherbrooke Turf, Inc. v. Minn. Dep't of Transp.*, 345 F.3d 964, 970 (8th Cir. 2003).

<sup>38</sup> *Mountain W. Holding Co. v. Montana*, 691 F. App'x 326, 328 (9th Cir. 2017).

<sup>39</sup> *Mountain W. Holding Co. v. Montana*, No. CV 13-49-BLG-DLC, 2014 WL 6686734 (D. Mont. Nov. 26, 2014), *aff'd in part, rev. in part, dismissed in part by Mountain W. Holding Co. v. Montana*, 691 F. App'x 326 (9th Cir. 2017).

<sup>40</sup> *Mountain W. Holding Co. v. Montana*, 691 F. App'x 326, 328 (9th Cir. 2017).

<sup>41</sup> *Id.* at 329-30 (quoting *W. States Paving*, 407 F.3d at 997-99).

<sup>42</sup> *Id.* at 330.

alone.<sup>43</sup> Finally, the court determined that it was improper for the district court to rely on the decrease in DBE participation after the state halted use of race- and gender-based preferences, concluding that such a decrease in participation is not necessarily evidence of discrimination against DBEs.<sup>44</sup>

- ii. *Midwest Fence Corporation v. Department of Transportation*, 840 F.3d 932 (7th Cir. 2016).

Midwest Fence, a fencing and guardrail contractor, filed an 18-count complaint against the USDOT, the Illinois DOT (IDOT), and the Illinois State Tollway Highway Authority (Tollway) challenging the constitutionality of the federal DBE program, the application of the program by IDOT, and Tollway's analogous DBE program. The Seventh Circuit affirmed the district court's ruling upholding the constitutionality of the federal, IDOT, and Tollway programs.<sup>45</sup> The plaintiff did not challenge whether a compelling interest justified the federal program, and the Seventh Circuit joined the Eighth, Ninth, and Tenth Circuits in concluding that the federal program is narrowly tailored and thus constitutional on its face.<sup>46</sup> Because not all of IDOT's contracts are federally funded, and the Tollway's DBE program did not make use of federal funds, they could not rely on the federal compelling interest in establishing the programs; thus, the court considered whether IDOT and the Tollway established a strong basis in evidence to support their programs.<sup>47</sup> Based on a review of studies presenting statistical evidence of disparities between the availability and utilization of DBEs in the relevant market areas, the court found that both IDOT and the Tollway had a strong basis in evidence to adopt their programs.<sup>48</sup> The court also concluded that all three programs are narrowly tailored, including because they use race- and gender-neutral alternatives, and because they include waivers from provisions that require specific goals when a contractor has made good faith efforts to comply with a DBE goal.<sup>49</sup>

- iii. *Dunnet Bay Construction Co. v. Borggren*, 799 F.3d 676 (7th Cir. 2015).

Dunnet Bay, a corporation specializing in general highway construction, was owned and operated by White males. After its bid proposal for the Eisenhower Highway construction project was rejected for failing to meet IDOT's DBE goal, despite being the lowest bid, it filed a claim challenging the constitutionality of IDOT's DBE program. The court held that Dunnet Bay lacked standing to raise an equal protection claim because it could not show that it was excluded from competing for contracts because of race-based measures.<sup>50</sup> Rather, IDOT did not award the contract on which Dunnet Bay bid to anyone and re-bid the project because Dunnet Bay's low bid substantially exceeded the

<sup>43</sup> *Id.* at 331.

<sup>44</sup> *Id.*

<sup>45</sup> *Midwest Fence Corp. v. Dep't of Transp.*, 840 F.3d 932, 941, 935-36 (7th Cir. 2016).

<sup>46</sup> *Id.* at 942.

<sup>47</sup> *Id.* at 948.

<sup>48</sup> *Id.* at 949-51.

<sup>49</sup> *Id.* at 942-43, 954.

<sup>50</sup> *Dunnet Bay Constr. Co v. Borggren*, 799 F.3d 676, 690 (7th Cir. 2015).

program's estimated budget.<sup>51</sup> When Dunnet Bay bid on one of the rebid projects, it was not awarded the contract because it was not the lowest bid.<sup>52</sup> In addition, the court found that even if Dunnet Bay could establish that it was disadvantaged in competing for contracts as compared to DBEs, the reason was not because of race, but was equally attributable to the fact that Dunnet Bay exceeded the business size standard established to qualify as a DBE.<sup>53</sup>

The court then determined that even if Dunnet Bay had standing, IDOT was still entitled to summary judgment. Relying on *Northern Contracting, Inc. v. Illinois*, 473 F.3d 715, 720–21 (7th Cir. 2007), the court first noted that IDOT could rely on “the federal government’s compelling interest in remedying the effects of past discrimination in the national construction market,” and then stated that a “state is insulated from [a constitutional challenge as to whether its program is narrowly tailored to achieve this compelling interest], absent a showing that the state exceeded its federal authority.”<sup>54</sup> The court held that IDOT did not exceed its authority in establishing its DBE program and accordingly affirmed the district court’s grant of summary judgment in favor of IDOT.

iv. *Associated General Contractors of America, San Diego Chapter, Inc. v. California Department of Transportation*, 713 F.3d 1187 (9th Cir. 2013).

An association of general contractors challenged the California Department of Transportation’s (Caltrans) DBE program on constitutional grounds because it provided race- and gender-based preferences on certain transportation contracts. After the United States District Court for the Eastern District of California upheld the constitutionality of the program, the association appealed. The Ninth Circuit dismissed the appeal for lack of jurisdiction on the grounds that the plaintiff association did not have standing to bring the suit because it did not identify a single member of its association who had suffered or would suffer harm under Caltrans’s program.<sup>55</sup> The court also found that even if the plaintiff did have standing, the program survived strict scrutiny.<sup>56</sup> Relying on *Western States*, the Court first explained that Caltrans could rely on the compelling nationwide interest identified by Congress when passing the federal statute and did not need to demonstrate an independent compelling interest for the program.<sup>57</sup> The court then applied the two-prong narrow-tailoring test set forth in *Western States*.<sup>58</sup> First, the court found that a 2007 disparity study commissioned by Caltrans contained “substantial statistical and anecdotal evidence of discrimination in

<sup>51</sup> *Id.* at 692.

<sup>52</sup> *Id.* at 687.

<sup>53</sup> *Id.* at 692-93.

<sup>54</sup> *Id.* at 697 (quoting *N. Contracting*, 473 F.3d at 720, 721).

<sup>55</sup> *Assoc. Gen. Contractors of Am., San Diego Chapter, Inc. v. Cal. Dep’t of Transp.*, 713 F.3d 1187, 1194-95 (9th Cir. 2013).

<sup>56</sup> *Id.* at 1195.

<sup>57</sup> *Id.* at 1195-96 (citing *Western States*, 407 F.3d at 995-1002).

<sup>58</sup> *Id.* at 1196.

the California transportation contracting industry.”<sup>59</sup> Second, the court found that Caltrans’s program was limited only to those groups actually identified in the disparity study as having experienced discrimination: African Americans, Native Americans, Asian Pacific Americans, and women.<sup>60</sup> Accordingly, the court concluded that the program was narrowly tailored to benefit only those groups that had actually suffered discrimination in the relevant contracting market.

- v. *Geyer Signal, Inc. v. Minnesota Department of Transportation*, No. 11-321 (JRT/LIB), 2014 WL 1309092 (D. Minn. Mar. 31, 2014).

Geyer Signal, a White male-owned signage contractor in Minnesota, filed a complaint challenging the constitutionality of the state’s DBE program. The complaint also challenged the constitutionality of the USDOT regulations regarding DBE programs as Minnesota’s DBE program follows those regulations.<sup>61</sup> The United States intervened in order to defend the USDOT regulations.<sup>62</sup> The court granted summary judgment in favor of both the United States and Minnesota. In June 2014, plaintiffs abandoned a pending appeal in the Seventh Circuit.

- vi. *Geod Corporation v. New Jersey Transit Corporation*, 678 F. Supp. 2d 276 (D.N.J. 2009), and 746 F. Supp. 2d 642 (D.N.J. 2010).

GEOD, a White male-owned corporation that specializes in surveying, topographic mapping, and photogrammetry, challenged the New Jersey Transit Corporation’s (NJT) DBE program on constitutional grounds. In ruling on the parties’ cross-motions for summary judgment, the district court followed numerous other courts in determining that NJT did not need to independently establish a compelling interest because states inherit the federal government’s compelling interest in enacting the legislation.<sup>63</sup> The parties disputed the appropriate standard for determining whether the program was narrowly tailored. Plaintiff relied on the Ninth Circuit’s decision in *Western States* to assert that its as-applied challenge to the constitutionality of the DBE program required NJT to demonstrate that the program is narrowly tailored.<sup>64</sup> Defendants relied on the Seventh Circuit’s decision in *Northern Contracting* to contend that the program was narrowly tailored as long as it complied with the requirements of the federal program.<sup>65</sup> While the parties presented these two approaches as a circuit split, the court seemingly disagreed, stating that each case involved “considerably the same analysis,” because determining whether a state’s DBE program complies with the federal program requirements involves much the same considerations as the narrow

<sup>59</sup> *Id.*

<sup>60</sup> *Id.* at 1198-99.

<sup>61</sup> *Geyer Signal, Inc. v. Minn. Dep’t of Transp.*, No. 11-321 (JRT/LIB), 2014 WL 1309092 (D. Minn. Mar. 31, 2014).

<sup>62</sup> *Id.*

<sup>63</sup> *Geod Corp. v. N.J. Transit Corp.*, 678 F. Supp. 2d 276, 282 (D.N.J. 2009).

<sup>64</sup> *Id.*

<sup>65</sup> *Id.*



tailoring analysis.<sup>66</sup> Ultimately, the court found that a genuine issue of material fact remained concerning whether the method NJT used to determine its DBE goal was sufficiently narrowly tailored.<sup>67</sup>

Following a bench trial, the court upheld the constitutionality of the program. The court first clarified that it agreed with the Seventh Circuit's holding in *Northern Contracting* that "a challenge to a state's application of a federally mandated program must be limited to the question of whether the state exceeded its authority."<sup>68</sup> After reviewing the steps NJT undertook to set its DBE goals, the court ruled that NJT's DBE program was sufficiently narrowly tailored because it did not exceed the authority granted by the federal statute.<sup>69</sup> The court also found that even under the as-applied narrow tailoring test set forth in *Western States*, the program was still constitutional as it was narrowly tailored to further a compelling governmental interest.<sup>70</sup>

### 3. Challenges to Race- and Gender-Conscious COVID-related Relief Efforts

In early 2021, Congress enacted the American Rescue Plan Act of 2021 ("ARPA"), which included several race- and gender-conscious relief plans to assist minority-, female-, and veteran-owned businesses in the restaurant and agricultural industries. Some of the programs prioritize socially and economically disadvantaged individuals for certain pandemic relief, in some cases adopting the SBA's definition of social and economic disadvantage.<sup>71</sup> A number of constitutional challenges to the race- and gender-conscious provisions in the ARPA followed. These lawsuits fall into two main groups: those challenging a debt relief program for socially disadvantaged farmers and ranchers,<sup>72</sup> and those challenging an emergency grant fund's 21-day prioritization of restaurants owned by socially and economically disadvantaged individuals.<sup>73</sup>

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<sup>66</sup> *Id.* at 282-83.

<sup>67</sup> *Id.* at 284.

<sup>68</sup> *Geod Corp. v. N.J. Transit Corp.*, 746 F. Supp. 2d 642, 652 (D.N.J. 2010).

<sup>69</sup> *Id.* at 954-55.

<sup>70</sup> *Id.* at 656-57.

<sup>71</sup> American Rescue Plan Act of 2021, Pub. L. No. 117-2, § 5003(c)(3)(A) (adopting the Small Business Act's definition of social and economic disadvantage for the purpose of prioritizing applications for restaurant relief grants); *see also*, ARPA § 1005(a) (providing debt relief for socially disadvantaged farmers and ranchers); § 1006(b)(1)-(2), (5) (establishing educational training and providing grants, loans, and financial assistance to socially disadvantaged farmers); § 3206(c)(2) (prioritizing a portion of a homeowner assistance fund for socially disadvantaged individuals); § 3301(b), (d), (f) (distributing funds to the states to help small businesses owned and controlled by socially and economically disadvantaged individuals).

<sup>72</sup> ARPA § 1005(a). *See, e.g., Miller v. Vilsack*, No. 4:21-cv-595 (N.D. Tex. filed Apr. 26, 2021); *Faust v. Vilsack*, No. 1:21-cv-548 (E.D. Wis. filed Apr. 29, 2021); *Wynn v. Vilsack*, No. 3:21-cv-514 (M.D. Fla. filed May 18, 2021); *Carpenter v. Vilsack*, No. 0:21-cv-103 (D. Wyo. filed May 24, 2021); *Holman v. Vilsack*, No. 1:21-cv-1085 (W.D. Tenn. filed June 2, 2021).

<sup>73</sup> ARPA § 5003(c)(3)(A). *See Vitolo v. Guzman*, 999 F.3d 353 (6th Cir. 2021); *Blessed Cajuns v. Guzman*, No. 21-cv-00677-O (N.D. Tex. filed May 23, 2021).

One challenge to the emergency relief fund for restaurants, *Vitolo v. Guzman*, 999 F.3d 353, 357 (6th Cir. 2021), was filed by a bar and grill equally co-owned by Antonio Vitolo, who is White, and his wife, who is Hispanic. Their restaurant struggled during the COVID-19 pandemic, and they applied for relief from the Restaurant Revitalization Fund (“RRF”) the first day the SBA accepted applications.<sup>74</sup> Congress directed the SBA to process applications and distribute the funds on a first come, first served basis, with the exception of a 21-day priority applicant period for restaurants that are at least 51 percent owned and controlled by women, veterans, or the “socially and economically disadvantaged,” as defined by the SBA.<sup>75</sup> Non-priority restaurants would not receive a grant until the 21-day period ended, if any funds remained.<sup>76</sup> Vitolo and his restaurant sued the SBA, claiming that the race- and sex-based preferences in the RRF’s 21-day priority period violated his constitutional rights under the Equal Protection Clause, and requested a temporary restraining order and a preliminary injunction.<sup>77</sup>

While the United States District Court for the Eastern District of Tennessee denied the plaintiff’s motion for a temporary restraining order and a preliminary injunction,<sup>78</sup> the Sixth Circuit granted an emergency motion for an injunction pending appeal, enjoining the SBA from relying on the regulatory presumption that certain racial and ethnic groups are socially disadvantaged and from using any race-based criteria to evaluate social disadvantage in the distribution of RRF grants.<sup>79</sup> It directed the SBA to “fund the plaintiffs’ grant application, if approved, before all after-filed applications, without regard to processing time or the applicants’ race or sex.”<sup>80</sup> The court held that Vitolo had standing even though he might not otherwise qualify for priority consideration without the use of race-conscious preferences and that even though the 21-day period had expired, the claim was not moot because the SBA had not yet paid out any funds.<sup>81</sup>

The court held that the government likely failed to demonstrate a compelling interest in targeting restaurants owned by socially and economically disadvantaged individuals for relief assistance because: (1) the government pointed only to societal discrimination against business owners, not to any specific instances of discrimination; (2) the government’s statistical evidence of past discrimination against the groups protected by the presumption was “not nearly enough” to support an inference of intentional discrimination; and (3) a congressional hearing identifying a “theme” that minority-owned businesses required targeted relief assistance because prior pandemic

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<sup>74</sup> *Vitolo*, 999 F.3d at 357. The \$28.6 billion RRF was created by the ARPA to help small, private restaurant owners meet payroll and other expenses. ARPA, Pub. L. No. 117-2, § 5003(b)(2)(A).

<sup>75</sup> ARPA §§ 5003(c)(1)-(3)(A).

<sup>76</sup> *Id.* See *Vitolo*, 999 F.3d at 357.

<sup>77</sup> *Vitolo*, 999 F.3d at 358.

<sup>78</sup> *Vitolo v. Guzman*, No. 3:21-cv-176, 2021 WL 2132106 (E.D. Tenn. May 25, 2021).

<sup>79</sup> *Vitolo*, 999 F.3d at 365.

<sup>80</sup> *Id.* at 366.

<sup>81</sup> *Id.* at 358-59.

programs failed to reach them was not enough to show that the government participated in the discrimination it sought to remedy.<sup>82</sup>

Even if the government had shown a compelling interest, the court held that the RRF likely was not narrowly tailored because: (1) there were a number of race-neutral alternatives relying on economic rather than racial indicators; (2) the vastly different evidentiary burdens on those who are eligible for the racial presumption and those who are not render the program underinclusive; and (3) the regulation’s “racial gerrymandering”—presuming that some ethnicities are socially disadvantaged, and not others—makes the program overbroad.<sup>83</sup>

The court also held that the RRF’s prioritization of women-owned businesses did not survive intermediate scrutiny because the government failed to show that (1) the sex-based classification serves an important governmental objective, and (2) the classification is substantially related to that objective.<sup>84</sup> The government’s statistics were insufficient to show actual evidence of discrimination, and the RRF prioritized *all* women-owned restaurants, not just those who were economically disadvantaged.<sup>85</sup>

The USDA loan forgiveness program for socially and economically disadvantaged farmers has received a similar reception in a number of federal court cases. For example, a Wisconsin district court issued a temporary restraining order halting the program’s implementation, finding that the program “purportedly intended to provide economic relief to disadvantaged individuals without actually considering the financial circumstances of the applicant.”<sup>86</sup> Subsequently, a Florida district court issued a nationwide preliminary injunction, temporarily halting enforcement of the program.<sup>87</sup> These and other equal protection challenges to the race-conscious aspects of the USDA’s loan forgiveness program remain pending as of the publication of this report, and the government is continuing to defend the program on the merits.

#### **4. Challenges to State and Local Disadvantaged Business Enterprise Programs**

Some states have implemented programs to promote the use of DBEs, minority business enterprises (MBEs), and/or women’s business enterprises (WBEs) in state-funded contracts. Since these contracts are not federally funded, states are not required to adhere to the federal government’s mandate requiring states to implement a DBE program. Thus, even though a state program may mirror the federal DBE program, the state does not inherit the federal government’s compelling interest. Instead, the state must prove that it has its own compelling interest in remedying discrimination in contracting within the state.

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<sup>82</sup> *Id.* at 361-62.

<sup>83</sup> *Id.* at 362-64.

<sup>84</sup> *Id.* at 364-65.

<sup>85</sup> *Id.* at 365. As of July 19, 2021, the case remains pending in district court.

<sup>86</sup> *Faust v. Vilsack*, 519 F. Supp. 3d 470, 476 (E.D. Wis. 2021).

<sup>87</sup> *Wynn v. Vilsack*, --- F. Supp. 2d ---, 2021 WL 2580678 (M.D. Fla June 23, 2021).

In a recent circuit court decision involving such a challenge, the plaintiff, a prime contractor in North Carolina who was denied a contract on a state-funded construction project for failing to demonstrate “good faith efforts” to satisfy participation goals for minority- and women-owned subcontractors, alleged that North Carolina’s participation goals violated its equal protection rights.<sup>88</sup> After the district court found the program constitutional both on its face and as applied, the plaintiff appealed. Since North Carolina DOT’s DBE program applied to state-funded, not federally funded, contracts, the state did not inherit the government’s compelling interest.<sup>89</sup> North Carolina had commissioned a consulting firm to conduct a disparity study every few years regarding the state’s transportation construction industry. Relying heavily on these studies, the Fourth Circuit concluded that there was a strong basis in evidence of discrimination in North Carolina against Black and Native American subcontractors, and finding the program narrowly tailored, it upheld it both on its face and as applied to these two groups.<sup>90</sup> However, the Court found that the evidence did not justify application of the program to female, Asian American, and Hispanic subcontractors, and thus held that the statute was unconstitutional as applied to those groups.<sup>91</sup>

**II. There are Identified Disparities in Government Contracting between Minority- and Women-Owned Businesses and Their Non-Minority, Male-Owned Counterparts**

Following the *Croson* decision, in which the Supreme Court articulated the type of evidence necessary to support the use of race-conscious measures in contracting programs, state and local governments began commissioning disparity studies to determine whether evidence of racial and gender discrimination existed in their contracting markets sufficient to justify race- and gender-conscious remedial action. While disparity studies vary in approach, the central component of most disparity studies is a comparison between the availability of minority- and women-owned businesses as a percentage of businesses operating in distinct categories of a particular contracting market and the utilization of such businesses by the spending authority as defined by the percentage of dollars that goes to those firms. Simply put, dividing utilization percentage by availability percentage results in a disparity index. A disparity index of 100 indicates that the utilization of a particular category of businesses is equivalent to the availability of those businesses in the relevant market. For example, if 25% of the construction firms in a particular geographic area were women-owned, and 25% of the spending authority’s construction contracting was spent with women-owned businesses, that would yield a disparity index of 100. As a general rule of thumb, a

<sup>88</sup> *H.B. Rowe Co. v. Tippett*, 615 F.3d 233 (4th Cir. 2010).

<sup>89</sup> *Id.*

<sup>90</sup> *Id.* at 257.

<sup>91</sup> *Id.* at 245, 258 (noting that the study found that female subcontractors were overutilized during the study period and that underutilization of Hispanic American and Asian American subcontractors was not statistically significant).

disparity index of less than .80, or 80 for those studies that multiply the disparity index by 100, indicates a substantial disparity.<sup>92</sup>

The Department of Justice's 2010 report reviewed approximately 70 disparity studies, which showed that "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' in a pattern of discriminatory barriers that is repeated across the nation."<sup>93</sup> Since then, over 200 disparity studies have been published. A review of these studies shows that the "needle has not moved."<sup>94</sup> Disparity studies continue to identify substantial disparities between the availability of minority- and women-owned businesses and the utilization of such businesses in state and local government procurement. Overwhelmingly, the studies also present evidence linking such disparities to discriminatory factors. A list of 189 of these recent studies from state and local jurisdictions in 34 different states and the District of Columbia is attached as Appendix B.

In a 2016 report, the U.S. Department of Commerce's Minority Business Development Agency conducted a comprehensive review of 100 publicly available disparity studies, summaries, and reports, focusing on studies conducted in the prior ten years (hereinafter, "2016 MBDA Report").<sup>95</sup> The 2016 MBDA Report found that the studies "indicated significant contracting disparities for minority business enterprises (MBEs), pervasive across different ethnic and racial groups, industries, and geographies."<sup>96</sup> Over 78% of the observed disparity ratios fell below the 80% threshold signifying a "substantial" disparity. The median value for the observed disparities was just 19%, indicating that minority businesses were being utilized at less than one-fifth of their availability in a given marketplace. The report concluded that "these results indicate that contracting disparities for MBEs are pervasive."<sup>97</sup>

Disparity studies published since the 2016 MBDA Report continue to show substantial and pervasive disparities. For example, a 2019 disparity study commissioned by the City of Indianapolis and Marion County found that the participation of minority- and women-owned businesses in contracts the city awarded from 2014-2018 was substantially lower than what one would expect based on the availability of those businesses for that work, with a disparity index of 76.<sup>98</sup> This means that "minority- and woman-owned businesses received approximately \$0.76 for every dollar that they might

<sup>92</sup> *Uniform Guidelines on Employee Selection Procedures*, 29 C.F.R. § 1607.4 (D); *Connecticut v. Teal*, 457 U.S. 440, 443 n.4 (1982).

<sup>93</sup> *Compelling Interest for Race- and Gender-Conscious Federal Contracting Programs: An Update to the May 23, 1996 Review of Barriers for Minority- and Women-Owned Businesses* 10 (2010) (quoting *The Department of Transportation's Disadvantaged Business Enterprise Program: Hearing Before the H. Comm. on Transp. and Infrastructure*, 111th Cong. 326 (2009) (statement of Jon Wainwright, Vice President, NERA Economic Consulting)).

<sup>94</sup> U.S. Dep't of Com., Minority Bus. Dev. Agency, *Contracting Barriers and Factors Affecting Minority Business Enterprises: A Review of Existing Disparity Studies* (2016) (hereinafter, "2016 MBDA Report").

<sup>95</sup> 2016 MBDA Report, at 70.

<sup>96</sup> *Id.* at 69.

<sup>97</sup> *Id.* at vi.

<sup>98</sup> BBC Rsch. & Consulting, *City of Indianapolis and Marion County Disparity Study* 15 (2019).

be expected to receive based on their availability for the relevant prime contracts and subcontracts that the City awarded during the study period.”<sup>99</sup> A 2018 disparity study prepared for the City of New York found even greater disparities. Analysis of disparities across all procurement categories revealed a disparity index of 20.43% for minority- and women-owned businesses.<sup>100</sup> The study further found that this “quantitatively significant disparity” was corroborated by qualitative evidence of “barriers that M/WBES face in participating in the City’s procurement process.”<sup>101</sup>

A 2021 disparity study report prepared for the California Department of Transportation (“Caltrans”) found that women- and minority-owned businesses were substantially underutilized, receiving only 20.3 percent of Caltrans contracts despite being available to perform 27.6 percent of the construction and professional services contracts funded by USDOT.<sup>102</sup> This disparity persists despite the fact that all Caltrans construction and professional services contracts funded by USDOT are subject to race- and gender-conscious subcontracting programs. In contrast, Caltrans’ state-funded projects do not use race- or gender-conscious measures. In those projects, women- and minority-owned business participation lags at a meager 10.8 percent despite an availability of 23.4 percent.<sup>103</sup> The resulting disparity index is 46, meaning that W/MBEs received \$.46 of every dollar they should have expected to receive based on their availability to perform state-funded construction and professional services contracts.<sup>104</sup> The systemic barriers to the marketplace that cause these disparities are rooted in discriminatory systems. By way of example, the report cited that the average business loan approved for W/MBEs in the Pacific region was \$289,131, whereas, for non-Hispanic White men it was \$455,636.<sup>105</sup>

Similarly, the Commonwealth of Virginia’s 2020 disparity study found that the overall availability of minority- and women-owned businesses in construction, professional services, and goods and other services was 32.8 percent.<sup>106</sup> However, minority- and women-owned businesses received only 13.4 percent of the relevant contract and procurement dollars that the Commonwealth awarded during the study period (2014-2019).<sup>107</sup> As a result, the disparity index was 41, representing a significant underutilization of minority- and women-owned businesses.<sup>108</sup>

These findings comport with other comprehensive reviews of disparity studies and related statistical materials. For example, in a 2013 expert report prepared for

<sup>99</sup> *Id.*

<sup>100</sup> MGT Consulting Grp., *City of New York Disparity Study* 4-12 (May 2018).

<sup>101</sup> *Id.* at 6-3.

<sup>102</sup> BBC Rsch. & Consulting, *California Department of Transportation Availability and Disparity Study Report*, ES 3 & 5 (2021).

<sup>103</sup> *Ibid.*

<sup>104</sup> *Id.* at ES-8

<sup>105</sup> *Id.* at App’x C, Fig. C-16.

<sup>106</sup> BBC Rsch & Consulting, *Commonwealth of Virginia 2020 Disparity Study*, ES-3 (2020).

<sup>107</sup> *Id.* at ES-6.

<sup>108</sup> *Id.* at ES-8.

litigation, Dr. Jon Wainwright, Senior Vice President of NERA Economic Consulting, reviewed 107 disparity studies conducted since 2000 covering 142 public contracting entities in 35 states encompassing 89% of the national population. Dr. Wainwright concluded that “these materials contain significant evidence of large and adverse disparities facing minority business enterprises.”<sup>109</sup> Dr. Wainwright further concluded that the observed disparities “are consistent with the presence of discrimination and its lingering effects in the small business contracting environment.”<sup>110</sup>

While the evidence indicates that the barriers that have impeded the growth and success of minority- and women-owned businesses continue to exist, the evidence also shows that government contracting preference programs ameliorate the effects of public and private discrimination. For example, a 2017 disparity study prepared for the Los Angeles County Metropolitan Transportation Authority compared the participation of minority- and women-owned business on contracts that contained goals to encourage utilization of minority- and women-owned businesses as opposed to contracts that did not contain such goals.<sup>111</sup> The results showed that on contracts without goals, minority- and women-owned firms earned only 53 cents on the dollar, but on contracts with goals, such firms earned 96 cents on the dollar—almost what would be expected given the availability of such firms in the marketplace.<sup>112</sup>

The presence of substantial disparities does not in itself indicate that discrimination is the cause of the observed disparities. Researchers use both quantitative and qualitative methods to examine the causes of disparities in public contracting. One method includes testing the results for statistical significance, which helps to determine whether the observed disparities could be due to random chance alone. The 2016 MBDA Report found that the majority of substantial disparities observed were “statistically significant at high levels, such that disparity study consultants could reject chance as a prime driver of contracting disparities.”<sup>113</sup>

Another quantitative method used to identify the underlying causes of the observed disparities is regression analysis. Regression analysis is a statistical technique that allows for the “comparison between certain business outcomes, such as business formation, business earnings, or loan denials, and minority status, while holding other, potentially non-discriminatory factors, such as geographic location, industry affiliation,

<sup>109</sup> Jon Wainwright, Report of Defendant’s Expert, submitted in *Rothe Dev., Inc. v. Dep’t of Def.*, No. 12-CV-744 (D.D.C.) (2013), at 1 (“Wainwright Report”).

<sup>110</sup> *Id.* at 21, 25-35 (Table 5), 36-54.

<sup>111</sup> BBC Rsch. & Consulting, *2017 LA Metro Disparity Study 7-7* (2018).

<sup>112</sup> See also BBC Rsch. & Consulting, *Pennsylvania Department of Transportation Disparity Study*, ES-8-9 (2018) (noting that PennDOT’s use of DBE contract goals during the study period applied most directly to MWBE participation in subcontracts rather than on prime contracts and found that MWBEs showed a substantial disparity for prime contracts (75) but not for subcontracts); BBC Rsch. & Consulting, *City of Charlotte Disparity Study*, ES-5 (2017) (MWBEs, considered together, showed higher participation in goals contracts—18.3%—than in no-goals contracts—11.3%); BBC Rsch. & Consulting, *Illinois Department of Transportation Disparity Study*, ES-8 (2017) (MWBEs considered together showed a substantial disparity of 34 for prime contracts, which do not include goals, but do not show a disparity for subcontracts, which do use goals).

<sup>113</sup> 2016 MBDA Report, at 69.

education, age, or balance sheets, constant.”<sup>114</sup> This allows researchers to investigate various factors in private-sector marketplace discrimination, such as disparities in business formation, business earnings, and access to capital, and whether these contribute to observed contracting disparities.<sup>115</sup> The 2016 MBDA report determined through these regression analyses that “the majority of the studies in the set that utilized quantitative data on marketplace discrimination found that minorities and minority business enterprises: “[e]arned significantly lower wages than similarly situated non-minority male counterparts in relevant markets; [h]ad significantly lower business earnings than similarly situated non-MBEs in relevant markets; [h]ad lower rates of business formation than non-minority males; [w]ere more likely to be denied commercial or personal loans than similarly situated non-minority males or non-MBEs; and [h]ad lower revenues and market shares than similarly situated non-MBEs.”<sup>116</sup> Analyses of such private-sector disparities is important because the Supreme Court has found that governments have a compelling interest in not being a passive participant in private discrimination.<sup>117</sup>

Disparity studies also analyze qualitative evidence to identify and explain what factors lead to the contracting disparities observed through statistical evidence. Certainly, there are some challenges that all businesses face regardless of the identity of the business owner. Yet the 2016 MBDA Report also identifies discriminatory factors that lead to the observed disparities, including overt prejudicial treatment and exclusion based on race and systemic discrimination in the public and private marketplace. Key discriminatory barriers identified include “[a]gency and prime contractors employing capability stereotypes, double or higher standards, and manipulating bid processes based on prejudicial factors unrelated to business performance; also systemic discrimination against MBEs related to key market-based issues including access to capital.”<sup>118</sup> Each of these will be discussed in more detail below.

In addition to the substantial body of evidence showing disparities in state and local contracting, the evidence shows that substantial disparities are also present in federal contracting. In 2017, just 9.8% of federal spending on contracts went to minority-owned businesses.<sup>119</sup> The same year, woman-owned businesses received only 5% of federal prime contract awards.<sup>120</sup> In a 2012 expert report prepared for litigation, Dr. Robert N. Rubinovitz, the Deputy Chief Economist in the Economics and Statistics Administration at the Department of Commerce, conducted regression analyses comparing the likelihood of minority-owned businesses winning federal prime contracts

<sup>114</sup> Wainwright Report, at 64 n. 69.

<sup>115</sup> 2016 MBDA Report at vii.

<sup>116</sup> *Id.* at 44-45.

<sup>117</sup> *Croson*, 488 U.S. at 492.

<sup>118</sup> *Id.* at 69.

<sup>119</sup> Megan Janetsky, Ctr. for Responsive Politics, *Women- and minority-owned businesses receive only a small fraction of federal contracts*, Apr. 13, 2018, <https://www.opensecrets.org/news/2018/04/women-owned-biz-receive-fraction-of-fed-contracts/>.

<sup>120</sup> *Strengthening the Entrepreneurial Ecosystem for Women: Hearing Before the S. Comm. on Small Business and Entrepreneurship*, 115<sup>th</sup> Cong. 29 (2017) (opening statement from Sen. Shaheen).



when compared to majority-owned businesses of similar size in the same industry.<sup>121</sup> Dr. Rubinovitz analyzed data on government contracts for small businesses for Fiscal Year 2012 and found consistent, statistically significant underutilization of small, minority-owned businesses in federal prime contracting. Dr. Rubinovitz conducted regression analyses to control for factors other than race that might contribute to differences in the success of minority-owned firms in winning contracts compared to non-minority-owned firms. Specifically, Dr. Rubinovitz's regression analyses controlled for the industry in which the firm did business, business age, business size (both in terms of average number of employees and annual receipts), business form, and security clearance, and compared the likelihood of minority-owned businesses receiving a federal contract versus similar businesses.<sup>122</sup> The analysis showed that in the vast majority of industries, minority-owned businesses remained less likely to win a federal contract, usually to a statistically significant degree.<sup>123</sup>

### III. Discrimination Limits Access to Contracting Markets

The statistical evidence discussed in the prior section is bolstered by qualitative evidence that shows the various ways discrimination hinders the ability of minority- and women-owned businesses to compete equitably for government contracts. While this discrimination can take many forms, three primary obstacles are: (1) discrimination by procurement agencies and prime contractors, (2) exclusion from business networks, and (3) discrimination by bonding companies and suppliers.

#### A. Discrimination By Procurement Agencies and Prime Contractors Creates Obstacles for Minority- and Women-Owned Businesses

As the 2016 MBDA Report found, “[t]he most obvious barriers arising due to discrimination lie in actions by procurement agencies and non-MBE prime contractors (when considering MBE subcontractors) to purposely exclude or hinder MBE participation.”<sup>124</sup> The report identified these barriers as including “outright prejudicial treatment, attitudes, stereotypes, implementing higher and double standards for MBEs, or manipulating the bid process.”<sup>125</sup>

Unfortunately, recent studies and reports show that the prejudicial treatment and discriminatory attitudes discussed in the Department of Justice's 1996 and 2010 reports persist. The 2016 MBDA Report found that “instances of outright discrimination permeated” the reviewed disparity studies across industries, geographic areas, and all ethnic, racial, and gender groups.<sup>126</sup> Studies published since the 2016 MBDA Report show the same. In a 2018 disparity study commissioned by the City of New Orleans, a

<sup>121</sup> Robert N. Rubinovitz, Report of Defendants' Expert, submitted in *Rothe Dev., Inc. v. Dep't of Def.*, No. 12-cv-0744 (KBJ) (2012) (“Rubinovitz Report”).

<sup>122</sup> *Id.* at 10-11.

<sup>123</sup> *Id.* at 11-12.

<sup>124</sup> 2016 MBDA Report, at 54.

<sup>125</sup> *Id.*

<sup>126</sup> *Id.* at 63-64.

business owner reported an instance of a federal agency revoking his contract once it was discovered he was a minority, directly saying to him that they did not want an “n-word” to have the job.”<sup>127</sup> The same study noted that “[o]ther interviewees reported hearing racial slurs and gender-based insults used against minority and female business owners.”<sup>128</sup> In a 2015 study conducted in Arizona, a Black business owner explained: “I have seen everything from looks to gestures, hearing the ‘n-word’ and different things from Hispanics to whites. . . . Getting your truck sprayed, different things like tearing checks open [to] see what you make, or you are blocked off a job because you are the only woman or African American out there.”<sup>129</sup> In Nevada, an Asian-American female representing a woman-focused organization said, “It is still very difficult for women business owners to get contracts, especially in construction. I don’t want to say it is a man’s world, but it is here [in Las Vegas]. When I go out and do site visits for our WBE’s, they are still having difficulty accessing the contract that they need. Not so much with the smaller contracts like \$25,000 or under, but beyond that, they still struggle.” She shared an experience from a WBE who believes she lost the bid on an environmental project in her county to an out-of-state contractor because she was a woman-owned business.”<sup>130</sup>

Some minority and female business owners report dealing with assumptions by prime contractors that they are a worker and not the business owner of a subcontracting firm. This evidence could demonstrate that the under-utilization of minority and women-owned subcontracting firms in a particular market place was due to discrimination. For example, “[t]he vice president of a DBE-certified Black American engineering firm said that he was on a job where they had to go inside a sewer and he saw a worker point at him and overheard him say, ‘Send that boy down there.’”<sup>131</sup> In another study, the vice president, non-owner of a minority-owned contracting business stated that “it is often assumed that the business owner (a minority) works for him (a non-minority).”<sup>132</sup> A minority business owner even went so far as to change his company name and to hire a non-Hispanic White engineer to be his employee manager, and he noticed that “we started to get quite a few prime jobs in the rural areas. . . . So that tell[s] me something.”<sup>133</sup>

<sup>127</sup> Keen Indep. Rsch. LLC, *City of New Orleans Disparity Study* Appendix J-37 (2018).

<sup>128</sup> *Id.*

<sup>129</sup> Keen Indep. Rsch. LLC, *Arizona Department of Transportation Disparity Study Report* Appendix J-66 (2015).

<sup>130</sup> BBC Rsch. & Consulting, *2017 Nevada Transportation Consortium Disparity Study* Appendix D-54 (2017).

<sup>131</sup> BBC Rsch. & Consulting, *2014 Imperial County, CA Transportation Disparity Study* Appendix D-54 Appendix J-69 (2014). In the same study, a Hispanic female who is part-owner of a towing company reports not only her own issues with proving she is a business owner, but also that her husband faces the same issues, explaining, “nobody believes him, that he’s an owner. . . . They just say, ‘You’re just a driver [or] you’re just a worker.’” *Id.*

<sup>132</sup> Keen Indep. Rsch., LLC, *Arizona Department of Transportation Disparity Study Report* Appendix J-65 (2015).

<sup>133</sup> BBC Rsch. & Consulting, *Caltrans 2016 Disparity Study* Appendix D-128 (2016).

The 2016 MBDA Report also found that the studies reviewed “support the presence of double or higher standards for minority-owned businesses.”<sup>134</sup> In one study, a minority male business owner reported that “[s]ome City managers will require me as a minority-owned business to do work that was not required of others doing similar work. . . . I have seen other jobs where the work was not nearly as professional as mine but they did not have to redo it.”<sup>135</sup> In a 2018 study conducted in Maryland, a business owner stated that “we’ve seen situations where a majority contractor or a White firm would do the same thing, and a lot of times what happens, it’s an accident. With a minority firm . . . it happened because you didn’t manage it properly, you didn’t look far enough ahead, you didn’t anticipate.”<sup>136</sup>

Other barriers occur through manipulation of bid processes, such as bid shopping and held bids, or “bait and switch” practices. Some of these practices can affect all businesses to some extent, but the 2016 MBDA Report found a “strong discriminatory pattern” associated with certain process-related barriers.<sup>137</sup>

The Department of Justice’s 2010 report described the practice known as “bait and switch,” in which a prime contractor commits to using a minority- or woman-owned business to meet a race- or gender-conscious goal for subcontractors, but never gives the minority- or woman-owned business the promised work. Recent disparity studies have documented that this practice continues. For example, in a 2018 study conducted in Pennsylvania, a Black female owner of a professional services firm stated: “I have been approached and included on contracts and never gotten an order. . . . There have been several times when I have been put on the contract as a subcontractor and never heard another word.”<sup>138</sup> Similarly, a 2019 study in Florida reported that an “African American professional services firm stated there is no accountability for primes utilizing MWBE firms. Primes get work and submit names of MWBE subs but do not use the subs named in their proposals.”<sup>139</sup>

Bid shopping is another practice frequently cited in disparity studies as presenting barriers to minority- and woman-owned businesses. Bid shopping occurs when a prime contractor solicits a bid from a minority- or woman-owned business, but instead of selecting them as a subcontractor, the prime uses the bid to get lower bids from non-minority- and male-owned firms. For example, a minority business owner in

<sup>134</sup> 2016 MBDA Report, at 65.

<sup>135</sup> *Id.* at 66 (quoting Mason Tillman Assoc., Ltd., *City of Cincinnati Disparity Study* 10-6 (2015)).

<sup>136</sup> NERA Econ. Consulting, *Disadvantaged Business Enterprise Disparity Study: Volume I* (prepared for the Maryland Department of Transportation) 275 (2018).

<sup>137</sup> 2016 MBDA Report, at 60.

<sup>138</sup> BBC Rsch. & Consulting, *Commonwealth of Pennsylvania Department of General Services 2018 Disparity Study* Appendix D-100 (2018).

<sup>139</sup> MGT Consulting Group, *City of Tallahassee, Leon County, and Blueprint 2019 Disparity Study* 7-10 (2019); see also Keen Indep. Rsch. LLC, *Arizona Department of Transportation 2020 Disparity Study* J-59 (2020) (listing examples of minority-owned firms being used in “bait and switch” bidding and contracting processes).

Indiana noted that after faxing in his bids, the prime contractor would “use our bid with another contractor to get a lower bid.”<sup>140</sup>

### **B. Exclusion From Business Networks Limits Opportunities**

Often referred to as the “good ol’ boy” network, the lack of access to business networks is a barrier identified in almost all disparity studies. The 2016 MBDA Report identified networking barriers as the most frequently cited barrier, with 86% of minority- and women-owned businesses identifying exclusionary networks as a barrier to obtaining contracts. In one recent study, the Black owner of a construction firm reported that “general contractors would tell him that his subcontracting bid was too high but then he would later find out that the winning subcontracting bid was even higher than his bid, but was accepted because ‘[t]hey knew the guy. [The general contractor] had a working relationship with them.’”<sup>141</sup>

Exclusionary networks also can result in a lack of transparency, precluding some businesses from even hearing about opportunities. In a recent study conducted in North Carolina, the Black male owner of a minority-owned and veteran-certified professional services firm stated, “It is [a barrier]. No notification. If you’re not a part of the good old boy network, you’ll never know about it. It’s not open and transparent.”<sup>142</sup> Some treatment is more blatantly discriminatory. In a 2017 disparity study conducted for Palm Beach County, a female business owner noted: “My industry is the good old boys. I am called ‘Girlie,’ even though I’m over 60. The construction industry is a male-dominated White industry. If you are not in the club, you are ignored.”<sup>143</sup>

To be sure, some exclusion of minorities and women from business networks may not be due to overt discrimination, but to the reality that people are comfortable working with people who they know or already have experience working with. But considering many of these longstanding business and social connections have developed in environments that have historically excluded minorities and women, it is difficult to ignore the discriminatory foundation for such networks. As a female owner of a disadvantaged business-certified engineering and consulting firm noted when asked if there is a good ol’ boy network: “It is huge—it definitely exists,” and she knows that she is not going to get jobs that are discussed “while golfing at the country club or in the locker room at the gym.”<sup>144</sup> The Black co-owner of a professional services firm commented that he is from the generation that “sat at the back of the bus” and that some of his White peers are in charge now and still have that old mentality.<sup>145</sup> The

<sup>140</sup> Mason Tillman Assoc., Ltd., *City of St. Louis Disparity Study Volume 1* 8-6 (2015).

<sup>141</sup> Keen Indep. Rsch. LLC, *City of Baton Rouge, Parish of East Baton Rouge Disparity Study* 4-15 (2019).

<sup>142</sup> BBC Rsch. & Consulting, *2018 Disparity Study City of Asheville, North Carolina* Appendix D-70 (2018).

<sup>143</sup> Mason Tillman Assoc., Ltd., *Palm Beach County Disparity Study Final Report* 10-12 (2017).

<sup>144</sup> Keen Indep. Rsch. LLC, *2016 Availability and Disparity Study* (prepared for the Montana Department of Transportation) 5-18 (2016).

<sup>145</sup> Keen Indep. Rsch. LLC, *Missouri Department of Transportation 2019 DBE Availability Study Final Report* Appendix F-47 (2019).

existence of exclusionary networks supports the use of measures that encourage agencies and businesses to go outside of their usual networks to expand opportunities.

### **C. Discrimination in Bonding and by Suppliers Burdens Disadvantaged Firms**

Most public contracting projects require a contractor to obtain a surety bond, which financially guarantees the performance of the agreed upon work. Inability to meet bonding requirements can be a challenge for any small business trying to break into the marketplace, but numerous studies show that bonding requirements burden minority- and women-owned businesses to an even greater degree. Barriers to meeting bonding requirements not only inhibit the successful formation and growth of businesses, but also place such businesses at a disadvantage in competing for contracts.

Both quantitative and qualitative evidence shows that bonding requirements disproportionately affect businesses owned by women or people of color. The 2016 MBDA Report noted that 83% of minority- and women-owned businesses identified bonding requirements as a specific barrier to the ability to obtain contracts.<sup>146</sup> A number of recent studies show that minority-owned firms are significantly more likely to face difficulties in obtaining required bonds compared with majority-owned firms.<sup>147</sup> In some circumstances, minority- and women-owned businesses may even face double standards related to bonding requirements. A Black specialty contractor relayed a situation in which he was the low bidder for a contract and was required to provide bonding. While he was acquiring a bond, he learned that another contractor received the contract and was not required to have bonding on the project.<sup>148</sup>

Discriminatory barriers in the bonding market are closely related to the access to capital issues discussed below in Section V. Not only do the same factors affect both access to capital and access to bonding, but the inability to obtain adequate capital contributes to a business's ability to obtain bonding. In this way, even if contracts are

<sup>146</sup> 2016 MBDA Report, at 55.

<sup>147</sup> BBC Rsch. & Consulting, *City of Indianapolis and Marion County Disparity Study 9-4* (2019) (concluding that minority- and women-owned businesses do not have the same access to certain business inputs, including bonding, as businesses owned by non-Hispanic White men); Keen Indep. Rsch. LLC, *City of Baton Rouge, Parish of East Baton Rouge Disparity Study 4-10* (2019) (finding that among construction firms that had tried to obtain a bond for a project, 31% of minority-owned firms had difficulty obtaining the required bond compared with only 4% of majority-owned firms); Keen Indep. Rsch. LLC, *City of New Orleans Disparity Study 9* (2018) (reporting that minority-owned businesses (42%) and women-owned businesses (21%) were much more likely than majority-owned firms (7%) to indicate they had experienced difficulties trying to obtain a bond); BBC Rsch. & Consulting, *Illinois Department of Transportation Disparity Study 8-4* (2017) (finding that minority- and woman-owned businesses in Illinois do not have the same access to bonding and other business inputs as businesses owned by non-Hispanic White men); NERA Econ. Consulting, *Business Disparities in the DCAMM Construction and Design Market Area* (prepared for the Commonwealth of Massachusetts Division of Capital Asset Management and Maintenance) 15 (2017) (reporting that bonding requirements were statistically significantly more difficult for minority- and women-owned business even when holding constant factors such as business size and other characteristics related to business capacity).

<sup>148</sup> MGT of America, Inc., *Comprehensive Disparity Study for the City of Pensacola 7-12* (2012).

otherwise awarded on a race-and gender-neutral basis, public entities may still become passive participants in private sector discrimination.

The Department of Justice's 2010 report concluded that discrimination by suppliers also limited minority- and women-owned businesses' ability to compete. That remains the case. For example, a recent disparity study commissioned by New Orleans found that one-third of minority- and women-owned businesses reported experiencing competitive disadvantages due to supplier pricing compared to only 15% of majority-owned firms.<sup>149</sup> In another study, a minority female owner of an architecture and engineering company reported that "it's very well-known that suppliers have two to three tiers of pricing structures based on relationships where certain contractors get preferred pricing with our supplier. We can't be competitive on bids if someone else can rent the same equipment for \$50 a day and I get charged \$75 a day."<sup>150</sup> Discriminatory pricing by suppliers creates a significant barrier for minority- and women-owned businesses because they have to include those prices in their bid, resulting in a less competitive bid.

#### **IV. There Are Significant Disparities in Business Formation and Success Between Minority- and Women-Owned Businesses Relative to Their Non-Minority, Male-Owned Counterparts**

As was discussed in the Department of Justice's 2010 report, minority- and women-owned businesses make up a disproportionately small share of small businesses. Unfortunately, this remains true a decade later. Even though people of color constitute 40% of the U.S. population, they make up only 20% of the nation's business owners.<sup>151</sup> This disparity is even more stark for some racial and ethnic groups. The business ownership rate among non-Latino Whites is 11%, but for Black Americans it is only 3% and approximately 7% for Latinos.<sup>152</sup> While 12.7% of White men own businesses, the same is true of only 8.3% of Asian American women, 7.3% of White women, 6.9% of Hispanic women, and 3.5% of Black women.<sup>153</sup> Women-owned businesses represent about 38% of all firms.<sup>154</sup>

It is not merely that minority- and women-owned businesses are less common than businesses owned by White men; they are also less profitable. In 2012, the average

<sup>149</sup> Keen Indep. Rsch. LLC, *City of New Orleans Disparity Study* Appendix H, 42 (2018).

<sup>150</sup> Mason Tillman Assoc., Ltd., *City of St. Louis Disparity Study Volume 1 8-4* (2015).

<sup>151</sup> *Promoting Inclusive Lending During the Pandemic: Community Development, Financial Institutions, and Minority Depository Institutions*, Hearing Before the H. Comm. on Financial Services, 116th Cong. (2020).

<sup>152</sup> Robert W. Fairlie, *Latino Business Ownership: Contributions and Barriers for U.S.-born and Immigrant Latino Entrepreneurs*, produced under contract with the SBA, Office of Advocacy 6, 27 (2018).

<sup>153</sup> *Strengthening the Entrepreneurial Ecosystem for Minority Women: Hearing Before the S. Comm. on Small Business and Entrepreneurship*, 113<sup>th</sup> Cong. 105 (2013) (report by Robert W. Fairlie, *Wealth Inequality, Business Success, and Minority Women*).

<sup>154</sup> *Strengthening the Entrepreneurial Ecosystem for Women: Hearing Before the S. Comm. on Small Business and Entrepreneurship*, 115<sup>th</sup> Cong. 16 (2017) (statement of Michelle Richards, Executive Director, Great Lakes Women's Business Council).

minority-owned firm generated gross receipts of \$173,552, roughly one-third of the average non-minority-owned firm gross receipts of \$550,472.<sup>155</sup> Certain minority groups fare even worse. A Black-owned firm averages about \$58,000 in sales per firm, while a Hispanic-owned firm generates two and a half times this amount; an Asian American-owned firm, six times as much; and a White-owned firm, over nine times this amount.<sup>156</sup> Although African Americans own 9.5% of businesses, these businesses only account for 1.3% of sales.<sup>157</sup> Hispanic-owned firms are 12.2% of businesses but only 4.0% of sales.<sup>158</sup> Women-owned businesses earn less than male-owned firms, as they employ only 8% of the nation's private workforce and produce 4% of business revenues.<sup>159</sup>

The 2018 Small Business Credit Survey, an annual survey of over 6,000 businesses with fewer than 500 employees, found that:

- Smaller shares of Asian American- (51%) and Black-owned businesses (46%) were profitable at the end of 2017 compared to White-owned firms (55%).
- A larger share of White-owned firms reported revenue growth (58%) compared to Black-owned firms (49%).
- A larger share of White-owned firms reported growth in the number of employees (37%) compared to Black-owned firms (31%).
- Minority-owned firms more frequently reported financial challenges. Seventy-eight percent of Black-owned firms, and 69% of Asian American- and Hispanic-owned firms did so, compared to 62% of White-owned businesses.<sup>160</sup>

These disparities in sales, growth, and profitability make minority- and women-owned businesses less stable and less able to withstand challenges. This has been made even more apparent with the economic effects of the COVID-19 pandemic disproportionately affecting minority- and women-owned businesses, as discussed below in Section VI.

## V. **Discrimination Limiting Access to Capital Affects the Formation and Development of Businesses Owned by Women or People of Color**

Businesses owned by women or people of color have far less access to capital than White male business owners, and this significantly limits their ability to establish and grow their businesses and compete equally in the marketplace. Both statistical and

<sup>155</sup> U.S. Dep't of Com., Minority Bus. Dev. Agency, *The State of Minority Business Enterprises, An Overview of the 2012 Survey of Business Owners* 2 (2018).

<sup>156</sup> *Id.* at 10.

<sup>157</sup> *Id.* at 17.

<sup>158</sup> *Id.* at 18.

<sup>159</sup> *Strengthening the Entrepreneurial Ecosystem for Women: Hearing Before the S. Comm. on Small Business and Entrepreneurship*, 115<sup>th</sup> Cong. 2 (2017) (opening statement of Sen. Shaheen).

<sup>160</sup> Fed. Rsv. Bank of Atlanta, *Small Business Credit Survey: Report on Minority-Owned Firms* (Dec. 2019).

qualitative evidence show that minority and female business owners not only are denied loans at a higher rate than White males, but when they are successful in obtaining loans, they are for lower amounts and at less favorable terms and conditions. Because minority- and women-owned businesses cannot access capital at the same cost as firms owned by White males in the same marketplaces, they are at a competitive disadvantage when bidding on government contracts where they must include these higher costs in the price of their bid.<sup>161</sup>

**A. The Wealth Gap Contributes to, and is Exacerbated By, Lack of Access to Capital**

One factor contributing to the lack of access to capital is the vast wealth gap between Whites and minorities. The average wealth of White families in 2016 was seven times the wealth of Black families and five times the wealth of Latino families (at the median, White families have 10 times the wealth of Black families and eight times the wealth of Latino families).<sup>162</sup> This disparity has grown over time. In 1963, White families had \$121,000 more in wealth than Black families, on average; by 2016, they had over \$700,000 more.<sup>163</sup> The disparity also grows with age. On average, White people in their 30s have \$147,000 more in wealth than their Black counterparts. But by the time they are in their 60s, White people have \$1.1 million more in wealth than Black people, on average.<sup>164</sup> This wealth gap has grown in the last few decades. A 2019 McKinsey study found that even adjusting for inflation the overall racial wealth gap between Black and White families widened from about \$100,000 in 1992 to \$154,000 in 2016.<sup>165</sup> Researchers at the Center for Global Policy Solutions suggested that in the recovery period after the 2008 housing crisis, African Americans (45%), Asian Americans (48%) and Latinos (58%) lost nearly half or more than half of their wealth compared to a 21% loss among Whites.<sup>166</sup> In 2017, Prosperity NOW and the Institute for Policy Studies reported that 51% of households of color live in liquid asset poverty compared to 28% of White households.<sup>167</sup> Similar to minorities, “[w]omen start with less capital than men.”<sup>168</sup> Minority women in particular have low levels of wealth relative to White men

<sup>161</sup> See Rubinovitz Report, *supra* at 11 (showing a consistent, statistically significant underutilization of small, minority-owned businesses in federal prime contracting); see also Robert Rubinovitz, *Utilization of Women-Owned Businesses in Federal Prime Contracting*, Department of Commerce (Dec. 31, 2015) (finding that the odds of winning a contract for Woman-Owned Businesses (WOBs) are estimated to be roughly 21 percent lower relative to the odds of winning contracts by otherwise similar firms that were not identified as WOBS).

<sup>162</sup> *Examining the Racial and Gender Wealth Gap in America: Hearing Before Subcomm. on Diversity and Inclusion of the H. Comm. on Financial Services*, 116th Cong. (2019) (testimony of Kilolo Kijakazi, PhD, Urban Institute).

<sup>163</sup> *Id.*

<sup>164</sup> *Id.*

<sup>165</sup> *Id.*

<sup>166</sup> *Id.*

<sup>167</sup> *Id.* “Liquid asset poverty” is defined as a status of a four-person household that maintains less than three months’ worth of savings at any given time.

<sup>168</sup> *Strengthening the Entrepreneurial Ecosystem for Minority Women: Hearing Before the S. Comm. on Small Business and Entrepreneurship*, 113th Cong. 46 (2013) (quoting *Women-Owned Businesses in the 21st Century*, U.S. Department of Commerce Economics and Statistics Administration, for the White



and women.<sup>169</sup> White men have a median net worth of \$137,775, but the median net worth is lower for all groups of women—\$125,700 for White women, \$106,084 for Asian American women, \$8,902 for Hispanic women, and \$7,645 for Black women.<sup>170</sup> While 32% of White men have startup capital of at least \$10,000 when starting a business, the same is true of only 17% of White women, 15% of Hispanic women, and 11% of Black women.<sup>171</sup>

This wealth gap has a dramatic effect on the ability of minorities and women to start their own businesses. Underrepresentation of Black business owners can be attributed in large part to Black people having less of their own money to invest in firms and less collateral to put toward a loan due to job, housing, and financing discrimination. Black-owned businesses start with approximately a third less capital than their White peers and have difficulties raising private investments from mainstream investment systems.<sup>172</sup> The situation for minority women, particularly Black and Hispanic women, is especially dire, given that they have low levels of wealth relative to White women and men. This results in less access to startup capital, lower levels of business ownership, and smaller businesses when they are created.<sup>173</sup>

This wealth gap is the product, at least in part, of discrimination. Congress has received testimony that Black wealth accumulation has undergone a sustained process of asset underdevelopment “via an array of American programs and practices.”<sup>174</sup> These include:

- federally sanctioned redlining, which reduced the credit available for Black households, in turn limiting their ability to buy homes;
- discriminatory access to homeownership subsidies in the New Deal legislation;
- denial of the benefits of the G.I. Bill to Black veterans, while White households were able to rely on the G.I. Bill to build wealth;
- racial zoning practices and tax policies; and

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House Council on Women and Girls, October 2010); see also *Disparities in Access to Capital: What the Federal Government is Doing to Increase Support for Minority Owned Firms, Field Hearing Before the H. Comm. on Small Business*, 115th Cong. (2018); BBC Rsch. & Consulting, *Illinois Department of Transportation 2017 Disparity Study 3-6* (2017) (“Women have also faced consistent wage and income gaps relative to men. Nationally, the median hourly wage of women is still only 84 percent the median hourly wage of men.”).

<sup>169</sup> *Id.* at 101 (report by Robert W. Fairlie, *Wealth Inequality, Business Success, and Minority Women*).

<sup>170</sup> *Id.* at 102.

<sup>171</sup> *Id.* at 104.

<sup>172</sup> Andre Perry, Jonathan Rothwell, and David Harshbarger, *Five-star reviews, one-star profits: The devaluation of businesses in Black communities*, Metropolitan Policy Program at Brookings (Feb. 2020).

<sup>173</sup> *Strengthening the Entrepreneurial Ecosystem for Minority Women: Hearing Before the S. Comm. on Small Business and Entrepreneurship*, 113th Cong. (2013).

<sup>174</sup> *How Invidious Discrimination Works and Hurts: An Examination of Lending Discrimination and Its Long-term Economic Impacts on Borrowers of Color, Hearing before Subcomm. on Oversight and Investigations of the H. Comm. on Financial Services*, 117th Cong. (2021) (testimony of William Darity Jr., Samuel DuBois Cook Professor of Public Policy, Duke University) (citations omitted).

- the long-term effects of Jim Crow era state tax policies.<sup>175</sup>

**B. Businesses Owned by Women and People of Color are Significantly More Likely to Be Denied Access to Capital**

Given that women and people of color who own businesses have less of their own personal capital to contribute toward their small businesses, loans are especially critical for them. Unfortunately, these business owners are also less likely than White male business owners to be able to obtain loans. The wealth gap is a contributing factor to the challenges that minority and female business owners face in obtaining capital. The Director of Outreach at Goldman Sachs testified that women and minorities have lower credit, which inhibits their ability to obtain capital, not because they lack moral character or intend to default on loans, but rather for three other reasons: (1) customers are late to pay them, (2) they lack accumulated assets/wealth, and (3) they have debt.<sup>176</sup> The impact is significant: due to the historic barriers and private discrimination that has limited the ability of minority business owners to accumulate assets and wealth, minority-owned businesses are two to three times more likely to be denied credit, more likely to avoid applying for loans based on the belief they will be turned down, and more likely to receive smaller loans and pay higher interest rates on the loans they do receive.<sup>177</sup> Along the same lines, only 30% of businesses owned by women were able to get bank loans in the first part of 2016, and women founders get only 7% of the venture capital in this country.<sup>178</sup> Women receive only 16% of conventional small business loans, and only 4.4% of the total dollar value of loans from all sources.<sup>179</sup>

Disparity studies are replete with statistical evidence of disparities in access to capital.<sup>180</sup> For example, a 2017 disparity study conducted in Massachusetts concluded

<sup>175</sup> *Id.*

<sup>176</sup> *Strengthening Access to Capital for Minority-Owned Small Business: Field Hearing Before the S. Committee on Small Business and Entrepreneurship*, 115th Cong. 58 (2018) (statement of Will Holmes, Director of Outreach, Goldman Sachs).

<sup>177</sup> *Id.*

<sup>178</sup> *Strengthening the Entrepreneurial Ecosystem for Women: Hearing Before the S. Comm. on Small Business and Entrepreneurship*, 115th Cong. 3-4 (2017) (statement of Elizabeth Gore).

<sup>179</sup> *Id.* at 15 (statement of Michelle Richards, Executive Director, Great Lakes Women's Business Council).

<sup>180</sup> Keen Indep. Rsch. LLC, *Arizona Department of Transportation Disparity Study Report* 407 (2015) ("There are statistically significant disparities in loan approval rates for African American-owned small businesses compared with similarly-situated non-Hispanic white-owned firms."); NERA Econ. Consulting, *Business Disparities in the San Antonio, Texas Market Area* 9 (2015) ("When minority-owned firms applied for a loan, their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences in firm size and credit history."); NERA Econ. Consulting, *Business Disparities in the Travis County, Texas Market Area* 119 (2016) ("When minority-owned firms applied for a loan, their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences in firm size and credit history."); *id.* at 135 ("African American-owned firms are 24 percentage points more likely than nonminority male-owned firms to have their loan application denied . . ."); MGT of America, Inc., *City of Hampton and Hampton Schools Historical M/WBE Utilization Disparity Study* E-10 (2014) ("About 1.3 percent of non-M/WBE loan applicants reported being denied commercial bank loans, as compared to 36.3 percent of African American applicants and 4.5 percent of nonminority woman applicants."); MGT of America, Inc., *Comprehensive Disparity Study for the City of Pensacola* 8-5, 8-6 (2012) ("About 3.7 percent of non-

“that there is evidence of discrimination against M/WBEs in the DCAMM market area in the small business credit market” and that “[t]his discrimination is particularly acute for African American-owned small businesses where, even after adjusting for differences in assets, liabilities, and creditworthiness, the loan denial rates remain substantially higher than for nonminority male-owned small businesses.”<sup>181</sup> Another study, conducted in Washington State, analyzed data in the National Survey of Small Business Finance (NSSBF) and found that “African American businesses were much more likely to be denied loans than comparable businesses owned by nonminority males.”<sup>182</sup> In fact, only 2.7% of non-M/WBE loan applicants reported being denied commercial bank loans, as compared to 50% of African American loan applicants.<sup>183</sup> Another study found that “[m]inorities have a significantly lower probability of obtaining a business loan than Caucasian males in all industries.”<sup>184</sup> Similarly, a 2011 Virginia study found that “[a]bout 20.5 percent of non-M/WBEs reported being denied commercial bank loans, as compared to 52.4 percent of African American-owned firms, 35.3 percent of Hispanic American-owned firms.”<sup>185</sup> Of the minority-owned firms that did not apply for financing, 28% of the Hispanic-owned firms, 27% of the Black-owned firms, and 24% of the Asian American-owned firms explained that they did not apply because of a belief

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M/WBE loan applicants reported being denied commercial bank loans, as compared to 52.6 percent of African American-owned firms and 22.2 percent of Nonminority Woman-owned firms.”); NERA Econ. Consulting, *The State of Minority- and Women-Owned Business Enterprise: Evidence from Cleveland* 7 (2012) (“When minority-owned firms did apply for a loan, their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences like firm size and credit history.”); *id.* at 8 (“[F]or African American-owned small businesses where, even after adjusting for differences in assets, liabilities, and creditworthiness, the loan denial rate ranges from 8 to 22 percentage points higher than for nonminority male-owned small businesses.”); Colette Holt & Assoc., *Texas Department of Transportation Disparity Study* 156 (2019) (“Minority-owned firms are less likely to receive loans than non-minority-owned firms regardless of firm size.”); *Native 8(a) Contracting: Emerging Issues, Hearing Before the H. Comm. on Small Business*, 116th Cong. (2019) (“Native Hawaiians have less access to capital because they have a higher loan denial rate for mortgages due to poor credit history.”); Colette Holt & Assoc., *Washington State Airports Disparity Study* 121 (2019) (“[L]oan denial rates for minority firms were about three times higher, at 42 percent, compared to those of non-minority-owned firms, at 16 percent.”); BBC Rsch. & Consulting, *2013 Sound Transit Disparity Study* 4-10 (2013) (32% of MBEs reported difficulties obtaining lines of credit or loans, compared with 14% of majority-owned businesses); BBC Rsch. & Consulting, *2017 Disparity Study: City of Charlotte* 3-9 (2017) (“Researchers have shown that Black American-owned businesses and Hispanic American-owned businesses are more likely to forego submitting business loan applications and are more likely to be denied business credit when they do seek loans, even after accounting for various race-neutral and gender-neutral factors.”); BBC Rsch. & Consulting, *City of Indianapolis and Marion County Disparity Study* 9-4 (2019) (“Qualitative information collected through public meetings, telephone surveys, and in-depth interviews with local businesses also indicated that minority- and woman-owned businesses often have difficulties obtaining business loans and credit.”).

<sup>181</sup> NERA Econ. Consulting, *Business Disparities in the DCAMM Construction and Design Market Area* 9 (2017).

<sup>182</sup> MGT of America, Inc., *2015 Disparity Study for the Washington Suburban Sanitary Commission* ES-9 (2016).

<sup>183</sup> *Id.*

<sup>184</sup> Mason Tillman Assoc., LTD, *Shelby County (Tennessee) Disparity Study Final Report* 10-31 (2016).

<sup>185</sup> MGT of America, Inc., *A Disparity Study for the Commonwealth of Virginia* 7-16 (2011).

that they would not be approved, compared to only 13% of White-owned firms who reported the same.<sup>186</sup>

While these results were reported across the board, individual stories from minority and female business owners supported them. Consistent with the data on the challenges that minority business owners face in obtaining financing, several business owners of color reported how difficult it was to access the financing that their businesses needed.

- “The Hispanic male co-owner of a construction company reported that one major issue he faces is financing. He said that the Contractor’s Licensing Board sets limits on the size of job a contractor can bid on. In order to meet these requirements, they borrowed some money and had friends help them put \$20,000 in the business account. He said that his firm is licensed up to \$200,000 per job, making it ineligible to do jobs over \$200,000. He said that he would love to take on larger jobs but there’s no one who will back them financially without wanting a part of their company.”<sup>187</sup>
- “The African American director of a minority development agency reported that one of the biggest challenges a minority-owned business faces is access to capital and the banks are not making loans to minority businesses. He said that the lack of financing is impacting the ability to obtain bonding.”<sup>188</sup>
- “An African American owner of a DBE-and MBE-certified specialty contracting firm, when asked about challenges starting the business, reported that money was a challenge, saying ‘Finding people that would give you money to make your payroll without [abusing] you, that’s the hardest part.’”<sup>189</sup>

Numerous minority business owners reported on the practical fallout for their businesses resulting from their difficulty in accessing capital. For example:

A Black American male owner of a MBE-certified landscaping firm said that the biggest disadvantage or challenge he faces as a small or disadvantaged business is not being able to obtain capital to buy the equipment he feels the firm needs. He said, “What we would like to do is set up a line of credit and be able to get trucks and stuff, tractors, and Bobcats. We had a chance that one time this guy was going out of business. He was cutting grass, and he was [going to] set us up real good, but we didn’t have the financing to get the equipment.” He said that he believes

<sup>186</sup> Fed. Rsv. Bank of Atlanta, *Small Business Credit Survey: Report on Minority-Owned Firms* 6 (Dec. 2019).

<sup>187</sup> Keen Indep. Rsch. LLC, *Nevada Department of Transportation Disparity Study Final Report Appendix J-39* (2013).

<sup>188</sup> *Id.* at Appendix J-53.

<sup>189</sup> Keen Indep. Rsch. LLC, *Oregon Department of Transportation 2016 Availability and Disparity Study Appendix J-18* (2016).

the key to success in his industry is being able to get the financing to be able to grow. He added, “We don’t have the financing to get the type of equipment that we would like to get to go out and expand.”<sup>190</sup>

Similarly, “[a] minority male owner of a professional services company reported that he has been unable to receive any financial assistance for his small business: ‘We had a very difficult time getting financing. It obviously has put a strain on my business. We had to make business decisions to not seek certain work. The banks perceived my minority company as a business risk even though we had a great business plan that indicated that we were a minimal risk.’”<sup>191</sup>

### C. When Minority and Female Business Owners Do Obtain Loans, They Are Smaller and on Less Favorable Terms and Conditions

Minority- and women-owned firms receive smaller loans at higher interest rates than firms owned by White males, and they also get smaller equity investments.<sup>192</sup> While 49% of White-owned business applicants were approved for all of the financing for which they applied, the same was true for only 31% of Black-owned firms, 35% of Hispanic-owned firms, and 39% of Asian American-owned firms.<sup>193</sup> Thirty-eight percent of Black-owned business applicants and 33% of Hispanic-owned business applicants receive none of the financing they applied for, compared to 20% of White-owned business applicants and 24% of Asian American-owned business applicants.<sup>194</sup> At a congressional hearing on disparities in access to capital, Rep. Al Lawson noted that “minority-firms, including women, are more likely than other businesses to be denied traditional financing compared to other businesses. In fact, the average African-American owner raises about \$500 in equity in the first year, compared to \$18,000 for the average White business start-up.”<sup>195</sup>

Evidence from disparity studies also shows that the loans obtained by minority and female business owners were smaller than those obtained by White male business owners. A 2015 Arizona study found that “[t]he mean value of approved loans for minority- and female-owned businesses in the Mountain region was less than one-half that for non-Hispanic white male-owned firms.”<sup>196</sup> Additionally, numerous studies found that minority and female business owners pay higher interest rates than White business owners.<sup>197</sup>

<sup>190</sup> BBC Rsch. & Consulting, *2015-16 Ohio Public Authorities Disparity Study* Appendix E-29 (2016).

<sup>191</sup> Mason Tillman Assoc., LTD, *Palm Beach County Disparity Study Final Report* 10-13 (2017).

<sup>192</sup> *Empowering America to Reach its Full Economic Potential: Closing the Wealth Gap, Hearing Before the S. Comm. on Small Business and Entrepreneurship*, 113th Cong. (2013).

<sup>193</sup> Fed. Rsv. Bank of Atlanta, *Small Business Credit Survey: Report on Minority-Owned Firms* 6 (Dec. 2019).

<sup>194</sup> *Id.*

<sup>195</sup> *Disparities in Access to Capital: What the Federal Government is Doing to Increase Support for Minority Owned Firms: Field Hearing Before the H. Comm. on Small Business*, 115th Cong. (2018).

<sup>196</sup> Keen Indep. Rsch. LLC, *Arizona Department of Transportation Disparity Study* 4-7 (2015).

<sup>197</sup> See Colette Holt & Assoc., *Texas Department of Transportation Disparity Study* 156 (2019) (“Minority-owned firms paid an average of 7.8 percent in interest rates for loans compared to 6.4 percent

The challenges of obtaining financing lead minority business owners to rely more heavily on their personal funds. Twenty-eight percent of Black and Asian American business owners and 29% of Hispanic owners relied on personal funds as the primary funding source for their businesses, compared to only 16% of White business owners.<sup>198</sup> But as already discussed, the wealth gap between White males and minorities and women limits the personal wealth that minority and women owners have at their disposal.<sup>199</sup>

The challenges that minority- and women-owned businesses face in accessing capital affect their ability to get established in the first place, compete in the market, and maintain thriving and successful businesses over time.

## VI. COVID Has Had a Disproportionate Impact on Minority- and Women-Owned Businesses

The 2020 economic downturn caused by the COVID-19 pandemic has had an extremely disproportionate effect upon minority- and women-owned businesses.<sup>200</sup> This disparity exists for two critical reasons: (1) minority- and women-owned businesses tend to face underlying challenges that make them harder to run and scale successfully, and (2) they are more likely to be concentrated in the industries most immediately affected by the pandemic, such as service industries.<sup>201</sup> Distressed companies were three times as likely to close because of a two-month revenue shock,<sup>202</sup> and in April 2020, the Federal Reserve Bank of New York reported that minority- and women-owned businesses were twice as likely to be classified as “at risk” or “distressed” as their non-

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for non-minority-owned firms.”); NERA Econ. Consulting, *Business Disparities in the San Antonio, Texas Market Area* at 9 (2015) (“When minority-owned firms did receive a loan they were obligated to pay higher interest rates on the loans than comparable nonminority-owned firms.”); Keen Indep. Rsch. LLC, *Arizona Department of Transportation Disparity Study 4-7* (2015) (“There is evidence that minority- and women-owned small businesses in the Mountain region paid higher interest rates on their business loans than non-minority male-owned small businesses.”); NERA Econ. Consulting, *Business Disparities in the Travis County, Texas Market Area* 119 (2016) (“When minority-owned firms did receive a loan they were obligated to pay higher interest rates on the loans than comparable nonminority-owned firms.”); NERA Econ. Consulting, *The State of Minority- and Women-Owned Business Enterprise: Evidence from Cleveland 7* (2012) (“When minority-owned firms did receive a loan they were obligated to pay higher interest rates on the loans than comparable nonminority-owned firms.”).

<sup>198</sup> Fed. Rsrv. Bank of Atlanta, *Small Business Credit Survey: Report on Minority-Owned Firms* 5 (Dec. 2019).

<sup>199</sup> A number of studies have demonstrated that lower start-up capital adversely affects prospects for those businesses. See, e.g., Keen Indep. Rsch. LLC, *2017 Minnesota Joint Disparity Study* (2017).

<sup>200</sup> *Capital Access for Minority Small Businesses: COVID-19 Resources for an Equitable and Sustainable Recovery: Hearing Before S. Comm. on Small Business & Entrepreneurship*, 116th Cong. (2020).

<sup>201</sup> Andre Dua, Deepa Mahajan, Ingrid Millan, and Shelley Stewart, *COVID-19’s effect on minority-owned small businesses in the United States*, McKinsey & Company (May 2020); see also *Access Denied: Challenges for Women- and Minority-Owned Businesses Accessing Capital and Financial Services*, *Hearing Before Subcomm. on Diversity and Inclusion of the H. Comm. on Financial Services*, 116th Cong. (2020).

<sup>202</sup> *Id.*

minority male-owned counterparts.<sup>203</sup> The effects on minority- and women-owned businesses were thus predictable and pronounced. According to a recent survey of Latina and Black female business owners, 70% reported that COVID-19 has caused a decrease or loss of revenue, and 90% reported that they are currently unable to pay themselves a sustainable income.<sup>204</sup> The number of active small business owners in the United States dropped by 22% between February and April 2020, but this drop was even greater for minority and women business owners—Black business owners dropped by 41%, Latino business owners dropped by 32%, Asian American business owners dropped by 26%, and female-owned businesses dropped by 25%.<sup>205</sup>

Notwithstanding the federal government's efforts to assist small businesses in the wake of the economic crisis, this disparity persists. The Paycheck Protection Program (PPP), administered by the Small Business Administration, oversaw the disbursement of 4.4 million private loans totaling over \$511 billion as of May 26, 2020, to help small businesses with employees stay afloat during the COVID-19 economic crisis. A PPP loan is based on the applicant's average monthly payroll costs and could be partially or fully forgiven if the business keeps its employee counts and employee wages stable. However, businesses owned by women and people of color were more likely than White-male-owned businesses to face challenges in taking advantage of the PPP program for several reasons. First, businesses owned by people of color are likely to have fewer employees and lower payroll and thus could not qualify for higher loan amounts. Second, pre-existing disparities in access to capital, discussed in detail above in Section V, made it less likely that business owners of color would have the commercial lending relationships necessary to access the PPP program and discouraged many from applying. Third, the SBA did not issue guidance to lenders about prioritizing borrowers in rural, minority-owned, or women-owned markets and did not collect data that would allow analysis of whether lenders served underserved and rural markets under the PPP program. Fourth, PPP excluded potential loan recipients based on many forms of criminal legal system involvement, including people who have been charged, but not tried or convicted of a crime.<sup>206</sup> Due to racial disparities in all aspects of the criminal justice system, there is evidence that this provision had a negative impact on business owners of color.<sup>207</sup> These factors and others may have contributed to the fact that 70% of Black firms affiliated with the U.S. Black Chambers, Inc. that applied for PPP loans were denied, and 96% of U.S. Black Chambers, Inc. members who applied did not receive the

<sup>203</sup> *Access Denied: Challenges for Women- and Minority-Owned Businesses Accessing Capital and Financial Services: Hearing Before Subcomm. On Diversity and Inclusion of the H. Comm. on Financial Services*, 116th Cong. (2020).

<sup>204</sup> *Access Denied: Challenges for Women- and Minority-Owned Businesses Accessing Capital and Financial Services: Hearing Before Subcomm. On Diversity and Inclusion of the H. Comm. on Financial Services*, 116th Cong. (2020).

<sup>205</sup> Robert W. Fairlie, *The Impact of COVID-19 on Small Business Owners: Evidence of Early-Stage Losses from the April 2020 Current Population Survey*, National Bureau of Economic Research 1 (June 2020).

<sup>206</sup> Business Loan Program Temporary Changes; Paycheck Protection Program, 85 Fed. Reg. 20,811 (Apr. 15, 2020) (to be codified at 13 C.F.R. pt. 120).

<sup>207</sup> Ctr. for Responsible Lending, *The Paycheck Protection Program Continues to be Disadvantageous to Smaller Businesses, Especially Businesses Owned by People of Color and the Self-Employed* (Apr. 2020).

PPP loan amount that they requested.<sup>208</sup> Women of color similarly suffered. Since less than 7% of businesses owned by women of color have employees, few were in a position to benefit from the PPP despite facing revenue losses.<sup>209</sup>

The economic fallout of the COVID-19 pandemic is ongoing, and the long-term effects remain to be seen. It is already apparent, however, that this crisis has revealed and exacerbated the hardships that minority- and women-owned businesses continue to face.

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<sup>208</sup> *Capital Access for Minority Small Businesses: COVID-19 Resources for an Equitable and Sustainable Recovery: Hearing Before S. Comm. on Small Business & Entrepreneurship*, 116th Cong. (2020).

<sup>209</sup> Closing the Women's Wealth Gap Initiative, *On the Margins: Economic Security for Women of Color Through the Coronavirus Crisis and Beyond*, Closing the Women's Wealth Gap 17 (Apr. 2020).



**APPENDIX A****Congressional Hearings from 2010 to 2021  
Addressing Public Procurement and Challenges Facing Minority- and  
Women-Owned Business Enterprises**

- *How Invidious Discrimination Works and Hurts: An Examination of Lending Discrimination and Its Long-term Economic Impacts on Borrowers of Color, Hearing before Subcomm. on Oversight and Investigations of the H. Comm. on Financial Services, 117<sup>th</sup> Cong. (2021).*
- *Capital Access for Minority Small Businesses: COVID-19 Resources for an Equitable and Sustainable Recovery, Hearing Before S. Comm. on Small Business & Entrepreneurship, 116<sup>th</sup> Cong. (2020).*
- *Small Business in Crisis: The 2020 Paycheck Protection Program and its Future Before S. Comm. on Small Business and Entrepreneurship, 116<sup>th</sup> Cong. (2020).*
- *Oversight Hearing on “From Languages to Homelands: Advancing Tribal Self-Governance and Cultural Sovereignty for Future Generations,” Hearing Before the S. Comm. on Indian Affairs, 116<sup>th</sup> Cong. (2020).*
- *Holding Financial Regulators Accountable for Diversity and Inclusion: Perspectives from the Office of Minority and Women Inclusion, Hearing Before Subcomm. On Diversity and Inclusion of the H. Comm. on Financial Services, 116<sup>th</sup> Cong. (2020).*
- *The Rent is Still Due: America’s Renter, COVID-19, and an Unprecedented Eviction Crisis, Hearing Before the H. Comm. on Financial Services, 116<sup>th</sup> Cong. (2020).*
- *Access Denied: Challenges for Women- and Minority-Owned Businesses Accessing Capital and Financial Services, Hearing Before Subcomm. On Diversity and Inclusion of the H. Comm. on Financial Services, 116<sup>th</sup> Cong. (2020).*
- *Promoting Inclusive Lending During the Pandemic: Community Development, Financial Institutions, and Minority Depository Institutions, Hearing Before the H. Comm. on Financial Services, 116<sup>th</sup> Cong. (2020).*
- *Transparency in Small Business Lending, Hearing Before the H. Comm. on Small Business, 116<sup>th</sup> Cong. (2020).*
- *Transportation’s Disadvantaged Business Enterprise Program, Hearing Before the H. Comm. on Transportation and Infrastructure, 116<sup>th</sup> Cong. (2020).*

- *Examining the Racial and Gender Wealth Gap in America, Hearing Before Subcomm. On Diversity and Inclusion of the H. Comm. on Financial Services, 116<sup>th</sup> Cong. (2019).*
- *Reauthorization of the SBA's Contracting Programs, Hearing Before the S. Comm. on Small Business and Entrepreneurship, 116<sup>th</sup> Cong. (2019).*
- *Embracing Corporate Social Responsibility: Small Business Best Practices, Hearing Before the H. Comm. on Small Business, 116<sup>th</sup> Cong. (2019).*
- *Fostering the American Dream: How SBA Can Empower Immigrant Small Business Owners, Field Hearing Before the H. Comm. on Small Business, 116<sup>th</sup> Cong. (2019).*
- *Native 8(a) Contracting: Emerging Issues, Hearing Before the H. Comm. on Small Business, 116<sup>th</sup> Cong. (2019).*
- *The Role of the SBA's 8(a) Program in Enhancing Economic Opportunities, Hearing Before the H. Comm. on Small Business, 116<sup>th</sup> Cong. (2019).*
- *Lost Opportunities? SBA's Engagement with Historically Black Colleges and Universities, Hearing Before the H. Comm. on Small Business, 116<sup>th</sup> Cong. (2019).*
- *Strengthening Access to Capital for Minority-Owned Small Business, Field Hearing Before the S. Committee on Small Business and Entrepreneurship, 115<sup>th</sup> Cong. (2018).*
- *Opportunities and Challenges with the Small Business Administration's Federal Contracting Programs, Hearing Before the S. Comm. on Small Business and Entrepreneurship, 115<sup>th</sup> Cong. (2018).*
- *Disparities in Access to Capital: What the Federal Government is Doing to Increase Support for Minority Owned Firms, Field Hearing Before the H. Comm. on Small Business, 115<sup>th</sup> Cong. (2018).*
- *Strengthening the Entrepreneurial Ecosystem for Women, Hearing Before the S. Comm. on Small Business and Entrepreneurship, 115<sup>th</sup> Cong. (2017).*
- *Minority Access to Capital, Field Hearing Before the S. Comm. on Small Business and Entrepreneurship, 114<sup>th</sup> Cong. (2015).*
- *Accessing Capital in Indian Country, Hearing Before the S. Committee on Indian Affairs, 114<sup>th</sup> Cong. (2015).*
- *Empowering America to Reach its Full Economic Potential: Closing the Wealth Gap, Hearing Before the S. Comm. on Small Business and Entrepreneurship, 113<sup>th</sup> Cong. (2013).*

- *Strengthening the Entrepreneurial Ecosystem for Minority Women, Hearing Before the S. Comm. on Small Business and Entrepreneurship, 113<sup>th</sup> Cong. (2013).*
- *Closing the Gap: Exploring Minority Access to Capital and Contracting Opportunities, Hearing Before the S. Comm. on Small Business and Entrepreneurship, 112<sup>th</sup> Cong. (2011).*
- *Small Business Participation in the Federal Procurement Marketplace, Hearing Before the H. Comm. on Small Business, 111<sup>th</sup> Cong. (2010).*
- *Minority Contracting: Opportunities and Challenges for Current and Future Minority-Owned Businesses, Hearing Before the Subcommittee on Government Management, Organization, and Procurement of the H. Comm. on Oversight and Government Reform, 111<sup>th</sup> Cong. (2010).*

**APPENDIX B****State and Local Disparity Studies from 2010-2021****Alaska**

*Alaska Department of Transportation & Public Facilities Disadvantaged Business Enterprise Study, Final Report*, Prepared by the Alaska Department of Transportation & Public Facilities Civil Rights Office (2020).

*Alaska Department of Transportation & Public Facilities Disadvantaged Business Enterprise Study, Final Appendices*, Prepared by the Alaska Department of Transportation & Public Facilities Civil Rights Office (2020).

*Alaska Department of Transportation and Public Facilities Disparity Study*, Prepared by MGT of America, Inc. (2014).

**Arizona**

*Arizona Department of Transportation Disparity Study, Final Report*, Prepared by Keen Independent Research (2020).

*Arizona Department of Transportation Disparity Study Report*, Prepared by Keen Independent Research (2015).

**California**

*Availability and Disparity Study, California Department of Transportation, Final Report*, Prepared by BBC Research & Consulting (2012).

*BGPAA Disparity Study - Final Report, Burbank-Glendale-Pasadena Airport Authority (CA)*, Prepared by BBC Research & Consulting (2012).

*California Department of Transportation Availability and Disparity Study Report*, Prepared by BBC Research & Consulting (2021).

*California High-Speed Rail Authority Business Market Availability and Disparity Study*, Prepared by Mason Tillman Associates, Ltd. (2014).

*Caltrans 2014 Disparity Study for FTA Contracts, California DOT*, Prepared by BBC Research & Consulting (2014).

*Caltrans Disparity Study*, Prepared by BBC Research and Consulting for Caltrans Department of Transportation (2016).

*City of Oakland 2017 Race and Gender Disparity Study Draft*, Prepared by Mason Tillman Associates, Ltd. (2020).

*City of San Diego 2020 Disparity Study*, Prepared by BBC Research & Consulting (2021).

*Disadvantaged Business Enterprise (DBE) Program Disparity Study Update*, Prepared by Mason Tillman Associates, Ltd. for the Los Angeles County Metropolitan Transportation Authority Disparity Study (2013).

*2015 Disadvantaged Business Enterprise Disparity Study, John Wayne Airport, County of Orange, California Final Report*, Prepared by MGT of America, Inc. (2016).

*Imperial County Transportation Commission Disparity Study*, Prepared by BBC Research & Consulting (2014).

*LA Metro 2017 Disparity Study*, Prepared by BBC Research & Consulting for the Los Angeles County Metropolitan Transportation Authority (2018).

*Metro Disparity Study Final Report, Los Angeles County Metropolitan Transportation Authority*, Prepared by BBC Research & Consulting (2010).

*MTS Disparity Study Final Report*, Prepared by BBC Research & Consulting for the San Diego Metropolitan Transit System (2010).

*OCTA Disparity Study Final Report, Orange County Transportation Authority*, Prepared by BBC Research & Consulting (2010).

*SANDAG Disparity Study Final Report*, Prepared by BBC Research & Consulting for the San Diego Association of Governments (2010).

*San Diego Association of Governments Disparity Study*, Prepared by BBC Research & Consulting (2014).

*San Diego County Regional Airport Authority Disparity Study*, Prepared by BBC Research & Consulting (2010).

*San Francisco Bay Area Rapid Transit District Disparity Study Volume I*, Prepared by Miller<sup>3</sup> Consulting, Inc. (2017).

*Disadvantaged Business Enterprise Availability, Utilization, and Disparity Study for the San Francisco Municipal Transportation Agency*, Prepared by Rosales Business Partners LLC (2015).

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*City and County of Denver Disparity Study*, Prepared by BBC Research & Consulting (2018).

*City and County of Denver Minority/Women Owned/Disadvantaged Business Enterprise Disparity Study*, Prepared by MGT of America, Inc. (2013).

*Colorado Disparity Study, Final Report*, Prepared by Keen Independent Research (2020).

*Disparity Study for Denver Public Schools*, Prepared by MGT of America, Inc. (2015).

### **Connecticut**

*Connecticut Disparity Study: Phase 1*, Prepared by The Connecticut Academy of Science and Engineering for the Connecticut General Assembly and the Government Administration and Elections Commission (2013).

*Connecticut Disparity Study: Phase 2*, Prepared by The Connecticut Academy of Science and Engineering for the Connecticut General Assembly and the Government Administration and Elections Commission (2014).

*Connecticut Disparity Study: Phase 3*, Prepared by The Connecticut Academy of Science and Engineering for the Connecticut General Assembly and the Government Administration and Elections Commission (2016).

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*2015 Disparity Study for Washington Suburban Sanitary Commission*, Prepared by MGT of America, Inc. (2016).

*2010 Disparity Study for Washington Suburban Sanitary Commission*, Prepared by Mason Tillman Associates (2011).

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*Broward County Public Schools Disparity Study-Final Report*, Prepared by Mason Tillman Associates (2015).

*Comprehensive Disparity Study for the City of Pensacola*, Prepared by MGT of America, Inc. (2012).

*Disparity Study for Miami-Dade County Public Schools Phase I Report*, Prepared by MGT of America, Inc. (2014).

*Hillsborough County Aviation Authority Disparity Study Update Final Report*, Prepared by MGT of America, Inc. (2015).

*Jacksonville Multi-Jurisdictional Disparity Study Volume 1*, Prepared by Mason Tillman Associates (2013).

*Miami-Dade County Comprehensive Disparity Study, Final Report*, Prepared by Mason Tillman Associates, Ltd. (2015).

*Minority, Women, and Small Business Enterprise Disparity Study for the City of Tallahassee, Leon County, Florida and Blueprint Intergovernmental Agency*, Prepared by MGT Consulting Group (2019).

*Palm Beach County Disparity Study*, Prepared by Mason Tillman Associates, Ltd. (2017).

*Solid Waste Authority of Palm Beach County, Florida Disparity Study*, Prepared by Mason Tillman Associates, Ltd. (2017).

*Solid Waste Authority of Palm Beach County, Florida Disparity Study Appendix A*, Prepared by Mason Tillman Associates, Ltd. (2017).

*The State of Minority- and Women-Owned Business Enterprise: Evidence from Broward County*, Prepared by NERA Economic Consulting for Broward County, Florida (2010).

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*Atlanta Public Schools Disparity Study*, Prepared by Keen Independent Research (2017).

*City of Atlanta Disparity Study Summary Report*, Prepared by Keen Independent Research LLC (2015).

*Comprehensive Disparity Study City of Savannah, Georgia*, Prepared by Griffin & Strong, P.C. (2016).

*Georgia Department of Transportation Disparity Study*, Prepared by Griffin & Strong, P.C. for the State of Georgia (2016).

*Georgia Department of Transportation Disparity Study*, Prepared by BBC Research & Consulting for the State of Georgia (2012).

### **Hawaii**

*Hawaii Department of Transportation 2019 Availability and Disparity Study*, Prepared by Keen Independent Research (2020).

*The State of Minority- and Women-Owned Business Enterprise: Evidence from Hawai'i*, Prepared by NERA Economic Consulting for the Hawai'i Department of Transportation (2010).

**Idaho**

*Idaho Transportation Department Disparity Study*, Prepared by BBC Research & Consulting (2017).

**Illinois**

*Chicago Transit Authority Disparity Study*, Prepared by Colette Holt & Associates (2019).

*City of Chicago Disparity Study for Construction Contracts*, Prepared by Colette Holt & Associates (2021).

*Cook County, Illinois Disparity Study*, Prepared by Colette Holt & Associates (2015).

*Illinois Department of Transportation 2017 Disparity Study*, Prepared by BBC Research & Consulting (2018).

*Illinois Department of Transportation/Illinois Tollway Disadvantaged Business Enterprises Disparity Study, Volume 1: Illinois State Toll Highway Authority*, Prepared by Mason Tillman Associates, Ltd. (2011).

*Illinois Department of Transportation/Illinois Tollway Disadvantaged Business Enterprise Disparity Study, Volume 2: Illinois Department of Transportation*, Prepared by Mason Tillman Associates, Ltd. (2011).

*Illinois State Toll Highway Authority Disparity Study Construction and Construction Related Services*, Prepared by Colette Holt & Associates (2015).

*Metra Availability Study*, Prepared by Colette Holt & Associates for the Northeast Illinois Regional Commuter Railroad Corporation (2016).

*Pace Suburban Bus Disparity Study*, Prepared by Collette Holt & Associates (2015).

*RTA Availability Study*, Prepared by Colette Holt & Associates for the Regional Transportation Authority of Illinois (2016).

*The Metropolitan Water Reclamation District of Greater Chicago Disparity Study 2015*, Prepared by Collette Holt & Associates, (2015).

*The Status of Minority and Women Owned Business Enterprises Relevant to Construction Activity in and around Cook County, Illinois*, Prepared by Collette Holt & Associates and NERA, 2010.

*State of Illinois Department of Central Management Services Disparity Study*, Prepared by Colette Holt & Associates (2015).



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*2015-16 State of Indiana Disparity Study*, Prepared by BBC Research & Consulting for Ball State University (2016).

*2015-16 State of Indiana Disparity Study*, Prepared by BBC Research & Consulting for Indiana Department of Administration (2016).

*2015-16 State of Indiana Disparity Study*, Prepared by BBC Research & Consulting for Indiana University (2016).

*2015-16 State of Indiana Disparity Study*, Prepared by BBC Research & Consulting for Indiana State University (2016).

*2015-16 State of Indiana Disparity Study*, Prepared by BBC Research & Consulting for Ivy Tech Community College (2016).

*2015-16 State of Indiana Disparity Study*, Prepared by BBC Research & Consulting for Purdue University (2016).

*2015-16 State of Indiana Disparity Study*, Prepared by BBC Research & Consulting for University of Southern Indiana (2016).

*2015-16 State of Indiana Disparity Study*, Prepared by BBC Research & Consulting for Vincennes University (2016).

*City of Indianapolis and Marion County Disparity Study*, Prepared by BBC Research & Consulting (2019).

*Indiana Disparity Study Final Report*, Prepared by BBC Research & Consulting (2010).

*Indiana Disparity Study Final Report Appendices*, Prepared by BBC Research & Consulting (2010).

*State of Indiana 2020 Disparity Study*, Prepared by BBC Research & Consulting (2020).

**Kentucky**

*Louisville & Jefferson County Metropolitan Sewer District Disparity Study*, Prepared by Mason Tillman Associates, Ltd. (2018).

**Louisiana**

*City of Baton Rouge, Parish of East Baton Rouge Disparity Study*, Prepared by Keen Independent Research (2019).

*City of New Orleans Disparity Study*, Prepared by Keen Independent Research (2018).

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*City of Frederick MD Disparity Study Report*, Prepared by Griffin & Strong (2021).

*Disadvantaged Business Enterprise Disparity Study: Volume I*, Prepared by NERA Economic Consulting for the Maryland Department of Transportation (2018).

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*MBE/WBE Disparity Study for the Baltimore City Public Schools*, Prepared by NERA Economic Consulting (2014).

*Montgomery County Maryland Disparity Study Final Report*, Prepared by Griffin & Strong (2014).

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*City of Boston 2020 Disparity Study*, Prepared by BBC Research & Consulting (2021).

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*2017 Minnesota Joint Disparity Study City of Saint Paul*, Prepared by Keen Independent Research (2018).

*2017 Minnesota Joint Disparity Study Hennepin County*, Prepared by Keen Independent Research (2018).

*2017 Minnesota Joint Disparity Study Metropolitan Airports Commission*, Prepared by Keen Independent Research (2018).

*2017 Minnesota Joint Disparity Study Metropolitan Council*, Prepared by Keen Independent Research (2018).

*2017 Minnesota Joint Disparity Study Metropolitan Mosquito Control District*, Prepared by Keen Independent Research (2018).

*2017 Minnesota Joint Disparity Study Minnesota Department of Administration*, Prepared by Keen Independent Research (2018).

*2017 Minnesota Joint Disparity Study Minnesota Department of Transportation*, Prepared by Keen Independent Research (2018).

*2017 Minnesota Joint Disparity Study Minnesota State Colleges and Universities*, Prepared by Keen Independent Research (2018).

*State of Minnesota Joint Availability and Disparity Study, Final Report*, Prepared by MGT of America, Inc. for the Metropolitan Airports Commission (2010).

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*The State of Minority- and Women-Owned Business Enterprise: Evidence from Minneapolis*, Prepared by NERA Economic Consulting (2010).

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*The State of Minority- and Women-Owned Business Enterprise: Evidence from Mississippi*, Prepared by NERA Economic Consulting for the Jackson Municipal Airport Authority (2012).

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*City of Kansas City Construction Workforce Disparity Study*, Prepared by Keen Independent Research (2019).

*City of Kansas City, Missouri Disparity Study*, Prepared by Colette Holt & Associates (2016).

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*City of St. Louis Disparity Study Volume 1*, Prepared by Mason Tillman Associates (2015).

*Jackson County, Missouri Disparity Study*, Prepared by Colette Holt & Associates (2017).

*Kansas City Area Transportation Authority Disadvantaged Business Enterprise Availability Study*, Prepared by Colette Holt & Associates (2016).

*Metropolitan St. Louis Sewer District Disparity Study Draft Report*, Prepared by Mason Tillman Associates, Ltd. (2012).

*Missouri Department of Transportation DBE Availability Study*, Prepared by Keen Independent Research (2019).

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*Saint Louis County Disparity Study*, Prepared by Griffin & Strong P.C. (2017).

*State of Missouri Office of Administration Disparity Study*, Prepared by Colette Holt & Associates (2014).

**Montana**

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**Nevada**

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*Nevada Department of Transportation Disparity Study Final Report*, Prepared by Keen Independent Research (2013).

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*Newark Public Schools Disparity Study 2017*, Prepared by Collette Holt & Associates (2017).

*Purchasing Disparity Study (Draft)*, Prepared by MGT of America, Inc. for the City of Jersey City (2011).

**New York**

*City of New York Disparity Study*, Prepared by MGT Consulting Group (2018).

*State of New York 2016 MWBE Disparity Study Volume I*, Prepared by Mason Tillman Associates, Ltd. (2016).

*State of New York 2016 MWBE Disparity Study Policy Review Final Report Volume II*, Prepared by Mason Tillman Associates, Ltd. (2017).

**New Jersey and New York**

*The Port Authority of New York and New Jersey MWBE Disparity Analysis 2017 Volume I: Final Report*, Prepared by Mason Tillman Associates, Ltd. (2018).

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*City of Asheville, North Carolina Disparity Study*, Prepared by BBC Research & Consulting (2018).

*City of Charlotte Disparity Study*, Prepared by BBC Research & Consulting (2017).

*City of Winston-Salem 2019 Disparity Study*, Prepared by MGT Consulting Group (2019).

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*Durham County/City of Durham, North Carolina Multi-jurisdictional Disparity Study*, Prepared by Griffin & Strong, P.C. (2015).

*Greensboro, North Carolina Disparity Study*, Prepared by Griffin & Strong (2018).

*Guilford County Schools 2015 Disparity Study*, Prepared by MGT of America, Inc. (2016).

*Mecklenburg County, North Carolina Disparity Study Report*, Prepared by Griffin & Strong (2020).

*North Carolina Department of Transportation*, Prepared by Colette Holt & Associates (2014).

*State of North Carolina Department of Administration, Disparity Study Report: Volume 1, State Agencies*, Prepared by Griffin & Strong, P.C. (2020).

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*Cuyahoga County Disparity Study Report*, Prepared by Griffin & Strong P.C. (2020).

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**Oregon**

*City of Portland Disparity Study*, Prepared by BBC Research & Consulting (2011).

*Oregon Department of Aviation, Oregon Statewide Airport DBE Disparity Study*, Prepared by Keen Independent Research (2021).

*Oregon Department of Transportation Availability and Disparity Study*, Prepared by Keen Independent Research LLC (2016).

*Portland Development Commission Disparity Study*, Prepared by BBC Research & Consulting (2011).

*State of Oregon Disparity Study Update Final Report*, Prepared by MGT of America, Inc. for the Oregon Department of Transportation (2011).

*The Port of Portland Small Business Program Disparity Study*, Prepared by Colette Holt & Associates (2018).

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*City of Philadelphia Fiscal Year 2019 Annual Disparity Study*, Prepared by the City of Philadelphia Department of Commerce and Miller<sup>3</sup> Consulting (2020).

*City of Philadelphia Fiscal Year 2018 Annual Disparity Study*, Prepared by Econsult Solutions, Inc. and Milligan & Company, LLC (2019).

*City of Philadelphia Fiscal Year 2016 Annual Disparity Study*, Prepared by Econsult Solutions, Inc. for the City of Philadelphia Department of Commerce (2017).

*City of Philadelphia Fiscal Year 2015 Annual Disparity Study*, Prepared by Econsult Solutions, Inc. and Milligan & Company, LLC (2016).

*City of Philadelphia Fiscal Year 2014 Annual Disparity Study*, Prepared by Econsult Solutions, Inc. and Milligan & Company, LLC (2014).

*City of Philadelphia Fiscal Year 2013 Annual Disparity Study*, Prepared by Econsult Solutions, Inc. and Milligan & Company, LLC (2014).

*City of Philadelphia Fiscal Year 2012 Annual Disparity Study*, Prepared by Econsult Corp., Milligan & Company, and Winston Terrell (2013).

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*City of Philadelphia Fiscal Year 2009 Annual Disparity Study*, Prepared by Econsult Corp. and Milligan & Company (2010).

*Commonwealth of Pennsylvania Department of General Services Disparity Study*, Prepared by BBC Research & Consulting (2018).

*Pennsylvania Department of Transportation Disparity Study*, Prepared by BBC Research & Consulting (2018).

### **Rhode Island**

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IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TENNESSEE

Ultima Services Corporation,	)	
	)	
Plaintiff	)	
	)	
vs.	)	2:20-CV-00041-DCLC-CRW
	)	
	)	
U.S. Department of Agriculture, et al.	)	
	)	
Defendants.	)	
	)	
	)	
	)	

**REPORT OF DEFENDANT'S EXPERT**

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## Executive Summary

- In this report, I have analyzed recent evidence to determine whether minority-owned businesses in the United States face disparities in public and private contracting markets and, to the extent that disparities exist, to determine the likelihood that such disparities are caused by discrimination. The Section 8(a) Business Development Program at issue in this case is a federal government contracting program that provides contracting opportunities to small and disadvantaged business owners and has a presumption of disadvantage for members of certain minority groups.
- The expert analysis in this report seeks to establish whether minority business owners continue to face discrimination and the lingering effects thereof in the public contracting sector by analyzing three major sources of statistical evidence: (1) evidence from disparity studies commissioned by state and local governments and public contracting entities since 2010; (2) evidence from the U.S. Census Bureau's past and present data collection efforts dedicated to minority-owned businesses; and (3) evidence for minorities and minority business owners from the U.S. Census Bureau's *American Community Survey*.
- Since the U.S. Supreme Court's decision in *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989), courts have consistently held that disparity studies—which examine the utilization of minority-owned businesses in public contracting relative to their availability in a particular geographic and contracting market—provide powerful evidence of discrimination and the continuing effects of discrimination justifying the use of remedial measures in public contracting.
- In Section II, I summarize and analyze the findings from 205 different disparity studies completed between 2010 and 2021, which collectively span 32 states and the District of Columbia and represent practically every industry segment in the U.S. economy. I found that 74 percent of the disparity indexes for minority-owned businesses across all procurement categories were large and adverse, and that minority-owned businesses facing large adverse disparities were utilized on average at just 25 percent of their availability, while median utilization was even lower at just 18 percent of availability. I found similarly large adverse disparities across all major industry sectors and for every minority group. This indicates that in the overwhelming number of public procurement markets, minority-owned businesses are underutilized based on their availability.
- The only two national surveys dedicated to minority-owned business enterprise are the Census Bureau's *Survey of Business Owners and Self-Employed Persons* (SBO) and its *Annual Business Survey* (ABS). Both provide evidence regarding how minority-owned businesses fare in the overall economy. In Section III, I examine data from both sources to determine whether consistent disparities are observed in aggregate data across the U.S. economy. Regardless of whether the SBO data or

the ABS data is examined, I found a consistent pattern of large, adverse, and statistically significant disparities in the performance of minority-owned businesses across all major industry sectors and for every minority group.

- Finally, in Section IV, using data from the Census Bureau's *American Community Survey 5-year Public Use Microdata Sample* (ACS PUMS), I directly test the likelihood that race-neutral factors can account for the large adverse racial disparities observed in the previous sections. Using the statistical technique of regression analysis to control for independent variables untainted by discrimination, I found that the disparities facing minority business owners remain large, adverse, and statistically significant in the vast majority of cases.
- In each of these sections, I have also analyzed disparities in contracts and procurements related to the industries in which the Plaintiff contracted with the U.S. Department of Agriculture to provide services, as the Plaintiff has challenged the use of the 8(a) Business Development Program in these industry segments specifically.
- Based on the data and findings presented in this report, I conclude that there is strong evidence of large, adverse, and statistically significant disparities facing minority-owned businesses in the United States, and in the business categories that the Plaintiff has challenged, and that these disparities cannot be explained by differences between the relevant populations in factors untainted by the effects of discrimination. These disparities are therefore consistent with the presence of discrimination in the business market.

## I. Introduction

I have been asked to provide a statistical overview of the state of Minority-Owned Business Enterprises (“MBE”) in the United States, for the economy as a whole, and in the industry sectors relevant to this matter. I have done this in order to determine how minority-owned businesses fared in public and private contracting markets relative to non-MBEs and, to the extent that disparities exist, to determine the likelihood that such disparities are caused by discrimination.

My findings are drawn from several sources of evidence, including numerous studies of MBE participation in public sector contracting activity that have been performed in the wake of the U.S. Supreme Court’s ruling in *City of Richmond v. J. A. Croson Company*,<sup>1</sup> a number of which I conducted in conjunction with NERA Economic Consulting. These disparity studies examine statistical evidence of MBE participation in public sector and private sector business activity compared to MBE representation in the relevant business population. They also include qualitative, or anecdotal, accounts from both MBEs and non-MBEs regarding these disparities. Since *Croson*, courts have consistently held that such studies provide powerful evidence of discrimination and the continuing effects of discrimination, justifying the use of remedial measures in public contracting.

Additionally, I have drawn findings from the few primary sources of statistical evidence that exist regarding MBEs, namely the Census Bureau’s historical *Survey of Business Owners*, its new *Annual Business Survey*, and its ongoing *American Community Survey*. The *Survey of Business Owners* and its recent successor, the *Annual Business Survey*, provide information regarding the total number of MBEs in the country, their gross sales and receipts, and their employment and payroll, both in absolute terms as well as relative to their non-minority, male-owned counterparts. The *American Community Survey* is an annual version to the former decennial census long form and provides evidence regarding patterns of business formation by minority entrepreneurs and associated business earnings relative to their non-minority, male-owned counterparts. This Census Bureau data provides some of the best available evidence as to how minority businesses fare in the overall economy.

In preparing this report, I conducted extensive original research using all of the above-mentioned sources of evidence. This research is a continuation of similar research I have performed over the course of my career as an economist. Based on the findings presented below, I conclude that there is strong contemporary evidence of large, adverse, and statistically significant disparities facing minority-owned business throughout the United States, in the economy as a whole, and in each major procurement category and industry sector. Of the 205 disparity studies I reviewed, 74 percent of the disparity indexes for minority-owned businesses across all procurement categories were large and adverse, and minority-owned businesses facing large adverse disparities were utilized on average at just one-quarter of their availability, while median utilization was even lower at less than one-fifth of availability.

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<sup>1</sup> 488 U.S. 469 (1989).



Moreover, these disparities cannot be adequately explained by differences between the relevant populations in factors untainted by the effects of discrimination. I conclude that these disparities result from discrimination and its lingering effects, in the economy as a whole, as well as in the market segments that are relevant to public sector contracting and purchasing and to the Plaintiff in the present matter.

### A. Qualifications

I hold a Ph.D. in economics from the University of Texas at Austin. My graduate curriculum included advanced courses in statistics, econometrics and labor economics, among others. Prior to joining NERA Economic Consulting, Inc. in 1995, I served as a Research Associate Professor at the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin and also headed my own economic consulting firm. While at NERA, I conducted economic and statistical studies of discrimination for attorneys, corporations, governments and non-profit organizations. I also conducted research and advised clients on adverse impact and economic damage issues arising from contracting activities, hiring, termination, performance assessment, compensation, and promotion. I have extensive experience producing, processing, and analyzing large and complex statistical databases, including public sector contracting and purchasing data, as well as with myriad socioeconomic and demographic datasets produced by the Census Bureau and other official statistical agencies.

Over the course of my career, I have conducted economic and statistical research and assisted in litigation concerning minority and female participation in public contracting activities. From 2004 through 2018, I directed NERA's national discrimination consulting practice. In that capacity, I served as the project director and principal investigator for more than 40 studies of business discrimination, and prior to that time as principal or co-principal investigator on approximately a dozen additional business discrimination studies. I have authored two peer-reviewed monographs and several articles and white papers on this and related subjects, including *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*, published in 2010 by the *Transportation Research Board of the National Academy of Sciences*.<sup>2</sup>

Between 2010 and 2013 I served as an economic and statistical expert on behalf of the U.S. Department of Justice, testifying in four cases challenging federal policies to promote participation by disadvantaged groups in federal contracting activities. These were:

- *Kevcon, Inc. v. The United States* (United States Court of Federal Claims), concerning the Small Business Administration ("SBA") 8(a) Business Development Program.<sup>3</sup>
- *Geyer Signal, Inc. and Kevin Kissell v. Minnesota Department of Transportation, et al.* (United States District Court for the District of Minnesota), concerning the

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<sup>2</sup> Wainwright and Holt (2010).

<sup>3</sup> Wainwright, Jon S. (2010).

U.S. Department of Transportation (“USDOT”) Disadvantaged Business Enterprise (“DBE”) Program.<sup>4</sup>

- *Midwest Fence Corporation v. United States Department of Transportation, et al.* (United States District Court for the Northern District of Illinois, Eastern Division), concerning the USDOT DBE Program.<sup>5</sup>
- *Rothe Development, Inc. v. Department of Defense and Small Business Administration* (United States District Court for the District of Columbia), concerning the SBA 8(a) Business Development Program.<sup>6</sup>

I have been repeatedly qualified as an expert economic and statistical witness in both federal and state courts and have testified in these and related matters on 20 occasions. I have also testified before the United States Congress on these matters on five previous occasions.

My current curriculum vitae is attached to this report. The source material relied on in reaching my findings and conclusions are noted below in the body of my report and in the “References” section at the conclusion.

## **B. Evidence of Discrimination and its Lingering Effects Causing Disadvantage to Minority-Owned Business Enterprises**

There is strong evidence of significant disparities facing minority-owned businesses in the United States. As other researchers have noted, and as demonstrated in many of the studies, reports, and other testimony submitted to Congress, individuals from minority groups have been historically and consistently disadvantaged by the effects of discrimination in business enterprise. Despite progress in some areas, these disadvantages are still present in business and contracting markets.<sup>7</sup> As my report demonstrates, although severe disparities persist between non-minority male-owned firms and minority-owned firms, we are making progress thanks to programs like the SBA’s Section 8(a) Business Development Program and the USDOT DBE Program. The evidence is overwhelming that, the elimination or reduction of these programs would lead to a return of the much greater disparities of the past. I and other researchers arrive at this conclusion by examining both the public sector contracting markets where affirmative measures like the SBA 8(a) program are found as well as the private sector contracting markets where such programs are rare. This is why, although my report includes voluminous data from public sector sources like disparity studies, I also include a great deal of information from Census sources which examine markets that are largely unremediated by programs like the SBA 8(a) Program.

<sup>4</sup> Wainwright, Jon S. (2012).

<sup>5</sup> Wainwright, Jon S. (2013b), (2013c).

<sup>6</sup> Wainwright, Jon S. (2013a).

<sup>7</sup> See, generally, U.S. Department of Justice (2022); U.S. Small Business Administration (2010). See also U.S. Department of Commerce (2015); Rubinovitz (2013a); Rubinovitz (2013b); Lowrey (2010a); Lowrey (2010b); Marshall (2002); Wainwright (2000).

Blacks are 13.3 percent of the general population, 12.6 percent of the civilian labor force, and 12.2 percent of total employment. However, at the most recent complete count, Blacks owned only 9.5 percent of the nation's businesses, and earned a mere 1.26 percent of all business sales and receipts.<sup>8</sup>

Hispanics are 18.2 percent of the general population, 17.1 percent of the civilian labor force, and 17.0 percent of total employment. However, at last count Hispanics owned only 12.2 percent of the nation's businesses, and earned less than 4.0 percent of all business sales and receipts.

Native Americans are 1.3 percent of the general population, but they are only 1.0 percent of the business population and earned just 0.32 percent of business sales and receipts.

Asians represent 6.1 percent of the general population, 6.2 percent of the civilian labor force, and 6.2 percent of total employment. While Asians own 7.1 percent of the nation's businesses, they earned only 5.9 percent of business sales and receipts.

Even those minorities who manage against the odds to start their own businesses must compete in a business enterprise system that has long been dominated by non-minority male-owned firms.<sup>9</sup> The advantages enjoyed by non-minority males in this context are borne out in the statistics. In a groundbreaking pair of studies of employer business closure rates, Professor Ying Lowrey documented that existing Black-owned, Hispanic-owned and Asian and Pacific Islander-owned businesses across a wide variety of industry groups suffered substantially higher closure rates during the 2002-2006 period than did their non-minority male counterparts.<sup>10</sup> More recently, Professor Robert Fairlie has shown that Black, Hispanic, Asian, and Native American small businesses closed at higher rates than their non-minority male counterparts during the first month of widespread COVID-19 induced shelter-in-place restrictions in April of 2020.<sup>11</sup>

Even among larger firms, such as those with one or more paid employees, the disparities between minorities, on the one hand, and non-minority males, on the other, are stark. In 2017, for every dollar in sales and receipts earned by non-minority male-owned employers, Black-owned employers earned 45 cents, Hispanic-owned employers earned 57 cents,

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<sup>8</sup> General population statistics are from the U.S. Census Bureau (2017a); civilian labor force and total employment figures are from the Bureau of Labor Statistics (2018a, 2018b, 2018c); business enterprise statistics are from the *2012 Survey of Business Owners*, U.S. Census Bureau (2018b). Note: Publicly-owned companies have been excluded from all calculations in this report that use *Survey of Business Owners* or *Annual Business Survey* statistics.

<sup>9</sup> See, e.g., Wainwright (2000), pp. 17-22, and the studies cited therein.

<sup>10</sup> Lowrey, Ying (2010a), pp. 20-21; Lowrey, Ying (2010b), p. 16. The comparison was between non-publicly held establishments that were in business in 2002 but had closed by 2006 versus all non-publicly held establishments in business in 2002.

<sup>11</sup> Fairlie, Robert (2020), p. 16.

Asian-owned employers earned 63 cents, and Native American-owned employers earned 67 cents.<sup>12</sup>

The overwhelming majority of businesses have less than 10 employees, and only a small fraction have more than 500 employees. Minority-owned firms are over-represented in the former category and under-represented in the latter. For the smallest firms in 2017, 78 percent of non-minority male-owned firms had less than 10 employees, compared to 82.1 percent of Black-owned firms, 82.3 percent of Hispanic-owned firms, 81.2 percent of Asian-owned firms, and 82.2 percent of Native American-owned firms.<sup>13</sup> For the largest firms in 2017, 0.21 percent of non-minority male-owned firms had 500 or more employees, compared to 0.12 percent of Blacks, 0.1 percent of Hispanics, 0.07 percent of Asians, and 0.11 percent of Native Americans.<sup>14</sup>

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<sup>12</sup> U.S. Census Bureau (2020a, 2020b). For employer firms, the data are from the 2017 Annual Business Survey, released in May 2020.

<sup>13</sup> U.S. Census Bureau (2018b, 2018c, 2018d).

<sup>14</sup> *Ibid.*

## II. Studies Conducted Since 2010 Document Large Adverse Disparities Facing Minority-Owned Businesses

### A. Introduction

Since the U.S. Supreme Court decision in *City of Richmond v. J.A. Croson Co.*,<sup>15</sup> the disparities facing minority business owners in the United States have been documented in more than 500 studies and related research reports.<sup>16</sup> This is because, since *Croson*, courts have consistently held that disparity studies—which examine the utilization of minority-owned businesses in public contracting relative to their availability in a particular geographic and contracting market—provide powerful evidence of discrimination and the continuing effects of discrimination justifying the use of remedial measures in public contracting.

Much of this material is already before Congress,<sup>17</sup> including “Congressional hearings and reports that address the barriers faced by minority- and women-owned businesses; government-produced and government-sponsored reports on the characteristics and dynamics of minority- and women-owned small businesses; academic literature by social scientists, economists, and other academic researchers that focuses on the manner in which various forms of discrimination act together to restrict business opportunities for minorities and women; and disparity studies commissioned by state and local governments to determine whether there is evidence of racial discrimination in their contracting markets.”<sup>18</sup>

Table 2.1 below identifies 205 different disparity studies of minority business enterprise completed between 2010 and 2021, which collectively span 32 states and the District of Columbia and represent practically every industry segment in the U.S. economy.<sup>19</sup> I assembled all the availability and utilization statistics from these studies into a database, as well as all the disparity indexes derived from them, in order to summarize and analyze the disparity findings across all of the studies.

### B. Overview of Disparity Study Methods

Before proceeding to a summary and analysis of the evidence of minority business disparities in the United States, it is helpful to provide a short overview of what disparity studies are and the types of evidence they typically contain. Below I primarily describe the

<sup>15</sup> 488 U.S. 469 (1989).

<sup>16</sup> Wainwright and Holt (2010, 12, n. 41) noted 300 studies published between 1989 and 2008. I have catalogued an additional 250 studies published between 2009 through 2021.

<sup>17</sup> See U.S. Department of Justice (2022); U.S. Small Business Administration (2010).

<sup>18</sup> U.S. Small Business Administration (2010, p. 2). Most recently, see U.S. Congress (2021, p. 3) (noting 40 recent disparity studies placed into the *Congressional Record*).

<sup>19</sup> Some disparity studies were published in multiple volumes, typically because multiple government entities were included, various appendices were included, or both. The 205 studies examined here therefore include 215 total volumes with relevant material.

key elements included in my own disparity studies. Many of these elements are found in other consultants' studies as well.<sup>20</sup> The key elements of a disparity study include:

- Determining the appropriate product market and geographic market area;
- Developing availability and utilization statistics; determining public entity contracting disparities;
- Calculating economy-wide disparities; and
- Collecting anecdotal evidence in order to check for consistency with statistical findings.

### **1. Determination of Relevant Geographic Market Area**

The relevant geographic market area identifies those vendor locations that account for approximately 75 percent or more of contract and subcontract<sup>21</sup> dollar expenditures in the project database for the study period. Firms in these locations are included for analysis in each study. Each study contains a section describing how the government entity's contract and subcontract data were collected and used to make this determination and showing the results.

Location is determined by linking the zip code of the contractor or subcontractor to the associated state and county. For multi-establishment firms, location does not have to be defined as the headquarters of the firm. If the firm has established a local presence, it is appropriate to use that address for purposes of market area determination.

The major contracting categories typically examined include: construction; architecture, engineering and other construction-related professional services ("AECRS"); other professional and general services ("services"); and commodities, supplies, and equipment ("CSE"). In some cases, separate geographic market determinations are made for each major procurement category, as well as for a combined category.<sup>22</sup>

### **2. Determination of Relevant Product Market**

The relevant product market identifies the detailed industries that account for approximately 75 percent or more of contract and subcontract dollar expenditures in the project database for the study period. Firms in these industries are included for analysis in each study. The amounts accounted for by each industry are listed by dollars and also as a percentage of overall spending. The percentage distribution by industry is used elsewhere in the study to calculate overall MBE availability as a dollar-weighted average of detailed

<sup>20</sup> These are discussed in more detail in Wainwright and Holt (2010, 29–53).

<sup>21</sup> By "subcontract" I intend to include subcontractors, subconsultants, suppliers, and in general, any firm that is paid by the prime contractor or vendor to provide goods or services.

<sup>22</sup> See, e.g., Wainwright and Holt (2010, 29).

industry level MBE availability. Detailed industry affiliation is determined by assigning a NAICS code, as appropriate, to each establishment in the project database.<sup>23</sup>

### 3. Determination of MBE Availability

MBE availability is a statistic expressing the percentage of businesses in a relevant geographic and product market that are owned by minorities.

To estimate availability, my own studies used a “custom census” designed to provide an accurate calculation of the current availability of MBEs in the relevant market.<sup>24</sup> Other consultants have employed different methods for measuring availability, including the use of vendor lists, bidder lists, and other types of Census data, as well as variations of the custom census. A variety of approaches to measuring availability are reflected in the disparity studies identified in Table 2.1.

The custom census approach employs a seven-step analysis that: (1) creates a database of representative public contracts, (2) identifies the appropriate geographic market for the entity’s contracting activity, (3) identifies the appropriate product market for the entity’s contracting activity, (4) counts all businesses in those relevant markets, (5) identifies listed minority-owned businesses in the relevant markets, (6) verifies the ownership status of listed minority-owned businesses, and (7) verifies the ownership status of all other businesses. This method results in an overall MBE availability number that is a dollar-weighted average of all of the underlying industry availability numbers, with larger weights applied to industries with relatively more spending and lower weights applied to industries with relatively less spending. The availability figure can also be sub-divided by race, ethnicity, and gender group, where required.<sup>25</sup>

In addition to the custom census, another relatively common approach is to use internal agency lists of contractors and subcontractors, such as certified MBE/WBE directories, bidders lists, prequalified contractor lists, licensed contractor lists, plan holder lists, or lists of winning bidders or sub-bidders. Internal lists are sometimes supplemented with lists gathered from other sources. I refer to this as the “bidders list approach.”

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<sup>23</sup> NAICS stands for North American Industry Classification System and has been the standard system of industrial classification for the United States since replacing the Standard Industrial Classification (SIC) system in 1997. NAICS divides the economy into 20 sectors. The industries within each sector are grouped according to their production processes. Each NAICS code has 6 digits at the most detailed level. The first two identify industry sectors. The first three identify industry subsectors. The first four identify industry groups, and the fifth and sixth digits identify individual industries. See U.S. Office of Management and Budget (2017).

<sup>24</sup> See, e.g., *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 966 (10th Cir. 2003), cert. denied, 540 U.S. 1027 (2003) (custom census is “more sophisticated” than earlier studies using Census data and bidders’ lists); *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715, 723 (7th Cir. 2007); *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964 (8th Cir. 2003), cert. denied, 124 S.Ct. 2158 (2004) at 973.

<sup>25</sup> See Wainwright and Holt (2010, 33-44) for an extended discussion of the custom census approach.

Still other methods of estimating availability employ variations on the custom census approach or the bidders list approach that attempt to control for factors that are themselves likely to be directly and adversely impacted by discrimination if it exists in the relevant markets.<sup>26</sup>

#### **4. Determination of Agency MBE Utilization**

MBE utilization is a statistic showing the fraction of public contracting and procurement dollars in a particular market that is spent with MBEs.

The project database assembled for a disparity study will typically detail several years of recent contract and subcontract activity for both MBEs and non-MBEs. Utilization statistics—that is, the percentage of contract and subcontract dollars spent with MBEs—can be calculated along a variety of dimensions, including by race and ethnicity, by time period, and by major procurement category.

Many studies conduct separate utilization analyses for prime contracts versus subcontracts, as well as for both types of contracting combined, which often provides the fullest picture of MBE participation relative to an agency's spending. If the project database has been coded by NAICS, utilization statistics can also be produced for detailed industry categories. In a typical study, utilization statistics are then combined with availability measures to determine disparity indexes or disparity ratios.

#### **5. Determination of Agency MBE Disparity**

A disparity index or disparity ratio is simply a comparison of MBE utilization to MBE availability for a given group in a given geographic and product market for a given public agency. The only difference between a disparity index and a disparity ratio is that the former benchmarks parity at a level of 100 while the latter benchmarks it at a level of 1. Testing a disparity index or disparity ratio for substantive and statistical significance allows us to identify, respectively, whether a disparity is large and whether it could have arisen due to random chance alone.

It is important to note that many of the studies in Table 2.1 tested for disparities on contracts and subcontracts that were already subject to race-conscious contracting aspirations or requirements of some type. If such studies find "overutilization" in certain categories, policy makers or courts may be inclined to conclude that there is an absence of discrimination. This would be premature, however, because the results of MBE utilization on projects with MBE contracting goals likely include the positive impact of remedial efforts by the public sector. Of course, if adverse disparities are observed even in cases

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<sup>26</sup> Firm revenues, employment size, bonding limits, and similar "capacity" measures are all likely to be influenced by the presence of discrimination if it exists in the relevant markets. Consequently, building such metrics into the measure of availability will cause any resulting disparity statistic to be understated. That is, the built-in downward bias in the availability measure may lead to a conclusion of no significant disparity when, in fact, a disparity exists.



where race-conscious efforts are present, then the case for an inference of discrimination is stronger.<sup>27</sup>

## 6. Determination of Economy-Wide Disparity Analyses for the Relevant Markets

Disparity studies often include a variety of additional statistical analyses that assess how minorities fare in several key aspects of business enterprise activity. This type of analysis helps to determine whether an agency is passively participating in an industry segment tainted by discrimination. Evidence of economy-wide discrimination in disparity studies can take several forms:

- Regression analyses comparing business formation rates between minorities and similarly situated non-minority males in the relevant markets, using the *Public Use Microdata Sample* from the *American Community Survey*.<sup>28</sup>
- Regression analyses comparing the earnings of minority business owners to those of similarly situated non-minority male business owners in the relevant markets, using the *Public Use Microdata Sample* from the *American Community Survey*.
- Regression analyses comparing denial rates on commercial loans between minority and similarly situated non-minority male business owners, using data from the *Survey of Small Business Finances* produced by the Federal Reserve Board and the Small Business Administration.
- Disparity indexes comparing market share of revenues to market share of business population between minority and non-minority businesses, using data from the Census Bureau's *Survey of Business Owners* or its *Annual Business Survey*.
- Disparity indexes comparing minority utilization to availability, using participation data on private sector construction projects from sources such as *Reed Construction Data* or *F. W. Dodge* or public agency contracting permit databases.

<sup>27</sup> For example, as documented in NERA's disparity studies, MBEs who are used by prime contractors on projects with MBE goals nevertheless frequently report that they are rarely used, or even solicited, for projects without MBE goals in the same jurisdiction. See, e.g., Memphis-Shelby County Airport Authority 2013, pp. 220-221 (Bates US0038930-US0038931); Massachusetts Division of Capital Asset Management and Maintenance 2017, pp. 209-211 (Bates US0017737-US0017738); State of Maryland 2017, pp. 265-266 (Bates US0004163-US0004164); City of Austin 2017, pp. 305-307 (Bates US0136445-US0136446).

<sup>28</sup> Regression analysis is a type of statistical analysis that examines the correlation between two variables ("regression") or three or more variables ("multiple regression" or "multivariate regression") in a mathematical model by determining the line of best fit through a series of data points. In simpler terms, regression analysis is a statistical technique allowing the comparison between certain outcomes, such as the level of wages, the extent of business formation, the level of business earnings, or the extent of loan denials, and minority status, while holding other, potentially non-discriminatory factors, such as geographic location, industry affiliation, education, age, or balance sheets, constant.

## 7. Collection of Anecdotal Evidence

Anecdotal evidence consists of personal accounts from business owners, MBE and non-MBE alike, concerning the barriers, challenges, and successes they experience in the marketplace.

Anecdotal evidence is an important part of a disparity study because it can confirm or conflict with the trends shown in the statistical analyses. Anecdotal evidence can be collected in a variety of formats including mail or telephone surveys, individual interviews, group interviews or focus groups, and public hearings or meetings. All of these approaches can produce qualitative evidence of barriers to full and fair participation by MBEs in public contracting processes. Some disparity studies often employ multiple approaches to gathering this type of evidence, *e.g.*, surveys and focus groups and individual interviews.

Studies typically gather evidence from MBEs as well as non-MBEs and try to document the extent to which barriers reported by anecdotal sources are the result of discrimination beyond the usual challenges facing all businesses related to obtaining capital, navigating business networks, finding suppliers, managing cash flow, *etc.*<sup>29</sup> As a measure of continuing barriers to full participation in the market, special emphasis is often placed on the experiences of MBEs that desire to obtain prime contracts and subcontracts. Studies typically strive to have a wide enough variety of interviewees, survey participants, *etc.*, to ensure representation of all MBE and non-MBE types and all major procurement categories.

### C. Data and Methods

Table 2.1 below identifies 205 different studies of minority business enterprise completed by 12 different authors between 2010 and 2021. The study authors are:

- BBC Research & Consulting ("BBC") (45 studies);
- Colette Holt & Associates ("CHA") (28 studies);
- Econsult Solutions, Inc. ("ECONSULT") (9 studies);
- Griffin & Strong, PC ("GSPC") (17 studies);
- Keen Independent Research, LLC ("KEEN") (25 studies);
- Mason Tillman Associates, Ltd ("MTA") (23 studies);
- MGT of America ("MGT") (32 studies);

<sup>29</sup> Indeed, my own work on NERA's disparity studies has shown that although *all* small businesses tend to face such problems, MBEs encounter them with greater frequency and intensity than do non-MBEs in the same jurisdiction. *See, e.g.*, City of Minneapolis 2010, p. 251 (Bates US0121718); Jackson Municipal Airport Authority 2012, p. 272 (Bates US0086034); City of San Antonio 2015, p. 265-266 (Bates US0024887); State of Maryland 2017, p. 265 (Bates US0004163).

- Miller3 Consulting Inc. ("MILLER3") (2 studies);
- NERA Economic Consulting ("NERA") (21 studies);
- Rosales Business Partners, LLC ("ROSALES") (1 study);
- Texas A&M University, Corpus Christi - South Texas Economic Development Center ("TXAMCC") (1 study); and
- The Roy Wilkins Center for Human Relations and Social Justice ("RWC") (1 study).

I assembled all the availability and utilization statistics from these studies, as well as all the disparity indexes derived from these statistics, into a database in order to summarize and analyze the findings across all of the studies. The resulting file contains over 53,000 records.<sup>30</sup> Each record includes an availability statistic, a public sector utilization statistic, and the resulting disparity index.

Each record in the database is categorized along several key dimensions. These are provided for every record and include:

- Study Author (BBC, CHA, ECONCONSULT, GSPC, KEEN, MTA, MGT, MILLER3, NERA, ROSALES, TXAMCC, RWC);
- Race and sex group (minorities, non-minority women, non-minority men);<sup>31</sup>
- Detailed race/sex group (Black, Hispanic, Asian, Native American, non-minority women, non-minority men);
- Major procurement category (Construction, AECRS, professional services, general services, CSE, and overall);<sup>32</sup>
- Contractor level (prime contractors and subcontractors combined, prime contractors only, subcontractors only); and

<sup>30</sup> The database includes an additional 122K records classified by minor procurement category. However, 98 percent of those records originate from just one study author (NERA).

<sup>31</sup> Per 13 CFR §124.103(b)(1), presumptively disadvantaged groups in the SBA 8(a) Program include Black Americans, Hispanic Americans, Asian Pacific Americans, Subcontinent Asian Americans, and Native Americans (including Alaska Native, Native Hawaiian, and American Indian). Most disparity studies did not distinguish Asian Pacific and Subcontinent Asian. Those two groups are therefore combined in the database.

<sup>32</sup> Different authors used somewhat varying procurement categories to present their results. I created indicator variables for Construction; AECRS; Professional Services (other than AECRS); General Services; Goods; and All Industries Combined in order to group results as consistently as possible across all studies in the database.

- Key parameters from the underlying study, identifying the public sector agency(ies), state(s), study publication year, study period start year, study period end year, and accounting year type (calendar, state fiscal, federal fiscal).

Additionally, each record may contain other categories captured in different studies. Thus, some records in the database also contain information on:

- Statistical significance testing for disparity indexes;
- Public funding sources (*e.g.*, local, state, federal, mixed public/private);
- Detailed procurement categories (varying from the 2- or 3-digit NAICS level down to 6-digit NAICS level);
- Whether MBE goals were in place or not;
- Agency sub-divisions;
- Geographic sub-divisions; and
- Contract size limitations (*e.g.*, small contracts, large contracts, contracts under \$25K, contracts over \$1M).

Collectively, the 205 studies identified in Table 2.1 examined minority participation in public contracting and procurement for hundreds of different public entities and funding sources. The studies spanned 32 states and the District of Columbia, and combined accounted for approximately \$710 billion in public spending. Of the 205 studies, 87 (42% of the total) were just published in the last five years, spanning 28 states and accounting for approximately \$390 billion in public spending (55% of the total).<sup>33</sup>

A wide variety of state and local government types are represented in these disparity studies, including:

- Entire states (*e.g.*, Colorado, Indiana, Maryland, New York, Rhode Island, Virginia, and Washington);
- State transportation departments, (*e.g.*, Alaska, Arizona, California, Georgia, Hawaii, Idaho, Illinois, Maryland, Minnesota, Missouri, Montana, Nevada, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Texas, and Washington);
- State general administration and purchasing departments (*e.g.*, Illinois, Indiana, Massachusetts, Minnesota, Missouri, North Carolina, and Pennsylvania);

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<sup>33</sup> Twenty-one of these studies were conducted under my direction at NERA. Over the course of those studies, I personally analyzed roughly \$68 billion worth of public sector spending across more than 100,000 prime contracts or purchases and 154,000 subcontracts.

- Cities (*e.g.*, Arlington, Ashville, Atlanta, Austin, Boston, Charlotte, Chattanooga, Chicago, Cincinnati, Cleveland, Columbus, Dallas, Dayton, Fort Worth, Frederick, Greensboro, Houston, Indianapolis, Jacksonville, Jersey City, Kansas City, Madison, Memphis, Minneapolis, New Orleans, New York, Oakland, Pensacola, Philadelphia, Portland, Portsmouth, St. Paul, San Antonio, San Diego, Savannah, Tacoma, Tulsa, Virginia Beach, and Winston-Salem);
- Counties (*e.g.*, Baltimore, MD; Bexar, TX; Broward, FL; Cook, IL; Cuyahoga, OH; Dallas, TX; Harris, TX; Hennepin, MN; Jackson, MO; Mecklenburg, NC; Miami-Dade, FL; Montgomery, MD; Palm Beach, FL; Shelby, TN; St. Louis, MO; and Travis, TX); and
- Special districts including schools, community colleges, universities, public utilities, housing authorities, airports, transit agencies, and others.

Collectively, the 205 studies identified examined contracts and procurements representing practically every industry segment in the U.S. economy. These are grouped generally into the major procurement categories of construction, AECRS, professional services (other than AECRS), general services, and CSE. This comprehensive group of procurement categories reflects the fact that state and local governments, and their prime contractors and vendors, purchase goods and services from businesses in practically every major industry sector in the economy. NERA's most recent study for the State of Maryland, for example, recorded spending with 695 distinct industries.<sup>34</sup>

In addition to covering most major industry sectors, the studies in Table 2.1 span the country geographically, representing all four Census Regions (Northeast, South, Midwest, and West) and all nine Census Divisions (New England, Middle Atlantic, South Atlantic, East South Central, West South Central, Midwest, West North Central, Mountain, and Pacific). In all, 32 states plus the District of Columbia are represented here, including the State of Tennessee where the Plaintiff is based. Collectively, these states hold over 85 percent of the general population of the United States.<sup>35</sup>

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<sup>34</sup> NERA Economic Consulting (2017, p. 45). Public sector spending is not typically distributed evenly among industries, however. In the State of Maryland's case, 261 industries (38 percent) accounted for 99 percent of all spending over the study period.

<sup>35</sup> U.S. Census Bureau (2019a, 2019b).

Table 2.1. Selected Disparity and Availability Studies Performed in the United States Since 2010.

State	Subdivision	Authors	Publication Year	Study Period	Bates Start	Bates End	Call Nos.
AK	Alaska Dept. of Transportation & Public Facilities	MGJ	2014	2007-2011 FF	US0002109	US0002226	S-0521 001
AK	Alaska Dept. of Transportation & Public Facilities	MGJ	2021	2015-2019 SF	US0031979	US0033117	S-2000 001
AZ	Arizona Department of Transportation	KEEN	2015	2008-2013 SF	US0002227	US0002821	S-0535
AZ	Arizona Department of Transportation	KEEN	2020	2014-2018 FF	US0033324	US0033015	S-2001
CA	Burbank-Glendale-Pasadena Airport Authority	BBC	2012	2005-2009 CY	US0076014	US0076867	S-0514
CA	California Department of Transportation	BBC	2012	2007-2010 CY	US0077258	US0078082	S-0506
CA	California Department of Transportation	BBC	2014	2008-2013 FF	US0078692	US0078660	S-0559
CA	California Department of Transportation	BBC	2021	2015-2019 CY	US0116164	US0117219	S-2045
CA	California Department of Transportation (Caltrans)	BBC	2017	2011-2014 CY	US0004446	US0004886	S-0604
CA	City of San Diego	BBC	2021	2015-2019 SF	US0117492	US0118150	S-2036
CA	Imperial County	BBC	2014	2008-2012 CY	US0014575	US0015165	S-2003
CA	L. A. County Metro. Transp. Auth. (L.A. Metro)	BBC	2018	2011-2015 CY	US0015789	US0016376	S-0602
CA	L. A. County Metro. Transp. Auth. (L.A. Metro)	BBC	2010	2003-2007 CY	US0084491	US0085261	S-1412
CA	Orange County Transportation Authority	BBC	2010	2003-2007 CY	US0088058	US0088818	S-1410
CA	San Diego Association of Governments	BBC	2014	2008-2012 CY	US0023471	US0026097	S-0560
CA	San Diego Association of Governments	BBC	2010	2003-2007 CY	US0134725	US0135474	S-1411
CA	San Diego County Regional Airport Authority	BBC	2010	2003-2006 CY	US0128151	US0128811	S-1408
CA	San Diego Metropolitan Transit System	BBC	2010	2003-2006 CY	US0128812	US0129568	S-1409
CA	John Wayne Airport County of Orange California	MGJ	2016	2010-2015 SF	US0127338	US0127649	S-0579 001
CA	California High-Speed Rail Authority	MTA	2014	2007-2013 SF	US0126423	US0126606	S-0551
CA	City of Oakland	MTA	2020	2012-2016 SF	US0033350	US0033651	S-0615
CA	L. A. County Metro. Transp. Auth. (L.A. Metro)	MTA	2013	2008-2010 CY	US0011989	US0012297	S-0508
CA	San Francisco Bay Area Rapid Transit District	MILLER3	2017	2011-2014 SF	US0026698	US0026645	S-0570 001
CA	San Francisco Municipal Transp. Agency (Muni)	ROSALFS	2015	2009-2015 FF	US0026646	US0026928	S-0558
CA	City and County of Denver	BBC	2018	2012-2016 CY	US0033636	US0033626	S-2004
CO	State of Colorado	KEEN	2020	2015-2018 SF	US0034586	US0035315	S-2005
CO	City and County of Denver	MGJ	2013	2005-2010 CY	US0124629	US0125283	S-0510
CO	Denver Public Schools	MGJ	2015	2009-2013 CY	US0081016	US0081335	S-0525 001
DC	Washington Suburban Sanitary Commission	MGJ	2016	2010-2014 SF	US0031425	US0031942	S-0552
DC	Washington Suburban Sanitary Commission	MTA	2011	2004-2009 SF	US0074050	US0074462	S-0468
FL	City of Pensacola	MGJ	2012	2007-2011 SF	US0009170	US0009629	S-0477
FL	City of Tallahassee, Leon County, and Blueprint	MGJ	2019	2013-2017 SF	US0011040	US0011562	S-2006
FL	Hillsborough County Aviation Authority	MGJ	2015	2008-2012 SF	US0126940	US0127337	S-0577
FL	Miami-Dade County Public Schools	MGJ	2014	2007-2007 SF	US0125284	US0125762	S-0516
FL	Broward County Public Schools	MTA	2015	2009-2015 SF	US0076868	US0077257	S-0541
FL	City of Jacksonville	MTA	2013	2006-2010 SF	US0015164	US0015481	S-0518
FL	Miami Dade County	MTA	2015	2007-2011 CY	US0081571	US0082108	S-0573
FL	Palm Beach County	MTA	2017	2009-2013 CY	US0022740	US0023024	S-0589

State	Subdivision	Authors	Publication Year	Study Period	Bates Start	Bates End	Call Nos.
FL	Solid Waste Authority of Palm Beach County	MFA	2017	2009-2013 SF	US0049121	US0049404	S-0574 001
FL	Broward County	NRA	2010	2005-2009 SF	US0120188	US0120602	S-0414
GA	Georgia Department of Transportation	BBC	2012	2009-2011 CY	US0012659	US0013175	S-0461
GA	City of Savannah	GSPC	2016	2010-2014 CY	US0126607	US0126939	S-0556
GA	Georgia Department of Transportation	GSPC	2016	2012-2015 SF	US0013176	US0013479	S-0571
GA	Atlanta Housing Authority	KEFN	2017	2013-2015 SF	US0023822	US0033225	S-2007
GA	Atlanta Public Schools	KEFN	2017	2012-2016 SF	US0033016	US0033053	S-0591 002
GA	City of Atlanta	KEFN	2015	2009-2012 CY	US0135905	US0136115	S-0587
HI	Hawaii Department of Transportation	KEFN	2020	2012-2016 SF	US0036425	US0037241	S-2008
HI	Hawaii Department of Transportation	NRA	2010	2003-2008 FF	US0082292	US0082726	S-0411
ID	Idaho Transportation Department	BBC	2017	2012-2015 SF	US0037242	US0037763	S-0578
IL	Illinois Department of Transportation	BBC	2018	2013-2016 SF	US0013864	US0014427	S-2009
IL	Chicago Metra	CIA	2016	2009-2013 CY	US0134525	US0134724	S-2042
IL	Chicago Regional Transportation Authority	CIA	2017	2009-2013 CY	US0134383	US0134524	S-2041
IL	Chicago Transit Authority	CIA	2019	2012-2016 FF	US0037664	US0037961	S-0622
IL	City of Chicago	CIA	2021	2015-2019 CY	US0117220	US0117491	S-2046
IL	Cook County	CIA	2015	2010-2014 SF	US0115272	US0115443	S-2039
IL	Illinois State Toll Highway Authority	CIA	2015	2010-2012 CY	US0014428	US0014574	S-0540
IL	Metro. Water Reclamation Dist. of Greater Chicago	CIA	2014	2008-2014 CY	US0090989	US0091195	S-0538
IL	Pace Suburban Bus	CIA	2015	2008-2012 CY	US0088974	US0089172	S-0563
IL	State of Illinois Dept. of Central Mgmt. Services	CIA	2015	2010-2014 SF	US0028542	US0028736	S-0553
IL	Il. State Toll Highway Auth. & Il. Dept. of Transp.	MFA	2011	2006-2008 CY	US0062831	US0063177	S-0438 001 & S-0438 002
IN	Ball State University	BBC	2016	2010-2015 SF	US0131005	US0131540	S-1551
IN	City of Indianapolis and Marion County	BBC	2019	2014-2018 CY	US0008311	US0008938	S-0620
IN	Indiana Department of Administration	BBC	2010	2007-2010 SF	US0121751	US0122054	S-0431 001
IN	Indiana Department of Administration	BBC	2016	2010-2013 SF	US0028737	US0029289	S-1549
IN	Indiana State University	BBC	2016	2010-2013 SF	US0130469	US0131004	S-1550
IN	Indiana University	BBC	2016	2010-2013 SF	US0131541	US0132083	S-1552
IN	Ivy Tech Community College	BBC	2016	2010-2013 SF	US0132084	US0132623	S-1553
IN	Purdue University	BBC	2016	2010-2013 SF	US0132624	US0133165	S-1554
IN	State of Indiana	BBC	2020	2014-2018 SF	US0075166	US0076013	S-2031
IN	University of Southern Indiana	BBC	2016	2010-2013 SF	US0133166	US0133701	S-1555
IN	Vincennes University	BBC	2016	2010-2013 SF	US0133702	US0134238	S-1556
KY	Louisville & Jefferson County Metro. Sewer Dist.	MFA	2018	2011-2015 SF	US0037962	US0038231	S-0638
LA	City of Baton Rouge, Parish of East Baton Rouge	KEFN	2019	2013-2017 CY	US0003326	US0003883	S-2012
LA	City of New Orleans	KEFN	2018	2012-2016 CY	US0033965	US0034486	S-0605
LA	Rec. & Park Comm., Parish of E. Baton Rouge	KEFN	2019	2014-2018 CY	US0024090	US0024643	S-2013
MD	City of Frederick	GSPC	2021	2014-2018 SF	US0078951	US0079187	S-0631
MD	Montgomery County	GSPC	2014	2008-2012 SF	US0135486	US0135778	S-0526

State	Subdivision	Authors	Publication Year	Study Period	Bases Start	Bases End	Call Nos.
MD	Baltimore County	MJA	2021	2013-2017 SF	US0081336	US0081562	S-0653
MD	Baltimore County Public Schools	NERA	2014	2007-2013 CY	US0126079	US0126422	S-0544
MD	City of Baltimore	NERA	2014	2007-2012 CY	US0005423	US0005859	S-0520
MD	Maryland Department of Transportation	NERA	2013	2005-2009 SF	US0038232	US0038692	S-0569 001, S-0569 002 & S-0569 003
MD	Maryland Department of Transportation	NERA	2018	2010-2014 SF	US0083783	US0084092	S-0659 001, S-0659 002 & S-0659 003
MD	State of Maryland	NERA	2011	2005-2009 SF	US0083178	US0083782	S-0428
MD	State of Maryland	NERA	2017	2010-2014 SF	US0003884	US0004445	S-0584
MA	City of Boston	BBC	2021	2015-2019 SF	US0074463	US0075165	S-2030
MA	Div. of Capital Asset Mgmt. & Maint. (DCAMM)	NERA	2017	2010-2015 CY	US0017512	US0017870	S-0581
MA	City of Minneapolis	KEFN	2018	2012-2016 SF	US0040133	US0040774	S-1584
MA	City of Saint Paul	KEFN	2018	2012-2016 SF	US0040775	US0041420	S-1596
MA	Hennepin County	KEFN	2018	2012-2016 SF	US0042704	US0043353	S-1589
MA	Metropolitan Airports Commission	KEFN	2018	2012-2016 SF	US0039492	US0040132	S-1590
MA	Metropolitan Council	KEFN	2018	2012-2016 SF	US0043354	US0043996	S-1591
MA	Metropolitan Mosquito Control District	KEFN	2018	2012-2016 SF	US0043997	US0044631	S-1592
MA	Minnesota Department of Administration	KEFN	2018	2012-2016 SF	US0041421	US0042062	S-1588
MA	Minnesota Department of Transportation	KEFN	2018	2012-2016 SF	US0042063	US0042703	S-1593
MA	Minnesota State Colleges and Universities	KEFN	2018	2012-2016 SF	US0044632	US0045269	S-1595
MA	Metropolitan Airports Commission	MGJ	2010	2005-2007 CY	US0129853	US0130105	S-1442
MA	Metropolitan Council	MGJ	2010	2003-2007 CY	US0085494	US0085742	S-1438
MA	Minnesota Department of Administration	MGJ	2010	2002-2007 CY	US0129569	US0129852	S-1439
MA	Minnesota Department of Transportation	MGJ	2010	2002-2007 CY	US0085262	US0085495	S-1437
MA	City of Minneapolis	NERA	2010	2003-2007 CY	US0121454	US0121750	S-0429 001
MS	Jackson Municipal Airport	NERA	2012	2005-2010 FF	US0085743	US0086250	S-0509 001
MO	City of Kansas City, MO Public School System	CHA	2017	2008-2013 CY	US0115564	US0115657	S-2044
MO	City of Kansas City, Missouri	CHA	2017	2008-2013 CY	US0015482	US0015627	S-0576
MO	Jackson County, Missouri	CHA	2016	2008-2013 CY	US0135779	US0135904	S-2011
MO	Kansas City Area Transportation Authority	CHA	2017	2008-2013 CY	US0115444	US0115563	S-2043
MO	State of Missouri Office of Administration	CHA	2014	2008-2013 SF	US0029290	US0029462	S-0527
MO	St. Louis County	GSFC	2017	2012-2018 SF	US0027960	US0028223	S-0586 001
MO	Missouri Department of Transportation	KEFN	2019	2014-2018 FF	US0018431	US0018615	S-2014
MO	City of St. Louis	MJA	2015	2008-2012 SF	US0011563	US0011739	S-0534
MO	St. Louis Metropolitan Sewer District	MJA	2012	2008-2012 SF	US0028224	US0028541	S-0505 001
MO	Missouri Department of Transportation	NERA	2012	2005-2009 SF	US0086397	US0086796	S-0501 001
MT	State of Montana Department of Transportation	KEFN	2016	2010-2014 FF	US0018616	US0019254	S-0554
NJ	Port Authority of New York and New Jersey	MJA	2018	2010-2014 CY	US0128033	US0128150	S-0618
NV	Regional Transp. Commission of Southern Nevada	BBC	2017	2010-2014 FF	US0020299	US0020879	S-2015



State	Subdivision	Authors	Publication Year	Study Period	Bates Start	Bates End	Call Nos.
NV	Nevada Department of Transportation	KEEN	2013	2007-2012 CY	US0019639	US0020298	S-0515
NJ	Newark Public Schools	CHIA	2017	2007-2014 CY	US0087133	US0087236	S-0626
NJ	City of Jersey City	MGJ	2011	2002-2008 SF	US0125763	US0125763	S-0523
NJ	NJ Transit	RWC	2016	2010-2013 FF	US0087237	US0087288	S-2035 001
NY	City of New York	MGJ	2018	2007-2015 SF	US008939	US009169	S-0594 001
NY	State of New York	MTA	2017	2011-2015 SF	US0029463	US0029776	S-0582 001
NY	City of Asheville	NERA	2010	2004-2008 SF	US0120986	US0121453	S-0427 001
NC	City of Charlotte	BBC	2019	2013-2017 SF	US0094887	US0095391	S-0608
NC	North Carolina Department of Transportation	BBC	2017	2013-2016 SF	US0005860	US0006423	S-0587
NC	City of Greensboro	CHIA	2014	2010-2012 SF	US0020880	US0021046	S-0524
NC	Durham County/City of Durham	GSPC	2015	2012-2016 SF	US0013480	US0013846	S-2016
NC	Mecklenburg County, North Carolina	GSPC	2020	2008-2019 SF	US0012360	US0012658	S-0530
NC	State of North Carolina	GSPC	2020	2016-2019 SF	US0084235	US0084490	S-2029 001
NC	City of Charlotte	MGJ	2011	2014-2018 SF	US0045270	US0045519	S-0639 001 & S-0639 002
NC	City of Greensboro North Carolina	MGJ	2012	2006-2010 SF	US0087587	US0088057	S-0435
NC	City of Winston-Salem	MGJ	2019	2006-2010 SF	US0074770	US008015	S-0474
NC	Gaillard County Schools	MGJ	2019	2014-2018 SF	US0092196	US0092315	S-0610 001
OH	Ohio Department of Transportation	BBC	2016	2010-2014 SF	US0118603	US0119009	S-0572
OH	Cuyahoga County	GSPC	2014	2010-2014 CY	US0021418	US0021933	S-0550
OH	City of Dayton	MGJ	2020	2009-2012 SF	US0138151	US0138602	S-0536
OH	City of Cincinnati	MTA	2019	2014-2018 SF	US0045615	US0045842	S-2034
OH	City of Columbus	MTA	2019	2012-2015 CY	US0050156	US0050373	S-0539
OH	City of Cleveland	NERA	2012	2006-2010 SF	US0006762	US0007469	S-0504 001
OH	Northeast Ohio Regional Sewer District	NERA	2010	2004-2008 CY	US0021047	US0021417	S-0415
OK	Oklahoma Department of Transportation	BBC	2010	2005-2009 SF	US0045843	US0046628	S-0457
OK	City of Tulsa	MGJ	2010	2003-2008 SF	US0120603	US0120985	S-0421
OR	City of Portland	BBC	2011	2005-2009 SF	US0009789	US0010561	S-0433
OR	Portland Development Commission	BBC	2011	2005-2009 SF	US0123155	US0123899	S-0432
OR	The Port of Portland	CHIA	2018	2012-2016 SF	US0024025	US0023149	S-0640
OR	Oregon Department of Aviation	KEEN	2021	2015-2019 FF	US0046629	US0047322	S-2018
OR	Oregon Department of Transportation	KEEN	2016	2011-2014 FF	US0021934	US0022660	S-0564
OR	Oregon Department of Transportation	MGJ	2011	2008-2010 SF	US0130106	US0130106	S-1458
PA	Pennsylvania Department of General Services	BBC	2018	2012-2016 SF	US0000825	US0001609	S-0598
PA	Pennsylvania Department of Transportation	BBC	2018	2012-2016 SF	US0000825	US0000824	S-0509
PA	City of Philadelphia	FCONSULT	2010	2009-2009 SF	US0079655	US0079808	S-0329
PA	City of Philadelphia	FCONSULT	2011	2010-2010 SF	US0079809	US0079997	S-0337
PA	City of Philadelphia	FCONSULT	2012	2011-2011 SF	US0079998	US0080150	S-0338

State	Subdivision	Authors	Publication Year	Study Period	Bates Start	Bates End	Call Nos.
PA	City of Philadelphia	ECONSU.LF	2013	2012-2012 SF	US0080151	US0080320	S-0339
PA	City of Philadelphia	ECONSU.LF	2014	2013-2013 SF	US0119643	US0119823	S-0351
PA	City of Philadelphia	ECONSU.LF	2015	2014-2014 SF	US0119894	US0120187	S-0352
PA	City of Philadelphia	ECONSU.LF	2016	2015-2015 SF	US0080321	US0080321	S-0359
PA	City of Philadelphia	ECONSU.LF	2017	2016-2016 SF	US0009630	US0009696	S-2019
PA	City of Philadelphia	ECONSU.LF	2019	2018-2018 SF	US0009697	US0009788	S-2021
PA	City of Philadelphia	MILLERS	2020	2019-2019 SF	US0047523	US0047511	S-2022
RI	State of Rhode Island	MTA	2021	2014-2017 SF	US0119379	US0119642	S-2038
TN	Metropolitan Nashville Airport Authority	CHA	2015	2008-2012 CY	US0018411	US0018430	S-0537
TN	City of Chattanooga	GSPC	2020	2014-2018 SF	US0033652	US0033964	S-2033
TN	City of Memphis	GSPC	2020	2003-2007 SF	US0079188	US0079462	S-0333 001
TN	City of Memphis	GSPC	2016	2010-2014 SF	US0039159	US0039491	S-0555
TN	Metro Nashville Government	GSPC	2018	2013-2017 SF	US0127650	US0128032	S-0606
TN	Metro Nashville Government	GSPC	2017	2014-2016 SF	US0136843	US0136909	S-2037
TN	Memphis Light, Gas, and Water Division	MGT	2012	2006-2010 CY	US0017871	US0018410	S-0561
TN	Shelby County Schools Board of Education	MGT	2017	2012-2016 SF	US0026929	US0027057	S-0593
TN	Shelby County	MTA	2016	2012-2014 CY	US0027058	US0027345	S-0543
TN	Memphis-Shelby County Airport Authority	NERA	2013	2006-2011 CY	US0038693	US0039138	S-0528
TX	City of Fort Worth	CHA	2020	2013-2018 SF	US0047512	US0047695	S-0642
TX	Dallas County	CHA	2015	2010-2013 CY	US0080663	US0080799	S-0542
TX	Dallas Fort Worth International Airport	CHA	2019	2012-2017 CY	US0080800	US0081015	S-0624
TX	Harris County	CHA	2020	2016-2018 SF	US0082109	US0082291	S-0634
TX	Parkland Health and Hospital System	CHA	2016	2011-2013 CY	US0134239	US0134382	S-2040
TX	Texas Department of Transportation	CHA	2019	2012-2016 CY	US0030009	US0030252	S-0629
TX	City of Dallas	MGT	2020	2014-2018 SF	US0047696	US0048045	S-2023
TX	San Antonio Water System	MGT	2015	2011-2013 CY	US0025101	US0025470	S-0568
TX	State of Texas	MGT	2010	2006-2008 SF	US0087026	US0087132	S-0498
TX	Bexar County	MTA	2011	2007-2009 SF	US0033034	US0033349	S-0502 002
TX	City of Arlington & Dallas-Fort Worth Intl. Airport	MTA	2010	2003-2007 SF	US0035430	US0035635	S-0364 002 & S-0364 004
TX	Metro Transit Auth. of Harris County (Metro)	MTA	2021	2014-2018 SF	US0090698	US0090988	S-0654
TX	Austin Independent School District	NERA	2015	2009-2013 SF	US0089604	US0089968	S-0518
TX	City of Austin	NERA	2017	2008-2013 SF	US0136119	US0136831	S-0546 002
TX	City of Houston	NERA	2012	2005-2010 SF	US0008016	US0008310	S-0459
TX	City of San Antonio	NERA	2015	2011-2013 CY	US0024644	US0025100	S-0545
TX	Texas County	NERA	2016	2009-2013 SF	US0030253	US0030640	S-0547
TX	Corpus Christi Regional Transportation Authority	FXAMCC	2016	2015-2015 CY	US0035316	US0035429	S-0565
VA	City of Virginia Beach	HBC	2019	2013-2017 SF	US0001610	US0002108	S-0601
VA	Commonwealth of Virginia	HBC	2021	2015-2019 SF	US0048300	US0049107	S-0638
VA	City of Hampton and Hampton City Schools	MGT	2014	2008-2012 SF	US0013847	US0013863	S-0562

State	Subdivision	Authors	Publication Year	Study Period	Bates Start	Bates End	Call Nos.
VA	City of Portsmouth	MGT	2015	2009-2013 SF	US0091196	US0091517	S-0512
VA	Commonwealth of Virginia	MGT	2011	2006-2009 SF	US0030641	US0031065	S-0499
VA	Portsmouth Public Schools	MGT	2011	2006-2010 SF	US0023749	US0024089	S-0475
WA	Port of Seattle	BBC	2014	2010-2013 CY	US0023150	US0023748	S-0533
WA	Sound Transit	BBC	2013	2008-2011 CY	US0027344	US0027959	S-0532
WA	Sound Transit	BBC	2020	2016-2019 CY	US0089173	US0089358	S-2032
WA	Washington State Department of Transportation	BBC	2013	2009-2011 SF	US0091518	US0092195	S-0507
WA	Port of Seattle	CHA	2019	2012-2016 SF	US0049108	US0049720	S-2027
WA	State of Washington Department of Transportation	CHA	2017	2012-2015 FF	US0031280	US0031424	S-0583
WA	Washington State Department of Transportation	CHA	2019	2012-2016 SF	US0029777	US0030608	S-0628
WA	Washington State Department of Transportation	CHA	2019	2012-2016 SF	US0031066	US0031279	S-0627
WA	City of Tacoma	GSPC	2018	2012-2016 SF	US0016684	US0011039	S-2026
WI	City of Madison	KEFN	2015	2008-2013 CY	US0016377	US0016857	S-0522

Note: (1) Author abbreviations are as follows: BBC-BBC Research & Consulting; CHA-Colette Holt & Associates; Econsulte-Econsult Corporation; GSPC-Griffin & Strong, P.C.; KEFN-Keen Independent Research, LLC; MGT-MGT of America; MTA-Mason Tillman Associates, Ltd.; NERA-NERA Economic Consulting; ROSALES-Rosales Business Partners, LLC; RWC-The Roy Wilkins Center for Human Relations and Social Justice at the University of Minnesota; TXAMCC-South Texas Economic Development Center, Texas A&M Corpus Christi; (2) Study Period abbreviations are CY-Calendar Year, SF-State Fiscal Year, FF-Federal Fiscal Year.

## D. Findings

In reviewing the evidence from these studies, I sought to establish whether disparities continue to exist in the utilization of minority-owned businesses in public contracting relative to their availability in U.S. markets, and the evidence overwhelmingly indicates that they do.

Each study from Table 2.1 is different. They were prepared by different authors, for different government entities, in different parts of the country, with differing levels of resources. They examined different periods of time and employed a variety of methodologies for estimating availability and utilization, as well as for gathering anecdotal information.<sup>36</sup>

Despite their substantial differences, there are striking similarities. Foremost among these is that large, adverse, and statistically significant disparities are found to exist for minority businesses in the great majority of cases throughout the United States, in the economy as a whole, and in each major procurement category and industry sector.

Table 2.2 shows this result clearly. For example, the first five rows in column (6) document that for minorities as a group across all procurement categories combined, 80 percent of the disparity indexes from the studies were adverse (*i.e.*, less than 100) and 74 percent were large and adverse (*i.e.*, less than or equal to 80 or four-fifths).<sup>37</sup> Of the 74 percent of disparity indexes that were considered large and adverse, the mean (average) disparity index value was just 25, and the median value was just 18.<sup>38</sup> These findings are derived from 4,327 distinct disparity indexes.

In other words, 4 out of 5 disparities for minority-owned businesses across all procurement categories are adverse, 3 out of 4 are large and adverse, and minority-owned businesses facing large adverse disparities tended to be utilized at less than one-fifth to just one-quarter of their availability.

The first five rows of Table 2.2 in columns (1) through (5) document similar results when the data are disaggregated into major procurement categories. The fraction of disparities that are adverse varies from 78 percent to 85 percent. The fraction of disparities that are large and adverse varies from 72 percent to 81 percent. The mean disparity index value for large adverse disparities varies from 21 percent to 26 percent, and the median ranges from 14 to 21.

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<sup>36</sup> A detailed discussion of the differences in methods employed by different study authors is provided in Wainwright and Holt (2010), pp. 29-53.

<sup>37</sup> A disparity of less than 80% (or four-fifths) is generally regarded by the federal government as evidence of adverse impact. This is known as the "four-fifths rule." See 29 C.F.R. § 1607.4 (D).

<sup>38</sup> The median is the middle value of a distribution, where half the values are smaller and half the values are larger.

The succeeding four sections in Table 2.2 document similar results when minorities are disaggregated into more detailed race and ethnicity categories. For example:

- For Blacks across all procurement categories combined (column 6), 84 percent of the disparity indexes were adverse and 80 percent were large and adverse. Of the 80 percent that were large and adverse, the mean disparity index value was just 18, and the median was just 8.
- For Hispanics, 82 percent of the disparity indexes were adverse and 78 percent were large and adverse. Of the 78 percent that were large and adverse, the mean disparity index value was just 15, and the median was just 1.
- For Asians, 78 percent of the disparity indexes were adverse and 74 percent were large and adverse. Of the 74 percent of disparity indexes that were large and adverse, the mean disparity index value was just 15, and the median was just 1.
- For Native Americans, 85 percent of the disparity indexes were adverse and 83 percent were large and adverse. Of the 83 percent of disparity indexes that were large and adverse, the mean disparity index value was just 9, and the median was zero.

In stark contrast, the corresponding figures for non-minority males, in the last 5 rows of Table 2.2, show just 19 percent of disparity indexes below 100, and only 7 percent of these would be considered large and adverse. Of the 7 percent of disparity indexes that were large and adverse, the mean disparity index value was 41, and the median was 48.

Tables 2.3, 2.4 and 2.5 provide corresponding findings for those disparity indexes calculated for different levels of prime contracting or subcontracting.<sup>39</sup> Compared to Table 2.2, overall levels of disparity are somewhat more severe when only prime contracting is examined (Table 2.3); somewhat less severe when subcontracting alone is examined (Table 2.4), and similar when both levels are included (Table 2.5). Regardless of which contracting level is examined, however, the general conclusions of large, widespread, and adverse disparities are the same as for Table 2.2.

These general results also persist even when the analysis is restricted to just the newest studies in the database. Table 2.6 shows the same information as in Table 2.2 but only for those studies published between 2017 and 2021. Once again in column (6) we see adverse disparities in 84 percent of overall cases, large and adverse disparities in 77 percent of overall cases, a mean level of disparity for those indexes that are large and adverse of 26, and a median level of 20. For non-minority males, on the other hand, only 14 percent of disparities are adverse, and only 4 percent are large. The mean value is 41 and the median

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<sup>39</sup> Different disparity studies calculate utilization statistics, availability statistics, and disparity indexes at different contracting levels. In some cases, prime contracts and prime contractors are examined separately from subcontracts and subcontractors. In other cases, prime contracts and subcontracts are examined together. *See also*, Section II.B.4, *supra*.

is 51. Although there is variation, these general findings of widespread large and adverse disparities are documented in all procurement categories and for all minority groups.

When the analysis is restricted to those studies for which statistical significance testing was conducted on the disparity indexes, we find there are still far more minority businesses than non-minority male businesses facing large adverse and statistically significant disparities. Table 2.7 shows, for example, that 56 percent of statistically significant disparities for minorities were adverse, compared to just 5 percent for non-minority males, and that large, adverse, and statistically significant disparities were observed for 55 percent of minorities but only 3 percent of non-minority males.

Finally, we also observe similar patterns of disparities in those industry segments that are relevant to the Plaintiff in this matter. Table 2.8 shows this for all of the NAICS codes relevant to the Plaintiff<sup>40</sup> for which there were results in the database.<sup>41</sup>

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<sup>40</sup> In its complaint, the Plaintiff describes the industries in which it competes for contracts with the USDA as “administrative and/or technical support” services. (*See* *Ultima Services Corp. v. U.S. Dept. of Agriculture, et al*, 2020, pp. 2, 7, 8). In addition, the Performance Work Statement describes the Administrative Support Services Indefinite Delivery-Indefinite Quantity contract at issue in this matter (USDA NRCS, n.d., pp. 2-3 and Appendix A) (Bates US0052004-US0052027). *See* Section IV.C.1, below, for a discussion of the corresponding NAICS codes relevant to these industries.

<sup>41</sup> Only the NERA studies contained disparity results for these exact NAICS categories.

Table 2.2. Extent of Large, Adverse Disparities in Studies Published Between 2010-2021

	Construction	AECRS	Professional Services	General Services	CSE	Overall
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Minority</b>						
Percent LT 100	81%	78%	85%	82%	85%	80%
Percent LTE 80	75%	72%	81%	76%	81%	74%
Mean Disparity LTE 80	26	26	21	24	21	25
Median Disparity LTE 80	17	21	14	16	14	18
No. Observations	1,468	1,143	432	786	771	4,327
<b>Black</b>						
Percent LT 100	87%	82%	88%	82%	85%	84%
Percent LTE 80	83%	79%	86%	79%	82%	80%
Mean Disparity LTE 80	16	16	16	19	15	18
Median Disparity LTE 80	6	6	8	9	3	8
No. Observations	1,439	1,138	427	775	760	4,264
<b>Hispanic</b>						
Percent LT 100	80%	81%	86%	85%	87%	82%
Percent LTE 80	76%	76%	83%	84%	85%	78%
Mean Disparity LTE 80	18	17	11	11	10	15
Median Disparity LTE 80	2	0	0	0	0	1
No. Observations	1,430	1,097	421	776	740	4,185
<b>Asian</b>						
Percent LT 100	82%	76%	81%	82%	82%	78%
Percent LTE 80	78%	72%	77%	78%	79%	74%
Mean Disparity LTE 80	13	16	13	12	13	15
Median Disparity LTE 80	0	1	1	1	0	1
No. Observations	1,348	1,121	414	742	736	4,102
<b>Native American</b>						
Percent LT 100	82%	86%	92%	90%	95%	85%
Percent LTE 80	80%	84%	92%	89%	93%	83%
Mean Disparity LTE 80	11	11	7	5	3	9
Median Disparity LTE 80	0	0	0	0	0	0
No. Observations	1,354	940	353	706	629	3,752
<b>Non-minority male</b>						
Percent LT 100	21%	23%	13%	16%	16%	19%
Percent LTE 80	7%	8%	6%	6%	9%	7%
Mean Disparity LTE 80	36	43	41	45	39	41
Median Disparity LTE 80	45	51	39	46	46	48
No. Observations	1,487	1,156	431	787	773	4,392

Source: Author's calculations from the studies in Table 2.1. Notes: "AECRS" stands for Architecture, engineering and construction-related professional services. "CSE" stands for "Commodities, supplies, and equipment." "LT" stands for "Less than." "LTE" stands for "Less than or equal to." "No. Observations" is the total number of disparity indexes used as inputs in any given category.

Table 2.3. Extent of Large, Adverse Disparities in Studies Published Between 2010-2021, Prime Contractors Only

	Construction	AECRS	Professional Services	General Services	CSE	Overall
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Minority</b>						
Percent LT 100	91%	88%	95%	88%	82%	88%
Percent LTE 80	87%	84%	92%	83%	79%	84%
Mean Disparity LTE 80	16	18	17	25	24	20
Median Disparity LTE 80	6	7	10	16	21	11
No. Observations	452	422	237	291	297	1,569
<b>Black</b>						
Percent LT 100	98%	88%	95%	83%	78%	88%
Percent LTE 80	97%	87%	94%	80%	74%	86%
Mean Disparity LTE 80	10	12	14	21	20	15
Median Disparity LTE 80	2	2	8	11	9	5
No. Observations	434	415	233	287	293	1,528
<b>Hispanic</b>						
Percent LT 100	87%	91%	94%	92%	89%	89%
Percent LTE 80	85%	88%	92%	92%	87%	88%
Mean Disparity LTE 80	11	10	8	10	12	11
Median Disparity LTE 80	0	0	0	1	1	0
No. Observations	426	394	231	288	271	1,474
<b>Asian</b>						
Percent LT 100	89%	90%	93%	83%	79%	85%
Percent LTE 80	88%	87%	90%	79%	76%	83%
Mean Disparity LTE 80	9	12	12	15	17	13
Median Disparity LTE 80	0	0	0	3	6	0
No. Observations	374	403	220	262	279	1,411
<b>Native American</b>						
Percent LT 100	90%	89%	93%	82%	89%	88%
Percent LTE 80	89%	88%	93%	79%	86%	86%
Mean Disparity LTE 80	9	8	6	10	7	8
Median Disparity LTE 80	0	0	0	0	0	0
No. Observations	395	303	183	250	201	1,230
<b>Non-minority male</b>						
Percent LT 100	12%	13%	5%	11%	16%	13%
Percent LTE 80	4%	5%	2%	1%	5%	4%
Mean Disparity LTE 80	45	47	43	36	41	44
Median Disparity LTE 80	58	55	53	44	57	56
No. Observations	471	430	238	293	302	1,612

Source and Notes: See Table 2.2.



Table 2.4. Extent of Large, Adverse Disparities in Studies Published Between 2010-2021, Subcontractors Only

	Construction	AECRS	Professional Services	General Services	CSE	Overall
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Minority</b>						
Percent LT 100	74%	70%	58%	64%	82%	71%
Percent LTE 80	67%	62%	55%	64%	82%	65%
Mean Disparity LTE 80	23	24	16	7	10	21
Median Disparity LTE 80	11	10	0	0	0	7
No. Observations	399	182	64	33	38	677
<b>Black</b>						
Percent LT 100	83%	78%	67%	64%	81%	78%
Percent LTE 80	80%	74%	64%	64%	81%	75%
Mean Disparity LTE 80	15	13	11	8	8	14
Median Disparity LTE 80	2	0	0	0	0	0
No. Observations	392	188	64	33	37	674
<b>Hispanic</b>						
Percent LT 100	81%	73%	83%	94%	97%	80%
Percent LTE 80	77%	67%	81%	88%	92%	76%
Mean Disparity LTE 80	10	14	6	2	4	10
Median Disparity LTE 80	0	0	0	0	0	0
No. Observations	393	170	64	33	38	658
<b>Asian</b>						
Percent LT 100	82%	69%	68%	91%	92%	77%
Percent LTE 80	77%	67%	66%	91%	92%	74%
Mean Disparity LTE 80	9	17	6	2	6	10
Median Disparity LTE 80	0	0	0	0	0	0
No. Observations	368	186	65	33	36	649
<b>Native American</b>						
Percent LT 100	82%	82%	95%	97%	94%	84%
Percent LTE 80	81%	80%	95%	97%	94%	83%
Mean Disparity LTE 80	7	5	3	2	0	6
Median Disparity LTE 80	0	0	0	0	0	0
No. Observations	380	146	62	32	36	612
<b>Non-minority male</b>						
Percent LT 100	35%	43%	49%	44%	58%	40%
Percent LTE 80	15%	23%	32%	31%	53%	21%
Mean Disparity LTE 80	29	38	37	38	16	32
Median Disparity LTE 80	16	41	35	38	0	23
No. Observations	399	188	63	32	36	680

Source and Notes: See Table 2.2.

Table 2.5. Extent of Large, Adverse Disparities in Studies Published Between 2010-2021, Prime Contractors and Subcontractors

	Construction	AECRS	Professional Services	General Services	CSE	Overall
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Minority</b>						
Percent LT 100	79%	72%	80%	79%	86%	78%
Percent LTE 80	71%	65%	72%	72%	81%	70%
Mean Disparity LTE 80	36	36	32	24	20	31
Median Disparity LTE 80	34	35	29	17	12	28
No. Observations	617	539	131	462	436	2,081
<b>Black</b>						
Percent LT 100	82%	79%	84%	82%	90%	82%
Percent LTE 80	76%	75%	82%	79%	87%	78%
Mean Disparity LTE 80	23	21	22	19	13	22
Median Disparity LTE 80	19	16	14	9	0	15
No. Observations	613	535	130	455	430	2,062
<b>Hispanic</b>						
Percent LT 100	75%	76%	72%	80%	85%	78%
Percent LTE 80	69%	71%	68%	78%	83%	73%
Mean Disparity LTE 80	31	25	22	12	9	21
Median Disparity LTE 80	26	13	7	0	0	9
No. Observations	611	533	126	455	431	2,053
<b>Asian</b>						
Percent LT 100	78%	68%	67%	80%	82%	73%
Percent LTE 80	74%	62%	61%	77%	80%	68%
Mean Disparity LTE 80	19	21	21	11	10	18
Median Disparity LTE 80	6	10	14	1	0	8
No. Observations	606	532	129	447	421	2,042
<b>Native American</b>						
Percent LT 100	76%	86%	89%	95%	98%	83%
Percent LTE 80	72%	82%	88%	94%	97%	81%
Mean Disparity LTE 80	17	14	12	4	2	10
Median Disparity LTE 80	1	0	0	0	0	0
No. Observations	579	491	108	424	392	1,910
<b>Non-minority male</b>						
Percent LT 100	20%	25%	10%	17%	12%	17%
Percent LTE 80	3%	5%	2%	7%	8%	5%
Mean Disparity LTE 80	47	50	74	47	50	51
Median Disparity LTE 80	58	65	74	48	52	59
No. Observations	617	538	130	462	435	2,100

Source and Notes: See Table 2.2.

Table 2.6. Extent of Large, Adverse Disparities in Studies Published Between 2017-2021

	Construction	AECRS	Professional Services	General Services	CSE	Overall
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Minority</b>						
Percent LT 100	87%	81%	90%	88%	89%	84%
Percent LTE 80	81%	76%	86%	83%	85%	77%
Mean Disparity LTE 80	29	24	19	25	22	26
Median Disparity LTE 80	23	15	9	21	15	20
No. Observations	346	366	174	205	193	1,211
<b>Black</b>						
Percent LT 100	92%	88%	94%	91%	96%	90%
Percent LTE 80	87%	86%	94%	88%	92%	86%
Mean Disparity LTE 80	19	15	13	21	16	19
Median Disparity LTE 80	10	4	4	14	6	10
No. Observations	342	362	173	203	191	1,198
<b>Hispanic</b>						
Percent LT 100	77%	85%	92%	80%	82%	81%
Percent LTE 80	72%	83%	91%	78%	81%	77%
Mean Disparity LTE 80	25	19	12	12	12	19
Median Disparity LTE 80	15	2	0	1	2	5
No. Observations	341	354	169	201	188	1,179
<b>Asian</b>						
Percent LT 100	77%	72%	76%	83%	79%	73%
Percent LTE 80	73%	68%	72%	79%	78%	69%
Mean Disparity LTE 80	18	17	13	15	14	17
Median Disparity LTE 80	2	2	2	6	6	5
No. Observations	333	348	172	197	183	1,165
<b>Native American</b>						
Percent LT 100	88%	89%	95%	92%	97%	88%
Percent LTE 80	85%	86%	95%	92%	97%	86%
Mean Disparity LTE 80	17	11	7	8	4	11
Median Disparity LTE 80	5	0	0	0	0	0
No. Observations	313	308	151	178	171	1,073
<b>Non-minority male</b>						
Percent LT 100	9%	16%	5%	12%	10%	14%
Percent LTE 80	3%	5%	2%	3%	6%	4%
Mean Disparity LTE 80	39	44	58	35	23	41
Median Disparity LTE 80	45	55	67	33	2	51
No. Observations	349	368	176	207	195	1,224

Source and Notes: See Table 2.2.

**Table 2.7. Extent of Large, Adverse Disparities in Studies Published Between 2010-2021, Results with Statistical Significance of 10 Percent or Better, Overall Procurement**

	Minority	Black	Hispanic	Asian	Native American	Non-minority male
	(1)	(2)	(3)	(4)	(5)	(6)
Percent LT 100	56%	53%	46%	48%	44%	5%
Percent LTE 80	55%	53%	46%	47%	44%	3%
Mean Disparity LTE 80	25	19	13	13	6	43
Median Disparity LTE 80	21	15	2	6	0	47
No. Observations	940	1,007	925	911	912	881

Source and Notes: See Table 2.2.

**Table 2.8. Extent of Large, Adverse Disparities in Studies Published Between 2010-2021, Plaintiff's Industry Segments**

	Minority	Black	Hispanic	Asian	Native American	Non-minority male
	(1)	(2)	(3)	(4)	(5)	(6)
<b>NAICS 541 (Professional, Scientific, and Technical Services)</b>						
Percent LT 100	61%	83%	78%	58%	83%	17%
Percent LTE 80	61%	83%	75%	47%	83%	6%
Mean Disparity LTE 80	32	19	7	29	5	60
Median Disparity LTE 80	28	6	3	27	0	60
No. Observations	36	36	36	36	36	36
<b>NAICS 5416 (Management, Scientific, and Technical Consulting Services)</b>						
Percent LT 100	66%	72%	79%	88%	97%	46%
Percent LTE 80	61%	69%	77%	87%	97%	37%
Mean Disparity LTE 80	17	13	6	13	0	31
Median Disparity LTE 80	5	0	0	0	0	32
No. Observations	229	227	229	221	207	229
<b>NAICS 561</b>						
Percent LT 100	67%	61%	89%	94%	94%	31%
Percent LTE 80	58%	58%	89%	94%	94%	19%
Mean Disparity LTE 80	16	17	11	6	1	35
Median Disparity LTE 80	2	4	0	0	0	19
No. Observations	36	36	36	36	36	36
<b>NAICS 5611 (Office Administrative Services)</b>						
Percent LT 100	61%	66%	93%	100%	100%	38%
Percent LTE 80	61%	66%	93%	100%	100%	38%
Mean Disparity LTE 80	0	1	0	0	0	2
Median Disparity LTE 80	0	0	0	0	0	0
No. Observations	44	44	30	36	30	45
<b>NAICS 5613 (Employment Services)</b>						
Percent LT 100	54%	55%	89%	97%	98%	61%
Percent LTE 80	53%	53%	89%	97%	98%	54%
Mean Disparity LTE 80	10	6	2	1	1	17
Median Disparity LTE 80	0	0	0	0	0	8
No. Observations	125	125	123	119	123	127

Source: Author's calculations from the NERA studies in Table 2.1. Notes: See U.S. Office of Management and Budget (2017) for detailed descriptions of individual NAICS codes.

**E. Conclusions**

In my recent testimony before the U.S. House Committee on Transportation and Infrastructure, I noted that:

“According to my records, there are at least another 150 disparity studies that have been completed since I finished my work for USDOJ in 2013. There is no doubt in my mind that were I to conduct a comparable analysis on these latest studies, I would find similar results—large and adverse disparities that continue to face M/WBEs throughout the country.”

Having now had the opportunity to conduct such an analysis, I am disappointed, but not surprised, to learn that I was correct. Judging from the 205 studies produced since 2010, we observe large, adverse, and often statistically significant disparities facing minority-owned business enterprises throughout the United States and across all government contracting and procurement categories and among all types of minority-owned businesses. This indicates that in the overwhelming number of public procurement markets, minority-owned businesses are underutilized based on their availability.

In the final two sections of my report, I consider first, whether consistent findings of disparity are observed in two important government surveys of minority business and second, whether statistical regression analysis incorporating numerous potentially race-neutral variables can explain the disparities observed above.

### III. There is Strong Evidence of Disparities Between Utilization and Availability in Aggregate U.S. Business Enterprise Activity

A key rationale for the advent of public sector policies such as the SBA 8(a) Program was the federal government's desire to mitigate its own passive participation in private sector discrimination in business enterprise activity.<sup>42</sup> Therefore, it is important to examine the available evidence regarding how minority-owned businesses fare in the overall U.S. economy, to determine whether consistent disparities are observed in aggregate data. In order to do this, I present evidence from the U.S. Census Bureau's only past and present data collection efforts dedicated to MBEs.

The *Survey of Business Owners and Self-Employed Persons* (SBO) collected data on the number, sales, employment, and payrolls of businesses owned by minorities, women, and non-minority males. This survey was conducted every five years from 1972 to 2012 as part of the *Economic Census* program. Data from the 2012 SBO, the most recent available, were released in December 2015.<sup>43</sup>

In mid-2018, the Census Bureau announced that the SBO would be discontinued and only partially replaced with a new survey called the *Annual Business Survey* (ABS).<sup>44</sup> Unfortunately, the ABS only counts firms with paid employees, as opposed to the SBO, which also counted nonemployer firms (often sole proprietorships and smaller corporations).<sup>45</sup> Data from the 2017 ABS were released in May 2020.<sup>46</sup> The SBO and ABS cover women and five groups of minorities: (1) Blacks, (2) Hispanics, (3) Asians, (4) Native Hawaiians and Other Pacific Islanders, and (5) American Indians and Alaskan Natives. Comparative information for non-minority male-owned firms is also included.<sup>47</sup>

The SBO and ABS contain a wealth of information on the character of minority business enterprise in the U.S. as a whole as well as more limited information for individual states and some sub-state divisions. Regardless of whether the SBO data or the ABS data is

<sup>42</sup> *City of Richmond v. J. A. Croson Co.*, 488 U.S. 469, 492 (“Thus, if the city could show that it had essentially become a ‘passive participant’ in a system of racial exclusion practiced by elements of the local construction industry, we think it clear that the city could take affirmative steps to dismantle such a system.”).

<sup>43</sup> U.S. Census Bureau (2018a, 2018b, 2018c, 2018d).

<sup>44</sup> U.S. Census Bureau (2018e).

<sup>45</sup> U.S. Census Bureau (2018f). In 2012, according to the SBO, there were about 5.1 million firms with paid employees and more than 22 million nonemployer firms.

<sup>46</sup> U.S. Census Bureau (2020c). In the American Community Survey data, discussed in Section IV, the unit of analysis is the business owner, or self-employed person. In the SBO and ABS data, the unit of analysis is the business itself rather than the business owner. Also, the unit of analysis in the SBO and ABS is the firm, rather than the individual establishment, unlike most other components of the *Economic Census*.

<sup>47</sup> The race and ethnicity categories used in the SBO and ABS differ in some respects from those used in the SBA 8(a) Business Development Program. In the SBO and ABS, Native Hawaiians are grouped with Pacific Islanders, rather than with Native Americans. Also, Subcontinent Asians are grouped with Asians and Pacific Islanders, rather than classified separately.

examined, I found a consistent pattern of large, adverse, and statistically significant disparities in the performance of minority-owned businesses.

In the remainder of this section, I present national evidence from the 2012 SBO and the 2017 ABS for the economy as a whole, as well as for the major procurement categories of construction, professional services, general services, and CSE, including for those industry sectors that correspond with the type of work identified by the Plaintiff as at issue in this lawsuit—NAICS 54 (“Professional, Scientific, and Technical Services”) and NAICS 56 (“Administrative and Support and Waste Management and Remediation Services”).

## **A. Results from the 2012 Survey of Business Owners**

### **1. Economy-Wide Results**

I begin with the 2012 SBO—the most recent and final data from this important survey. Table 3.1 contains data for the U.S. as a whole and economy-wide (*i.e.*, all industries combined). Panel A in this table summarizes the SBO results for each race grouping. For example, Panel A shows a total of 27.18 million firms in the U.S. in 2012 (column 1) with overall sales and receipts of \$11.964 trillion (column 2). Of these 27.18 million firms, 5.14 million had one or more employees (column 3) and these 5.14 million firms had overall sales and receipts of \$10.965 trillion (column 4). Column (5) shows a total of 56.059 million employees on the payroll of these 5.14 million firms and a total annual payroll expense of \$2.096 trillion (column 6).

The remaining rows in Panel A provide comparable statistics for non-minority male-owned and minority-owned firms. For example, Table 3.1 shows that there were 2.6 million Black-owned firms counted in the SBO, and that these 2.6 million firms registered \$150.2 billion in sales and receipts. It also shows that 109,137 of these Black-owned firms had one or more employees, and that they employed a total of 975,052 workers with an annual payroll total of \$27.69 billion.

Panel B in Table 3.1 converts the figures in Panel A to percentage distributions within each column. For example, Column (1) in Panel B of Table 3.1 shows that Black-owned firms were 9.51 percent of all firms in the U.S. Additionally, 12.16 percent of firms were Hispanic-owned, 7.06 percent were Asian-owned, 0.20 percent were Native Hawaiian- and other Pacific Islander-owned, and 1.0 percent were American Indian- and Alaska Native-owned.

Column (2) in Panel B provides the same percentage distribution for overall sales and receipts. Table 3.1, for example, shows that non-minority males owned 45.18 percent of all firms and earned 73.45 percent of all sales and receipts. In contrast:

- Although Blacks owned 9.51 percent of all firms in the U.S. in 2012, they earned only 1.26 percent of all sales and receipts.
- Although Hispanics owned 12.16 percent of all firms, they earned only 3.96 percent of all sales and receipts.

- Although Asians owned 7.06 percent of all firms, they earned only 5.85 percent of all sales and receipts.
- Although Native Hawaiians and other Pacific Islanders owned 0.20 percent of all firms, they earned only 0.07 percent of all sales and receipts.
- Although American Indians and Alaska Natives owned 1.0 percent of all firms, they earned only 0.32 percent of all sales and receipts.

These disparities between the availability and utilization of minority-owned firms can be viewed directly from the disparity indexes in Panel C of Table 3.1. For example, Panel C shows that Black-owned firms in 2012 received just 13.2 percent of what would be expected based on their availability in the market.<sup>48</sup> For Hispanics, the figure was 32.55 percent. For Asians, the figure was 82.85 percent. For Native Hawaiians and other Pacific Islanders, the figure was 33.76 percent, and for American Indians and Alaska Natives, the figure was 32.33 percent. These disparities are all adverse and statistically significant. The disparities are all large (four-fifths or less for an unadjusted disparity<sup>49</sup>) as well, with the exception of Asian-owned firms.

We can also compare sales and receipts per firm among all firms in 2012. In Table 3.1, for example, average per firm sales and receipts for non-minority male-owned firms was \$715.6 thousand.<sup>50</sup> In contrast:

- For Black-owned firms, average per firm sales and receipts was \$58.1 thousand. In other words, for every dollar of sales and receipts earned by non-minority male-owned firms, Black-owned firms received just 8 cents.
- For Hispanic-owned firms, average per firm sales and receipts was \$143.3 thousand. In other words, for every dollar of sales and receipts earned by non-minority male-owned firms, Hispanic-owned firms received just 20 cents.
- For Asian-owned firms, average per firm sales and receipts was \$364.7 thousand. In other words, for every dollar of sales and receipts earned by non-minority male-owned firms, Asian-owned firms received just 51 cents.
- For Native Hawaiian- and other Pacific Islander-owned firms, average per firm sales and receipts was \$148.6 thousand. In other words, for every dollar of sales and receipts earned by non-minority male-owned firms, Native Hawaiian- and other Pacific Islander-owned firms received just 21 cents.

<sup>48</sup> The disparity index is derived by dividing the share of sales and receipts from Panel B column (2) by the share of firms in Panel B column (1) and multiplying the result by 100.

<sup>49</sup> By “unadjusted” I mean disparity measures that are not already “adjusted” for differences among businesses or business owners in other demographic or capacity factors. Section IV, *infra*, discusses the impact of such adjustments on measures of disparity.

<sup>50</sup> Average per firm sales and receipts is derived by dividing the value for non-minority males in Panel A, column (2) by the corresponding value in Panel A, column (1).



- For American Indian- and Alaska Native-owned firms, average per firm sales and receipts was \$142.3 thousand. In other words, for every dollar of sales and receipts earned by non-minority male-owned firms, American Indian- and Alaska Native-owned firms received just 20 cents.

These disparities are all large, adverse, and statistically significant.

Turning to employer firms (*i.e.*, firms with one or more paid employees), we see from column (3) in Table 3.1, that although non-minority male-owned firms were 57.11 percent of all employer firms, they accounted for 74.98 percent of all employer firm sales and receipts. In contrast:

- Although Blacks owned 2.12 percent of all employer firms in the U.S. in 2012, they earned only 0.94 percent of all sales and receipts.
- Although Hispanics owned 5.6 percent of all employer firms, they earned only 3.47 percent of all sales and receipts.
- Although Asians owned 9.37 percent of all employer firms, they earned only 5.72 percent of all sales and receipts.
- Although Native Hawaiians and other Pacific Islanders owned 0.09 percent of all employer firms, they earned only 0.06 percent of all sales and receipts.
- Although American Indians and Alaska Natives owned 0.51 percent of all employer firms, they earned only 0.29 percent of all sales and receipts.

The economy-wide employer firm disparity indexes for 2012 appear in Panel C of Table 3.1. Panel C shows that Black-owned employer firms in 2012 received just 44.4 percent of what would be expected based on their availability in the market. For Hispanics, the figure was 61.91 percent. For Asians, the figure was 61.11 percent. For Native Hawaiians and other Pacific Islanders, the figure was 64.40 percent, and for American Indians and Alaska Natives, the figure was 56.64 percent. These disparities are all large, adverse, and statistically significant.

Considering average sales and receipts per firm among employer firms in 2012, Table 3.1 shows a figure of \$2.8 million for non-minority male-owned employer firms. In contrast:

- For Black-owned employer firms, average per firm sales and receipts was \$947.9 thousand. In other words, for every dollar of sales and receipts earned by non-minority male-owned firms, Black-owned firms received just 34 cents.
- For Hispanic-owned employer firms, average per firm sales and receipts was \$1.32 million. In other words, for every dollar of sales and receipts earned by non-minority male-owned firms, Hispanic-owned firms received just 47 cents.
- For Asian-owned employer firms, average per firm sales and receipts was \$1.3 million. In other words, for every dollar of sales and receipts earned by non-minority male-owned firms, Asian-owned firms received just 47 cents.

- For Native Hawaiian- and other Pacific Islander-owned employer firms, average per firm sales and receipts was \$1.37 million. In other words, for every dollar of sales and receipts earned by non-minority male-owned firms, Native Hawaiian- and other Pacific Islander-owned firms received just 49 cents.
- For American Indian- and Alaska Native-owned employer firms, average per firm sales and receipts was \$1.21 million. In other words, for every dollar of sales and receipts earned by non-minority male-owned firms, American Indian- and Alaska Native-owned firms received just 43 cents.

These disparities are all large, adverse, and statistically significant.

The problem of minority-owned firms selling and earning less has important consequences that ripple throughout the economy. Because these firms make less, they may have to pay their employees less. This compounds race disparities to the extent that minority-owned firms hire proportionately more minority employees. In addition, it reduces the wealth accruing to minorities (both business owners and employees alike) and thus hinders would-be minority entrepreneurs in their efforts to create and grow their own firms, thus reinforcing the negative consequences of social and economic disadvantage. Table 3.1 shows that average payroll per employee at non-minority male-owned employer firms in 2012 was \$40,573.<sup>51</sup> In contrast:

- For Black-owned employer firms, average payroll per employee was just \$28,398. In other words, for every \$1 in wages earned by employees at non-minority male-owned firms, employees at Black-owned firms earned only 70 cents.
- For Hispanic-owned employer firms, average payroll per employee was just \$30,416. In other words, for every \$1 in wages earned by employees at non-minority male-owned firms, employees at Hispanic-owned firms earned only 75 cents.
- For Asian-owned employer firms, average payroll per employee was just \$30,942. In other words, for every \$1 in wages earned by employees at non-minority male-owned firms, employees at Asian-owned firms earned only 76 cents.
- For Native Hawaiian- and other Pacific Islander-owned employer firms, average payroll per employee was just \$36,681. In other words, for every \$1 in wages earned by employees at non-minority male-owned firms, employees at Native Hawaiian- and other Pacific Islander-owned firms earned just 90 cents.
- For American Indian- and Alaska Native-owned employer firms, average payroll per employee was just \$33,599. In other words, for every \$1 in wages earned by employees at non-minority male-owned firms, employees at American Indian- and Alaska Native-owned firms earned just 83 cents.

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<sup>51</sup> Average payroll per employee is derived by dividing the value in Panel A, column (6) by the corresponding value in Panel A, column (5).

These disparities are all adverse and statistically significant. For Blacks, Hispanics, and Asians, they are large as well.

**Table 3.1. Disparity Indexes from the 2012 Survey of Business Owners, United States, All Industries**

	Number of Firms	Sales and Receipts (\$000s)	Employer Firms	Sales and Receipts (\$000s)	Employees	Payroll (\$000s)
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A. Levels</b>						
All Firms	27,179,380	11,964,077,871	5,136,203	10,964,584,749	56,058,563	2,096,442,212
Non-minority male	12,280,591	8,787,915,377	2,933,198	8,221,010,815	37,750,711	1,531,662,394
Black	2,584,403	150,203,163	109,137	103,451,510	975,052	27,689,957
Hispanic	3,305,873	473,635,944	287,501	379,994,999	2,329,553	70,855,704
Asian	1,917,902	699,492,422	481,026	627,532,399	3,572,577	110,543,615
Native Hawaiian & Pac. Islander	54,749	8,136,445	4,706	6,469,957	39,001	1,430,591
Amer. Indian & Alaska Native	272,919	38,838,125	26,179	31,654,165	208,178	6,994,509
<b>Panel B. Column Percentages</b>						
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Non-minority male	45.18%	73.45%	57.11%	74.98%	67.34%	73.06%
Black	9.51%	1.26%	2.12%	0.94%	1.74%	1.32%
Hispanic	12.16%	3.96%	5.60%	3.47%	4.16%	3.38%
Asian	7.06%	5.85%	9.37%	5.72%	6.37%	5.27%
Native Hawaiian & Pac. Islander	0.20%	0.07%	0.09%	0.06%	0.07%	0.07%
Amer. Indian & Alaska Native	1.00%	0.32%	0.51%	0.29%	0.37%	0.33%
<b>Panel C. Disparity Indexes</b>						
		Column (2) ÷ (1)		(4) ÷ (3)	(5) ÷ (3)	(6) ÷ (3)
All Firms		100.00		100.00	100.00	100.00
Non-minority male		162.56		131.29	117.92	127.93
Black		13.20		44.40	81.86	62.16
Hispanic		32.55		61.91	74.24	60.38
Asian		82.85		61.11	68.05	56.30
Native Hawaiian & Pac. Islander		33.76		64.40	75.93	74.48

Source: Author's calculations using 2012 SBO. Notes: (1) Figures are rounded. Rounding was performed subsequent to any mathematical calculations; (2) Excludes publicly owned, foreign-owned, and not-for-profit firms; (3) Totals for "All Firms" include firms that were equally non-minority/minority owned; (4) Statistically significant disparity indexes are italicized; (5) "n/a" indicates that data were not disclosed due to confidentiality or other publication restrictions.

## 2. Industry-Specific Results

Table 3.2 shows the 2012 SBO disparity ratio and its underlying firm and sales percentages for both all firms and employer firms.<sup>52</sup> The top panel, for All Industries, replicates the results seen in Panels B and C in Table 3.1.

The remaining panels in Table 3.2 present results for 16 distinct industry sectors, grouped according to four major procurement categories. These are:

- Construction (NAICS 23);
- Professional Services (NAICS 54, 55 & 56);
- General Services (NAICS 48-49, 51, 52, 53, 61, 62, 71, 72 & 81); and
- CSE (NAICS 31-33, 42 & 44-45).

When the SBO survey results are disaggregated into major procurement categories and industry sectors, similar patterns of large, adverse, and statistically significant disparities are also observed in the vast majority of cases. Specifically:

- In the All Industries panel of Table 3.2, 100 percent of the disparity indexes are adverse (10 out of 10), 90 percent are large (9 out of 10), and 100 percent are statistically significant (10 out of 10).
- In the Construction (NAICS 23) panel, 90 percent of the disparity ratios are adverse, 90 percent are large, and 90 percent are statistically significant.
- In the Professional Services (NAICS 54) panel, 70 percent of the disparity ratios are adverse, 50 percent are large, and 90 percent are statistically significant.
- In the Professional Services (NAICS 55) panel, 80 percent of the disparity ratios are adverse, 60 percent are large, and 40 percent are statistically significant.
- In the Professional Services (NAICS 56) panel, 90 percent of the disparity ratios are adverse, 60 percent are large, and 60 percent are statistically significant.
- In the General Services (NAICS 48-49) panel, 100 percent of the disparity ratios are adverse, 100 percent are large, and 89 percent are statistically significant.

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<sup>52</sup> The all firm percentages in column (1) of Table 3.2 are comparable to the figures in Panel B, column (1) of Table 3.1. The all firm sales percentages in column (2) of Table 3.2 are comparable to the figures in Panel B, column (2) of Table 3.1. The employer firm percentages in column (3) of Table 3.2 are comparable to the figures in Panel B, column (3) of Table 3.1. The employer firm sales percentages in column (4) of Table 3.2 are comparable to the figures in Panel B, column (4) of Table 3.1. The all firms disparity ratios in column (5) of Table 3.2 are comparable to the figures in Panel C, column (2) of Table 3.1. Finally, the employer firms disparity ratios in column (6) of Table 3.2 are comparable to the figures in Panel C, column (4) of Table 3.1.

- In the General Services (NAICS 51) panel, 100 percent of the disparity ratios are adverse, 90 percent are large, and 100 percent are statistically significant.
- In the General Services (NAICS 52) panel, 100 percent of the disparity ratios are adverse, 100 percent are large, and 100 percent are statistically significant.
- In the General Services (NAICS 53) panel, 100 percent of the disparity ratios are adverse, 100 percent are large, and 100 percent are statistically significant.
- In the General Services (NAICS 61) panel, 100 percent of the disparity ratios are adverse, 67 percent are large, and 78 percent are statistically significant.
- In the General Services (NAICS 62) panel, 90 percent of the disparity ratios are adverse, 90 percent are large, and 100 percent are statistically significant.
- In the General Services (NAICS 71) panel, 80 percent of the disparity ratios are adverse, 50 percent are large, and 60 percent are statistically significant.
- In the General Services (NAICS 72) panel, 80 percent of the disparity ratios are adverse, 70 percent are large, and 90 percent are statistically significant.
- In the General Services (NAICS 81) panel, 100 percent of the disparity ratios are adverse, 78 percent are large, and 78 percent are statistically significant.
- In the CSE (NAICS 31-33) panel, 90 percent of the disparity ratios are adverse, 90 percent are large, and 90 percent are statistically significant.
- In the CSE (NAICS 42) panel, 100 percent of the disparity ratios are adverse, 100 percent are large, and 90 percent are statistically significant.
- In the CSE (NAICS 44-45) panel, 100 percent of the disparity ratios are adverse, 90 percent are large, and 90 percent are statistically significant.

These results are evident within each specific minority group as well. Specifically:

- For Blacks, 94 percent of the above disparity ratios are adverse (32 out of 34), 88 percent are large (30 out of 34), and 94 percent are statistically significant (32 out of 34).
- For Hispanics, 94 percent of the above disparity ratios are adverse, 88 percent are large, and 94 percent are statistically significant.
- For Asians, 88 percent of the above disparity ratios are adverse, 59 percent are large, and 85 percent are statistically significant.
- For Native Hawaiians and other Pacific Islanders, 88 percent of the above disparity ratios are adverse, 78 percent are large, and 66 percent are statistically significant.
- For American Indians and Alaska Natives, 97 percent of the above disparity ratios are adverse, 88 percent are large, and 79 percent are statistically significant.

**Table 3.2. Percentage of Firms and Sales and Corresponding Disparity Ratios, All Firms and Employer Firms, United States, 2012**

	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
	(1)	(2)	(3)	(4)	(5)	(6)
<b>All Industries</b>						
Black	9.51	1.26	2.12	0.94	0.13***	0.44***
Hispanic	12.16	3.96	5.60	3.47	0.33***	0.62***
Asian	7.06	5.85	9.37	5.72	0.83***	0.61***
NHPI	0.20	0.07	0.09	0.06	0.34***	0.64***
AIAN	1.00	0.32	0.51	0.29	0.32***	0.57***
	27,179,380	11,964,077,871	5,136,203	10,964,584,749		
<b>Construction</b>						
Black	4.67	0.93	1.19	0.77	0.20***	0.65***
Hispanic	16.24	4.65	6.07	3.59	0.29***	0.59***
Asian	2.63	1.28	1.66	1.19	0.49***	0.72***
NHPI	0.19	0.13	0.11	0.12	0.66***	1.02
AIAN	1.23	0.62	0.76	0.57	0.50***	0.75***
	2,928,015	1,200,413,658	637,296	1,083,093,941		
<b>Professional Services (NAICS 54)</b>						
Black	5.35	1.79	1.85	1.52	0.33***	0.82***
Hispanic	7.19	3.82	3.95	3.45	0.53***	0.87***
Asian	7.16	7.72	6.79	7.90	1.08***	1.16***
NHPI	0.16	0.11	0.08	0.10	0.65***	1.28
AIAN	0.80	0.36	0.48	0.30	0.45***	0.61***
	3,868,657	877,237,881	748,444	742,626,210		
<b>Professional Services (NAICS 55)</b>						
Black	1.20	0.77	1.20	0.77	0.64*	0.64*
Hispanic	2.31	2.91	2.31	2.91	1.26	1.26
Asian	2.95	2.54	2.95	2.54	0.86	0.86
NHPI	0.05	0.02	0.05	0.02	0.41***	0.41***
AIAN	0.34	0.26	0.34	0.26	0.75	0.75
	16,312	58,916,087	16,312	58,916,087		
<b>Professional Services (NAICS 56)</b>						
Black	12.86	2.96	3.31	2.38	0.23***	0.72***
Hispanic	23.01	6.35	7.98	4.81	0.28***	0.60***
Asian	3.75	3.68	3.44	3.64	0.98	1.06
NHPI	0.28	0.11	0.09	0.09	0.38***	0.98
AIAN	1.27	0.64	0.64	0.60	0.51***	0.93
	2,292,895	417,900,103	316,316	377,522,132		
<b>General Services (NAICS 48-49)</b>						
Black	15.35	3.19	4.00	1.30	0.21***	0.32***
Hispanic	20.19	8.11	9.45	5.35	0.40***	0.57***
Asian	7.77	3.68	4.18	2.76	0.47***	0.66***
NHPI	0.21	0.14	0.14	n/a	0.67	n/a
AIAN	0.94	0.38	0.58	0.28	0.40***	0.48***
	1,204,092	384,210,425	161,862	316,174,682		

	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
	(1)	(2)	(3)	(4)	(5)	(6)
<b>General Services (NAICS 51)</b>						
Black	7.54	1.16	1.58	0.99	0.15***	0.63***
Hispanic	8.03	1.90	3.73	1.64	0.24***	0.44***
Asian	6.10	4.77	5.18	4.64	0.78***	0.90*
NHPI	0.17	0.05	0.09	0.04	0.30***	0.51**
AIAN	0.92	0.21	0.46	0.19	0.23***	0.40***
	377,663	215,088,486	61,946	204,315,058		
<b>General Services (NAICS 52)</b>						
Black	4.74	0.85	2.02	0.71	0.18***	0.35***
Hispanic	6.02	1.79	4.02	1.48	0.30***	0.37***
Asian	5.23	2.26	3.59	1.79	0.43***	0.50***
NHPI	0.13	0.04	0.06	0.02	0.28***	0.31***
AIAN	0.67	0.21	0.58	0.16	0.31***	0.28***
	920,742	429,061,567	212,378	376,388,916		
<b>General Services (NAICS 53)</b>						
Black	3.02	0.98	1.11	0.75	0.32***	0.68***
Hispanic	5.53	2.74	3.95	2.05	0.49***	0.52***
Asian	5.79	4.34	4.73	3.15	0.75***	0.67***
NHPI	0.11	0.04	0.07	0.03	0.40***	0.42***
AIAN	0.42	0.20	0.35	0.18	0.47***	0.52***
	2,579,737	458,184,793	253,009	246,648,164		
<b>General Services (NAICS 61)</b>						
Black	10.46	3.15	2.91	2.23	0.30***	0.76***
Hispanic	8.31	3.91	3.94	3.37	0.47***	0.86*
Asian	6.63	6.07	10.00	5.94	0.92	0.59***
NHPI	0.20	0.08	0.16	n/a	0.37***	n/a
AIAN	1.15	0.53	0.49	0.46	0.46***	0.95
	644,290	50,165,519	54,424	42,240,448		
<b>General Services (NAICS 62)</b>						
Black	19.88	3.82	5.73	2.94	0.19***	0.51***
Hispanic	14.03	4.56	5.42	4.03	0.32***	0.74***
Asian	8.20	9.58	12.50	9.50	1.17***	0.76***
NHPI	0.27	0.07	0.10	0.06	0.27***	0.57*
AIAN	1.17	0.35	0.54	0.30	0.30***	0.55***
	2,479,990	635,156,474	559,533	575,266,041		
<b>General Services (NAICS 71)</b>						
Black	9.59	3.12	2.19	1.87	0.33***	0.86
Hispanic	7.84	3.27	2.72	2.30	0.42***	0.85**
Asian	4.23	2.49	2.78	2.00	0.59***	0.72*
NHPI	0.27	0.24	0.20	0.24	0.88	1.22
AIAN	1.23	0.57	0.33	0.47	0.46***	1.45
	1,296,039	118,949,215	86,393	91,003,931		
<b>General Services (NAICS 72)</b>						
Black	7.37	1.75	1.44	1.63	0.24***	1.13*
Hispanic	12.23	5.84	7.88	5.63	0.48***	0.72***
Asian	19.10	15.60	24.07	15.55	0.82***	0.65***
NHPI	0.18	0.07	0.09	0.07	0.41***	0.70
AIAN	0.70	0.22	0.30	0.20	0.31***	0.65***
	818,829	487,124,537	480,317	469,248,060		

	Percentage of All Firms	Percentage of All Sales	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio-All Firms	Disparity Ratio Employers
	(1)	(2)	(3)	(4)	(5)	(6)
<b>General Services (NAICS 81)</b>						
Black	17.94	4.10	2.16	1.34	0.23***	0.62***
Hispanic	15.26	7.62	6.46	4.78	0.50***	0.74***
Asian	10.64	8.61	12.84	6.83	0.81***	0.53***
NHPI	0.24	0.17	0.10	n/a	0.72	n/a
AIAN	1.20	0.64	0.55	0.48	0.53***	0.89
	3,623,459	265,917,236	359,361	185,959,517		
<b>CSE (NAICS 31-33)</b>						
Black	3.95	0.62	0.53	0.59	0.16***	1.11
Hispanic	8.96	1.90	4.31	1.81	0.21***	0.42***
Asian	4.81	3.20	5.03	3.18	0.66***	0.63***
NHPI	0.17	0.04	0.10	0.04	0.24***	0.38***
AIAN	1.04	0.19	0.47	0.18	0.18***	0.38***
	573,317	1,331,188,720	242,848	1,314,552,213		
<b>CSE (NAICS 42)</b>						
Black	3.57	0.47	0.79	0.44	0.13***	0.56***
Hispanic	9.35	3.50	5.73	3.42	0.37***	0.60***
Asian	9.79	6.47	11.48	6.38	0.66***	0.56***
NHPI	0.19	0.04	0.05	0.04	0.21***	0.74
AIAN	0.87	0.21	0.34	0.19	0.24***	0.57***
	685,212	2,751,429,926	297,528	2,708,449,056		
<b>CSE (NAICS 44-45)</b>						
Black	6.41	0.81	1.30	0.70	0.13***	0.54***
Hispanic	10.23	4.34	5.21	4.14	0.42***	0.79***
Asian	8.72	7.43	14.63	7.27	0.85***	0.50***
NHPI	0.19	0.04	0.08	0.03	0.21***	0.45***
AIAN	0.90	0.31	0.42	0.30	0.35***	0.71
	2,499,942	2,110,478,896	635,979	2,019,658,999		

Source: Author's calculations from the 2012 SBO. Notes: Statistical significance is indicated by asterisks (\* p-value<0.1, \*\* p-value<0.05, \*\*\* p-value<0.01); "n/a": Data was suppressed by Census due to confidentiality restrictions.



## B. Results from the 2017 Annual Survey of Businesses

### 1. Economy-Wide Results

Turning now to the 2017 ABS, Table 3.3 presents economy-wide results for the United States as a whole. Panel A summarizes the ABS results for each race group. For example, Panel A shows a total of 5.47 million employer firms in the U.S. in 2017 (column 1) with overall sales and receipts of \$12.689 trillion (column 2). These 5.47 million firms had a total of 62.99 million employees (column 3) and a total annual payroll expense of \$2.618 trillion (column 4).

The remaining rows in Panel A provide comparable statistics for non-minority male-owned and minority-owned firms. For example, the table shows that there were 124,004 Black-owned employer firms counted in 2017, and that these firms registered \$127.851 billion in sales and receipts. It also shows that these Black-owned firms employed a total of 1.21 million workers with an annual payroll total of \$36.105 billion.

Panel B in the table converts the figures in Panel A to percentage distributions within each column. For example, Column (1) in Panel B shows that Blacks owned just 2.27 percent of all employer firms in the U.S. Additionally, 5.88 percent of employer firms were Hispanic-owned, 10.15 percent were Asian-owned, 0.13 percent were Native Hawaiian and other Pacific Islander-owned, and 0.45 percent were American Indian- and Alaska Native-owned.

Column (2) in Panel B provides the same percentage distribution for overall sales and receipts for employer firms. Non-minority males in 2017 in the U.S. owned 52.08 percent of all employer firms and earned 70.71 percent of all sales and receipts. In contrast:

- Although Blacks owned 2.27 percent of all employer firms, they earned only 1.01 percent of all sales and receipts.
- Although Hispanics owned 5.88 percent of all employer firms, they earned only 3.33 percent of all sales and receipts.
- Although Asians owned 10.15 percent of all employer firms, they earned only 6.42 percent of all sales and receipts.
- Although Native Hawaiians and other Pacific Islanders owned 0.13 percent of all employer firms, they earned only 0.07 percent of all sales and receipts.
- Although American Indians and Alaska Natives owned 0.45 percent of all employer firms, they earned only 0.3 percent of all sales and receipts.

These disparities between the availability and utilization of minority-owned firms can be viewed directly from the disparity indexes in Panel C of the table. For example, Panel C shows that Black-owned employer firms in 2017 received just 44.48 percent of what would be expected based on their availability in the market. For Hispanics, the figure was 56.6 percent. For Asians, the figure was 63.27 percent. For Native Hawaiians and other Pacific

Islanders, the figure was 53.09 percent, and for American Indians and Alaska Natives, the figure was 66.89 percent. These disparities are all large, adverse, and statistically significant.

Another way to look at these disparities is by comparing sales and receipts per firm. In Table 3.3, for example, average per firm sales and receipts for non-minority male-owned employer firms was \$3.15 million. In contrast:

- For Black-owned employer firms, average per firm sales and receipts was \$1.03 million. In other words, for every dollar of sales and receipts earned by non-minority male-owned employer firms, Black-owned employer firms received just 33 cents.
- For Hispanic-owned employer firms, average per firm sales and receipts was \$1.31 million. In other words, for every dollar of sales and receipts earned by non-minority male-owned employer firms, Hispanic-owned employer firms received just 42 cents.
- For Asian-owned employer firms, average per firm sales and receipts was \$1.47 million. In other words, for every dollar of sales and receipts earned by non-minority male-owned employer firms, Asian-owned employer firms received just 47 cents.
- For Native Hawaiian- and other Pacific Islander-owned employer firms, average per firm sales and receipts was \$1.23 million. In other words, for every dollar of sales and receipts earned by non-minority male-owned employer firms, Native Hawaiian- and other Pacific Islander-owned employer firms received just 39 cents.
- For American Indian- and Alaska Native-owned employer firms, average per firm sales and receipts was \$1.55 million. In other words, for every dollar of sales and receipts earned by non-minority male-owned employer firms, American Indian- and Alaska Native-owned employer firms received just 49 cents.

As discussed above, these severe disparities in firm earnings have a direct negative and compounding effect on the employees of minority-owned firms. Table 3.3, for example, shows that average payroll per employee at non-minority male-owned employer firms in 2017 was \$45,555. In contrast:

- For Black-owned employer firms, average payroll per employee was just \$29,882. In other words, for every \$1 in wages earned by employees at non-minority male-owned firms, employees at Black-owned firms earned just 66 cents.
- For Hispanic-owned employer firms, average payroll per employee was just \$31,674. In other words, for every \$1 in wages earned by employees at non-minority male-owned firms, employees at Hispanic-owned firms earned just 70 cents.

- For Asian-owned employer firms, average payroll per employee was just \$34,137. In other words, for every \$1 in wages earned by employees at non-minority male-owned firms, employees at Asian-owned firms earned just 75 cents.
- For Native Hawaiian- and Other Pacific Islander-owned employer firms, it was just \$35,386. In other words, for every \$1 in wages earned by employees at non-minority male-owned firms, employees at Native Hawaiian- and Other Pacific Islander-owned firms earned just 78 cents.
- For American Indian- and Alaska Native-owned employer firms, average payroll per employee was just \$39,756. In other words, for every \$1 in wages earned by employees at non-minority male-owned firms, employees at American Indian- and Alaska Native-owned firms earned just 87 cents.

**Table 3.3. Disparity Indexes from the 2017 Annual Business Survey, United States, All Industries**

	Employer Firms (1)	Sales and Receipts (\$000s) (2)	Employees (3)	Payroll (\$000s) (4)
<b>Panel A. Levels</b>				
All Firms	5,474,721	12,689,937,307	62,990,475	2,618,191,164
Non-minority male	2,851,098	8,972,454,223	38,973,541	1,775,434,267
Black	124,004	127,850,815	1,208,270	36,105,467
Hispanic	322,076	422,573,589	2,872,550	90,985,526
Asian	555,638	814,806,324	4,649,688	158,725,110
Native Hawaiian/Pac. Islander	6,847	8,426,209	55,413	1,960,819
Am. Indian & Alaska Native	24,503	37,992,217	221,193	8,793,842
<b>Panel B. Column Percentages</b>				
All Firms	100.00%	100.00%	100.00%	100.00%
Non-minority male	52.08%	70.71%	61.87%	67.81%
Black	2.27%	1.01%	1.92%	1.38%
Hispanic	5.88%	3.33%	4.56%	3.48%
Asian	10.15%	6.42%	7.38%	6.06%
Native Hawaiian/Pac. Islander	0.13%	0.07%	0.09%	0.07%
Am. Indian & Alaska Native	0.45%	0.30%	0.35%	0.34%
<b>Panel C. Disparity Indexes</b>				
		Column (2) ÷ (1)	(3) ÷ (1)	(4) ÷ (1)
Non-minority male		<i>135.77</i>	<i>118.81</i>	<i>130.21</i>
Black		<i>44.48</i>	<i>84.69</i>	<i>60.88</i>
Hispanic		<i>56.60</i>	<i>77.52</i>	<i>59.07</i>
Asian		<i>63.27</i>	<i>72.73</i>	<i>59.73</i>
Native Hawaiian/Pac. Islander		<i>53.09</i>	<i>70.34</i>	<i>59.88</i>
Am. Indian & Alaska Native		<i>66.89</i>	<i>78.46</i>	<i>75.04</i>

Source: Author's calculations from the 2017 ABS. Notes: (1) Figures are rounded. Rounding was performed subsequent to any mathematical calculations; (2) Excludes publicly owned, foreign-owned, and not-for-profit firms; (3) Totals for "All Firms" includes firms that were equally non-minority/minority-owned; (4) Statistically significant disparity indexes are italicized; (5) "n/a" indicates that data were not disclosed due to confidentiality or other publication restrictions.

## 2. Industry-Specific Results

Table 3.4 shows the 2017 ABS disparity ratio and its underlying firm and sales percentages for both all firms and employer firms. The top panel, for All Industries, replicates the results seen in Panels B and C in Table 3.3. The remaining panels in Table 3.4 present results for 16 distinct industry sectors, grouped according to four major procurement categories.

When the ABS survey results are disaggregated into major procurement categories and industry sectors, similar patterns of large, adverse, and statistically significant disparities are also observed in the vast majority of cases. Specifically:

- In the All Industries panel of Table 3.4, 100 percent of the disparity ratios are adverse (5 out of 5), 100 percent are large (5 out of 5), and 100 percent are statistically significant (5 out of 5).
- In the Construction (NAICS 23) panel, 100 percent of the disparity ratios are adverse, 100 percent are large, and 100 percent are statistically significant.
- In the Professional Services (NAICS 54) panel, 60 percent of the disparity ratios are adverse, 40 percent are large, and 80 percent are statistically significant.
- In the Professional Services (NAICS 55) panel, 40 percent of the disparity ratios are adverse, 40 percent are large, and 60 percent are statistically significant.
- In the Professional Services (NAICS 56) panel, 80 percent of the disparity ratios are adverse, 80 percent are large, and 100 percent are statistically significant.
- In the General Services (NAICS 48-49) panel, 100 percent of the disparity ratios are adverse, 80 percent are large, and 80 percent are statistically significant.
- In the General Services (NAICS 51) panel, 100 percent of the disparity ratios are adverse, 100 percent are large, and 100 percent are statistically significant.
- In the General Services (NAICS 52) panel, 100 percent of the disparity ratios are adverse, 100 percent are large, and 100 percent are statistically significant.
- In the General Services (NAICS 53) panel, 100 percent of the disparity ratios are adverse, 100 percent are large, and 100 percent are statistically significant.
- In the General Services (NAICS 61) panel, 75 percent of the disparity ratios are adverse, 75 percent are large, and 75 percent are statistically significant.
- In the General Services (NAICS 62) panel, 100 percent of the disparity ratios are adverse, 100 percent are large, and 100 percent are statistically significant.
- In the General Services (NAICS 71) panel, 60 percent of the disparity ratios are adverse, 60 percent are large, and 60 percent are statistically significant.

- In the General Services (NAICS 72) panel, 80 percent of the disparity ratios are adverse, 60 percent are large, and 40 percent are statistically significant.
- In the General Services (NAICS 81) panel, 100 percent of the disparity ratios are adverse, 80 percent are large, and 80 percent are statistically significant.
- In the CSE (NAICS 31-33) panel, 80 percent of the disparity ratios are adverse, 80 percent are large, and 80 percent are statistically significant.
- In the CSE (NAICS 42) panel, 100 percent of the disparity ratios are adverse, 80 percent are large, and 80 percent are statistically significant.
- In the CSE (NAICS 44-45) panel, 100 percent of the disparity ratios are adverse, 80 percent are large, and 80 percent are statistically significant.

These results are evident within each specific minority group as well. Specifically:

- For Blacks, 88 percent of the above disparity ratios are adverse (30 out of 34), 88 percent are large (30 out of 34), and 88 percent are statistically significant (30 out of 34).
- For Hispanics, 88 percent of the above disparity ratios are adverse, 88 percent are large, and 88 percent are statistically significant.
- For Asians, 82 percent of the above disparity ratios are adverse, 82 percent are large, and 94 percent are statistically significant.
- For Native Hawaiians and other Pacific Islanders, 93 percent of the above disparity ratios are adverse, 87 percent are large, and 80 percent are statistically significant.
- For American Indians and Alaska Natives, 82 percent of the above disparity ratios are adverse, 65 percent are large, and 65 percent are statistically significant.

Table 3.4. Percentage of Firms and Sales and Corresponding Disparity Ratios, Employer Firms, United States, 2017

	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio Employers
	(1)	(2)	(3)
<b>All Industries</b>			
Black	2.27	1.01	0.44***
Hispanic	5.88	3.33	0.57***
Asian	10.15	6.42	0.63***
NHPI	0.13	0.07	0.53***
AIAN	0.45	0.30	0.67***
	5,474,721	12,689,937,307	
<b>Construction</b>			
Black	1.17	0.72	0.61***
Hispanic	7.16	4.10	0.57***
Asian	2.02	1.37	0.68***
NHPI	0.16	0.10	0.63***
AIAN	0.69	0.52	0.76***
	700,453	1,544,490,456	
<b>Professional Services (NAICS 54)</b>			
Black	2.06	1.60	0.78***
Hispanic	4.32	3.20	0.74***
Asian	7.67	8.84	1.15***
NHPI	0.12	0.10	0.85*
AIAN	0.52	0.52	1.00
	794,235	922,698,077	
<b>Professional Services (NAICS 55)</b>			
Black	1.05	0.62	0.60***
Hispanic	2.08	2.80	1.34
Asian	3.67	4.15	1.13
NHPI	0.13	0.05	0.38***
AIAN	0.28	0.72	2.58***
	17,799	63,794,562	
<b>Professional Services (NAICS 56)</b>			
Black	3.00	2.14	0.71***
Hispanic	9.02	5.46	0.61***
Asian	3.59	4.49	1.25***
NHPI	0.18	0.09	0.51***
AIAN	0.52	0.34	0.66***
	338,083	513,696,279	
<b>General Services (NAICS 48-49)</b>			
Black	3.95	1.18	0.30***
Hispanic	10.33	4.79	0.46***
Asian	5.36	3.85	0.72***
NHPI	0.19	0.09	0.46***
AIAN	0.45	0.44	0.97
	182,196	413,997,717	

	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio Employers
	(1)	(2)	(3)
<b>General Services (NAICS 51)</b>			
Black	1.78	0.87	0.49***
Hispanic	3.70	2.15	0.58***
Asian	7.91	5.67	0.72***
NHPI	0.11	0.02	0.20***
AIAN	0.38	0.16	0.43***
	69,855	283,206,026	
<b>General Services (NAICS 52)</b>			
Black	2.10	0.63	0.30***
Hispanic	4.79	2.08	0.43***
Asian	4.17	2.37	0.57***
NHPI	0.09	0.04	0.39***
AIAN	0.39	0.10	0.25***
	221,696	462,341,970	
<b>General Services (NAICS 53)</b>			
Black	1.20	0.66	0.55***
Hispanic	4.00	2.07	0.52***
Asian	5.18	3.31	0.64***
NHPI	0.00	0.00	
AIAN	0.28	0.14	0.50***
	294,449	346,607,366	
<b>General Services (NAICS 61)</b>			
Black	2.90	1.76	0.61***
Hispanic	4.12	4.43	1.08
Asian	10.90	8.73	0.80***
NHPI	0.00	0.00	
AIAN	0.52	0.22	0.43***
	63,171	40,481,264	
<b>General Services (NAICS 62)</b>			
Black	6.76	3.60	0.53***
Hispanic	5.32	3.47	0.65***
Asian	12.83	10.17	0.79***
NHPI	0.11	0.05	0.43***
AIAN	0.44	0.24	0.53***
	587,170	680,014,862	
<b>General Services (NAICS 71)</b>			
Black	2.53	2.01	0.79***
Hispanic	3.02	1.69	0.56***
Asian	3.04	2.13	0.70***
NHPI	0.13	0.13	1.03
AIAN	0.47	0.56	1.17
	100,472	117,212,130	
<b>General Services (NAICS 72)</b>			
Black	1.44	1.47	1.02
Hispanic	8.02	6.04	0.75***
Asian	25.46	18.17	0.71***
NHPI	0.11	0.09	0.80
AIAN	0.35	0.29	0.85
	521,135	628,834,327	

	Percentage of All Employers	Percentage of All Employer Sales	Disparity Ratio Employers
	(1)	(2)	(3)
<b>General Services (NAICS 81)</b>			
Black	2.14	1.28	0.60***
Hispanic	6.49	4.46	0.69***
Asian	14.88	7.86	0.53***
NHPI	0.11	0.07	0.67**
AIAN	0.34	0.30	0.86
	388,652	231,288,863	
<b>CSE (NAICS 31-33)</b>			
Black	0.68	0.70	1.04
Hispanic	4.41	1.87	0.42***
Asian	4.88	3.59	0.74***
NHPI	0.11	0.08	0.75*
AIAN	0.41	0.22	0.54***
	238,204	1,346,629,885	
<b>CSE (NAICS 42)</b>			
Black	0.69	0.44	0.64***
Hispanic	5.49	3.07	0.56***
Asian	12.54	7.17	0.57***
NHPI	0.05	0.01	0.20***
AIAN	0.27	0.21	0.76
	287,476	2,691,602,545	
<b>CSE (NAICS 44-45)</b>			
Black	1.38	0.75	0.55***
Hispanic	4.88	3.12	0.64***
Asian	16.49	8.13	0.49***
NHPI	0.13	0.09	0.67
AIAN	0.37	0.25	0.67**
	636,455	2,240,019,607	

### C. Conclusions

While the exact proportions vary, regardless of whether the 2012 SBO data or the 2017 ABS data is examined, a pattern of large, adverse, and statistically significant disparities is consistently observed. This pattern is evident in the economy as a whole, as well as in each major procurement category and industry sector. Moreover, this pattern is observed for every minority group in the data—Blacks, Hispanics, Asians, Native Hawaiians and other Pacific Islanders, and American Indians and Alaska Natives.



#### **IV. There is Strong Evidence of Disparities and Discrimination in Salaries and Wages, Business Formation Rates, and Business Earnings**

In this final section, using data from the Census Bureau's *American Community Survey 5-year Public Use Microdata Sample (ACS PUMS)*, I test the likelihood that race-neutral factors can account for the large adverse racial disparities observed in the previous sections. This is important because it is fair to ask whether the large disparities documented throughout the disparity studies discussed in Section II, as well as throughout the most recent SBO and ABS surveys examined in Section III, can be adequately explained by something other than discrimination. That is, can these disparities be eliminated by accounting for other, possibly race-neutral, factors that differ between advantaged and disadvantaged groups? Using the statistical technique of regression analysis, I tested this question directly and found that, after controlling for independent variables untainted by discrimination, the disparities facing minority business owners remain large, adverse, and statistically significant in the vast majority of cases.

##### **A. Methods**

The first step in testing whether race-neutral factors can account for the large adverse racial disparities shown in Sections II and III is to document the extent of these disparities as observed in the ACS PUMS before any other variables are taken into account. To carry out this step, which we will refer to as the "baseline model", we use the technique of regression analysis<sup>53</sup> to explain three key economic outcomes: annual wages and salaries, the rate of business formation, and annual business owner earnings.

After establishing the baseline model, the next two steps will add several independent variables to the regression that are indicators of qualifications and capacity. First, we will include schooling, age,<sup>54</sup> and geographic location.<sup>55</sup> We'll refer to this regression analysis as the "qualifications model." This model compares individuals who are similarly situated in terms of their educational attainment, their labor market experience, and their geographic

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<sup>53</sup>See fn. 28.

<sup>54</sup> A person's age is a widely-used measure of their labor market experience and enters the regression equation quadratically.

<sup>55</sup> Because the U.S. Department of Agriculture ("USDA") is a Defendant in this case and the Plaintiff's allegations concern its efforts to contract with the USDA's Natural Resources Conservation Service ("NRCS"), we have used NRCS regions to denote geographic location. There are four NRCS regions: Central, Northeast, Southeast, and West. The Central region includes the states of North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, Minnesota, Iowa, Missouri, Wisconsin, Illinois, and Indiana. The Northeast region includes the states of Michigan, Ohio, West Virginia, New York, Pennsylvania, Maryland, New Jersey, Delaware, the District of Columbia, Vermont, New Hampshire, Massachusetts, Rhode Island, and Maine. The Southeast region includes the states of Arkansas, Louisiana, Kentucky, Tennessee, Mississippi, Alabama, Virginia, North Carolina, South Carolina, Georgia, and Florida. The West region includes the states of Alaska, Hawaii, Washington, Oregon, California, Nevada, Idaho, Utah, Arizona, Montana, Wyoming, Colorado, and New Mexico.

location to see how much, if any, the disparities observed in the baseline model are reduced when these additional factors are accounted for.<sup>56</sup>

The final step incorporates a large number of additional independent variables into the qualifications model that are materially related to the propensity to become a business owner. These include measures of individual financial assets (interest and dividend income<sup>57</sup>, home ownership status, and home property value), family structure (spouse present in the household, number of children in the household, number of workers in the family), mobility (lived in the same house last year), immigration status (foreign born, years in the U.S., English proficiency), military status (veteran), and local macroeconomic conditions by state (general population level, unemployment rate, number of full-time government employees, per capita personal income).<sup>58</sup> We will refer to this as the “qualifications plus capacities model” to see how much, if any, the disparities observed in the baseline model and in the qualifications model are reduced when these numerous additional variables are accounted for.

## B. Data

The data used for these regression analyses are the multi-year estimates combining the 2014 through 2018 *American Community Survey Public Use Microdata Sample* (ACS PUMS) records. The *American Community Survey* is an ongoing annual survey covering the same type of information that was formerly collected in the decennial census “long form.” The ACS is sent to approximately 3.5 million addresses annually, including housing units in all counties in the 50 states and the District of Columbia.<sup>59</sup> The PUMS file from the ACS contains records for a subsample of the full ACS.<sup>60</sup> The ACS PUMS provides the full range of population and housing information collected in the annual ACS and in the decennial census, and therefore allows us to examine economic outcomes for different race and ethnic groups in great detail while holding individual differences in a wide variety of other relevant demographic and economic variables constant.<sup>61</sup>

The universe for all of the analyses presented in this section includes all prime age (16-64) private sector labor force participants. Business ownership status is identified in the ACS PUMS through the “class of worker” variable, which distinguishes the unincorporated and incorporated self-employed from others in the labor force. The presence of the class of

<sup>56</sup> See, e.g., Aronson (1991), Blanchflower (2000), Wainwright (2000) for discussions of the influence of these various factors on business ownership or self-employment.

<sup>57</sup> Interest and dividend income and per capita personal income are included in the model in their logarithmic forms.

<sup>58</sup> Local macroeconomic data taken from U.S. Bureau of Economic Analysis (2020) (state-level per capital personal income level); U.S. Bureau of Labor Statistics (2020a, 2020b, 2020c, 2020d, 2020e, 2020f) (state-level unemployment rate); U.S. Census Bureau (2019a, 2019b) (state-level general population level); and U.S. Census Bureau (2020e, 2020f, 2020g, 2020h, 2020i) (state-level public sector employment level).

<sup>59</sup> See U.S. Census Bureau (2020j).

<sup>60</sup> See U.S. Census Bureau (2021).

<sup>61</sup> These ACS data were released in January 2020. See U.S. Census Bureau (2020d).

worker variable allows us to construct a detailed cross-sectional sample of individual business owners and their associated earnings. The combined 2014-2018 file contains over six million person-level records.

### C. Baseline model

#### 1. Unadjusted Disparities in Salaries and Wages are Adverse, Large, and Statistically Significant

A key source of new entrepreneurs in any given industry is the pool of experienced wage and salary workers in similar or related industries.<sup>62</sup> Other things equal, however, minorities who face discrimination in the labor market will be less available to populate the pool of potential minority-owned businesses.<sup>63</sup>

The ACS PUMS shows that, on average across all industries during the 2014-2018 time period, annual wages and salaries for minorities of either sex were 40.7 percent lower than for non-Hispanic white (“non-minority”) men. In other words, for every dollar earned by non-minority males during this time, minorities only earned 59 cents on average. This finding is statistically significant.<sup>64</sup>

If we consider each minority group within the SBA 8(a) Program,<sup>65</sup> a similar phenomenon is observed in all but one case:<sup>66</sup>

- For Blacks, average annual wages and salaries were 48.3 percent lower than for non-minority men. For every dollar earned by non-minority males during this time, Blacks only earned 52 cents on average. This finding is statistically significant.
- For Hispanics, average annual wages and salaries were 45.0 percent lower than for non-minority men. For every dollar earned by non-minority males during this time, Hispanics only earned 55 cents on average. This finding is statistically significant.
- For Asian Pacifics, average annual wages and salaries were 18.2 percent lower than for non-minority men. For every dollar earned by non-minority males during this

<sup>62</sup> See, e.g., Blanchflower (2000).

<sup>63</sup> There is a substantial body of evidence that discriminatory constraints in the capital market prevent minority-owned businesses from obtaining business loans. Furthermore, even when they are able to do so, there is evidence that the loans are not obtained on equal terms: minority-owned firms pay higher interest rates, other things being equal. This is another form of discrimination with an obvious and direct impact on the ability of racial minorities to form businesses and to expand or grow previously formed businesses. See, e.g., NERA Economic Consulting (2017, pp. 177-236) for an extensive overview and analysis of racial disparities and discrimination in capital markets.

<sup>64</sup> See Table 4.1.

<sup>65</sup> See fn. 31.

<sup>66</sup> See Table 4.1.

time, Asian Pacifics only earned 82 cents on average. This finding is statistically significant.

- For Subcontinent Asians, average annual wages and salaries were 17.8 percent higher than for non-minority men. For every dollar earned by non-minority males during this time, Subcontinent Asians earned \$1.18 on average. This finding is statistically significant.
- For Native Americans, average annual wages and salaries were 50.6 percent lower than for non-minority men. For every dollar earned by non-minority males during this time, Native Americans only earned 49 cents on average. This finding is statistically significant.

Similar findings result if we examine the data by major procurement categories such as construction, AECRS, professional services, general services, and CSE. A statistically significant adverse disparity in wage and salary earnings is observed in 88 percent of these cases (See Table 4.1).<sup>67</sup>

**Table 4.1. Annual Wage Earnings Regressions by Disadvantaged Group, Major Procurement Categories**

Race/Ethnicity	Construction	AECRS	Professional Services	General Services	CSE	All Industries
Minority	-30.6%****	-22.7%****	-43.6%****	-41.0%****	-26.4%****	-40.7%****
Black	-37.5%****	-29.1%****	-59.1%****	-47.8%****	-50.5%****	-48.3%****
Hispanic	-30.7%****	-30.7%****	-54.6%****	-46.9%****	-44.4%****	-45.0%****
Asian Pacific	-10.4%*	-11.2%****	-5.1%****	-19.2%****	-15.5%****	-18.2%****
Asian Subcontinent	-4.6%****	-2.0%	37.5%****	26.1%****	-0.3%	17.8%****
Native American	-38.1%****	-38.4%****	-58.7%****	-52.4%****	-48.3%****	-50.6%****
Two or more races	-23.8%****	-19.6%****	-37.8%****	-46.5%****	-45.6%****	-45.3%****

Source: Author's calculations from the 2014-2018 ACS PUMS. Note: Since the dependent variable was measured logarithmically, the reported coefficients are equal to 1 minus the exponentiated raw regression coefficient, so that they may be interpreted as percentage differences.

If we consider just those industry segments relevant to the contracts at issue in this case, we observe similar results as well.<sup>68</sup> The NAICS codes corresponding to the industries relevant to the contracts identified in Plaintiff's Complaint include NAICS 5416 ("Management, Scientific, and Technical Consulting Services"), NAICS 5611 ("Office

<sup>67</sup> Complete results appear below in Appendix Tables 4.1A-4.1L.

<sup>68</sup> See fn. 40, regarding the Plaintiff's industries.

Administrative Services”), and NAICS 5613 (“Employment Services”).<sup>69</sup> Statistically significant adverse disparities are observed in 82 percent of these cases (*See* Table 4.2).<sup>70</sup>

**Table 4.2. Annual Wage Earnings Regressions by Disadvantaged Group, Plaintiff’s Industry Segments**

Race/Ethnicity	All Plaintiff NAICS	NAICS 5416	NAICS 561M	NAICS 5613
Minority	-53.7%****	-35.5%****	-44.7%****	-42.5%****
Black	-68.4%****	-46.6%****	-51.8%****	-54.2%****
Hispanic	-57.5%****	-44.9%****	-48.1%****	-38.9%****
Asian Pacific	-21.4%****	-26.9%****	-25.1%****	-0.3%
Asian Subcontinent	20.5%****	-0.1%	4.5%	46.5%****
Native American	-61.6%****	-43.0%****	-37.2%****	-49.7%****
Two or more races	-44.9%****	-37.2%****	-40.3%****	-33.5%****

Source and Notes: *See* Table 4.1.

## 2. Unadjusted Disparities in Business Formation are Adverse, Large, and Statistically Significant

If discrimination constrains the available pool of business owners this should be evident in the rate of business formation within a given group (*See* Table 4.3).<sup>71</sup> The ACS PUMS shows that, on average across all industries during the 2014-2018 time period, the odds of a minority becoming self-employed are only 58.8 percent of the odds of a non-minority male becoming self-employed.<sup>72</sup> This finding is statistically significant.<sup>73</sup>

Considering each specific group of presumptively disadvantaged minorities within the SBA 8(a) Program, a similar phenomenon is observed in all cases.<sup>74</sup>

- For Blacks, the odds of becoming self-employed are only 39.4 percent of the odds for non-minority males. This finding is statistically significant.
- For Hispanics, the odds of becoming self-employed are only 64.8 percent of the odds for non-minority males. This finding is statistically significant.

<sup>69</sup> The ACS PUMS identifies NAICS 5416 and 5613 explicitly. NAICS 5611 is grouped together in the ACS PUMS with NAICS 5612 (“Facilities Support Services”) and NAICS 5619 (“Other Support Services”). The ACS PUMS refers to these latter three codes collectively as NAICS 561M (“Other Administrative and Other Support Services”).

<sup>70</sup> Complete results appear below in Appendix Tables 4.2A-4.2H.

<sup>71</sup> Complete results appear below in Appendix Tables 4.3A-4.3L.

<sup>72</sup> The coefficients from the business formation regressions reported in Tables 4.3 and 4.4 are presented as odds ratios. That is, they represent a given group’s odds of being self-employed relative to (*i.e.*, divided by) the odds of the non-minority males being self-employed. For example, the top row of Table 4.3 shows that, across all industries, the odds of minorities (row 1) as a group being self-employed are only 58.8 percent as high as the odds of non-minority males being self-employed.

<sup>73</sup> *See* “All Industries” column, Table 4.3.

<sup>74</sup> *Ibid.*

- For Asian Pacifics, the odds of becoming self-employed are only 72.7 percent of the odds for non-minority males. This finding is statistically significant.
- For Subcontinent Asians, the odds of becoming self-employed are only 66.8 percent of the odds for non-minority males. This finding is statistically significant.
- For Native Americans, the odds of becoming self-employed are only 63.3 percent of the odds for non-minority males. This finding is statistically significant.

Similar findings result when we subdivide the ACS PUMS data by major procurement categories. A statistically significant adverse disparity in business formation is observed in 93 percent of the cases shown in Table 4.3.

**Table 4.3. Annual Business Formation Regressions by Disadvantaged Group, Major Procurement Categories**

Race/Ethnicity	Construction	AECRS	Professional Services	General Services	CSE	All Industries
Minority	61.7****	59.7****	55.9****	61.0****	68.8****	58.8****
Black	58.2****	51.1****	41.4****	43.0****	30.8****	39.4****
Hispanic	60.5****	67.8****	72.0****	69.0****	65.4****	64.8****
Asian Pacific	85.7****	54.2****	49.7****	74.9****	1.18****	72.7****
Asian Subcontinent	72.9****	51.0****	29.2****	62.7****	1.62****	66.8****
Native American	54.0****	46.3****	73.4****	52.4****	1.00	63.3****
Two or more races	68.4****	67.1****	63.3****	61.3****	92.5****	61.3****

Source: Author's calculations from the 2014-2018 ACS PUMS. Note: The reported coefficients are odds ratios, interpreted as the ratio of the odds of one group forming a business divided by the odds of the reference group forming a business.

Furthermore, similar findings occur when we consider just the Plaintiff's industry segments. Statistically significant adverse disparities are observed in 86 percent of cases (See Table 4.4).<sup>75</sup>

**Table 4.4. Annual Business Formation Regressions by Disadvantaged Group, Plaintiff's Industry Segments**

Race/Ethnicity	All Plaintiff NAICS	NAICS 5416	NAICS 561M	NAICS 5613
Minority	39.5****	58.3****	52.9****	39.2****
Black	29.7****	65.8****	46.1****	30.9****
Hispanic	36.1****	60.1****	43.4****	37.9****
Asian Pacific	58.3****	55.5****	81.0*	56.2****
Asian Subcontinent	46.2****	35.9****	65.3*	89.4
Native American	56.4****	98.5	1.29	59.5*
Two or more races	64.1****	80.2****	73.1	56.0****

Source and Notes: See Table 4.3.

<sup>75</sup> Complete results appear below in Appendix Tables 4.4A-4.4H.

### 3. Unadjusted Disparities in Business Owner Earnings are Adverse, Large, and Statistically Significant

For those minorities who manage to overcome the odds observed in Tables 4.3 and 4.4 and actually form businesses, how do their earnings from those businesses fare relative to non-minority male business owners? The ACS PUMS shows that, on average across all industries during the 2014-2018 time period, annual business earnings were 29.9 percent lower for minorities than for non-minority males. This finding is statistically significant (see Table 4.5).

Considering each minority group within the SBA 8(a) Program, a similar phenomenon is observed in all but one case (see Table 4.5).<sup>76</sup>

- For Blacks, average annual business earnings were 46.2 percent lower than for non-minority men. For every dollar earned by non-minority males during this time, Blacks only earned 54 cents on average. This finding is statistically significant.
- For Hispanics, average annual business earnings were 26.9 percent lower than for non-minority men. For every dollar earned by non-minority males during this time, Hispanics only earned 73 cents on average. This finding is statistically significant.
- For Asian Pacifics, average annual business earnings were 12.7 percent lower than for non-minority men. For every dollar earned by non-minority males during this time, Asian Pacifics only earned 87 cents on average. This finding is statistically significant.
- For Subcontinent Asians, average annual business earnings were 8.1 percent higher than for non-minority men. For every dollar earned by non-minority males during this time, Subcontinent Asians earned \$1.08 on average. This finding is statistically significant.
- For Native Americans, average annual business earnings were 44.3 percent lower than for non-minority men. For every dollar earned by non-minority males during this time, Native Americans only earned 56 cents on average. This finding is statistically significant.

Similar findings result when we subdivide the ACS PUMS data by major procurement categories. A statistically significant adverse disparity in business owner earnings is observed in 83 percent of these cases.

**Table 4.5. Annual Business Owner Earnings Regressions by Disadvantaged Group, Major Procurement Categories**

Race/Ethnicity	Construc- tion	AECRS	Professional Services	General Services	CSE	All Industries
Minority	-17.3%****	-30.0%****	-35.8%****	-30.7%****	-19.2%****	-29.9%****
Black	-40.3%****	-59.2%****	-53.5%****	-43.5%****	-54.5%****	-46.2%****

<sup>76</sup> Complete results appear below in Appendix Tables 4.5A-4.5L.

Hispanic	-12.4%****	-16.3%	-33.5%****	-30.5%****	-15.2%****	-26.9%****
Asian Pacific	-1.9%**	-21.1%**	-19.2%****	-10.9%****	9.4%***	-12.7%****
Asian Subcontinent	8.8%	-28.3%*	3.8%*	13.1%****	36.0%****	8.1%****
Native American	-30.3%****	-66.1%**	-52.0%****	-50.1%****	-39.5%****	-44.3%****
Two or more races	-31.5%****	-36.2%*	-42.1%****	-46.7%****	-42.6%****	-46.8%****

Source: Author's calculations from the ACS PUMS. Note: Since the dependent variable was measured logarithmically, the reported coefficients are 1 minus the exponentiated raw regression coefficient, so that they may be interpreted as percentage differences.

Furthermore, similar findings occur when we consider just the Plaintiff's industry segments. Adverse disparities are observed in 82 percent of cases, and almost half of these disparities are statistically significant (*See* Table 4.6).<sup>77</sup>

**Table 4.6. Annual Business Owner Earnings Regressions by Disadvantaged Group, Plaintiff's Industry Segments**

Race/Ethnicity	All Plaintiff NAICS	NAICS 5416	NAICS 561M	NAICS 5613
Minority	-40.2%****	-35.0%****	-26.1%***	-34.6%****
Black	-44.1%****	-42.8%****	-22.3%	-56.0%****
Hispanic	-19.4%****	-23.0%****	-27.7%	-17.6%
Asian Pacific	-29.8%****	-31.7%****	-48.1%	-2.5%
Asian Subcontinent	1.4%	-5.2%	70.1%	41.5%
Native American	-14.2%	7.5%	-53.0%	-54.1%
Two or more races	-18.2%**	-26.1%***	7.3%	-17.3%

Source and Notes: *See* Table 4.5.

#### 4. Summary

Tables 4.1 to 4.6 document the adverse racial and ethnic disparities that exist in salaries and wages, business formation rates, and business owner earnings—for minorities as a group and among each presumptively disadvantaged group. These disparities exist in the economy as a whole, and in each of five major procurement categories, including two (professional services and general services) that encompass the industries identified in the Plaintiff's Complaint. Moreover, these disparities exist within the industries relevant to the contracts the Plaintiff identifies in its Complaint, that is, NAICS 5416, NAICS 561M, NAICS 5613, regardless of whether we examine those industries collectively or individually. In the vast majority of cases, these adverse disparities are large and statistically significant.

<sup>77</sup> Complete results appear below in Appendix Tables 4.6A-4.6H.



## D. Qualification and Capacities models

### 1. Disparities Remain Adverse, Large, and Statistically Significant after Adjusting for Qualifications and Capacities

To see if the disparities documented in Tables 4.1 to 4.6 can be explained by qualifications-related factors, we add schooling, age, and geographic location to each regression analysis. The qualifications model allows us to compare individuals who are similarly situated in terms of their educational attainment, their labor market experience, and their geographic location. We are interested to learn how much of the disparity from the baseline model is accounted for by including these qualifications-related factors.

To see if the disparities can be explained by capacity-related factors, we add indicators of individual financial assets, family structure, mobility, immigration status, military status (veteran), and local macroeconomic conditions by state to each regression analysis. The qualifications plus capacities model allows us to compare individuals who not only are similarly situated in terms of educational attainment, labor market experience, and geographic location, but are also similarly situated across a wide range of other attributes material to business ownership. We are interested to learn how much of the disparity from the baseline model and from the qualifications model is accounted for by controlling for capacity-related factors.

#### a. Findings for Wage and Salary Earnings

Table 4.7 shows the results of these analyses for annual wage and salary earnings. The coefficients from the annual wage and salary earnings regressions presented in Table 4.7 can be interpreted as a given group's earnings, in dollars, for each dollar of earnings in the reference group (non-minority males). For example, the top row of Table 4.7 shows that in the baseline model (column A), minorities as a group across all industries earn just 59¢ for each dollar of non-minority male earnings. When qualifications-related factors are accounted for (column B), this amount rises to 75¢ for each dollar of non-minority male earnings. When capacity-related factors are also accounted for (column C), the amount rises to 78¢ for each dollar of non-minority male earnings. Thus, of the 41¢ racial deficit observed (\$1.00 minus 59¢), qualifications and capacities account for just 19¢ worth (78¢ minus 59¢) (or 45%), leaving 55 percent unexplained. All of these differences are statistically significant.

If we consider each presumptively disadvantaged minority group separately within the economy as a whole, we see that large, adverse, and statistically significant disparities remain for every group even after accounting for qualifications- and capacities-related factors. For Blacks (row 2), the combined qualifications plus capacities model explains just 44 percent of the underlying disparity in annual wages and salaries. For Hispanics (row 3) the figure is 62 percent. For Native Americans (row 6) the figure is 47 percent. For Asian Pacific (row 4) and Subcontinent Asians (row 5), on the other hand, the figures are actually negative. In other words, accounting for qualifications and capacities actually worsens the observed level of disparity for these two groups relative to the baseline. This result occurs

when a given group possesses, on balance, more of the factors that are positively related to earnings than non-minority males possess. All of these results are statistically significant.

Considering major procurement categories, whether we consider minorities as a group or each presumptively disadvantaged minority group separately, we again see that, with just two exceptions, large, adverse, and statistically significant disparities still remain after controlling for qualifications- or qualifications plus capacities-related factors. This is true in construction, AE-CRS, professional services (within which some of the Plaintiff's lines of work fall), general services (within which other of the Plaintiff's lines of work fall), and CSE.<sup>78</sup> All of these results are statistically significant.

Turning to just those lines of work specific to the Plaintiff, we see that in all cases adverse disparities still remain after controlling for qualifications- and capacities-related factors. This is true when considering NAICS 5416, NAICS 561M, and NAICS 5613 combined, as well as when considering each one separately. It is true when considering minorities as a group and for each minority group separately. In 90 percent of cases these adverse disparities are large and in 98 percent of cases they are statistically significant.

#### **b. Findings for Business Formation**

Table 4.8 shows the results for the rate of business formation logit regressions.<sup>79</sup> The coefficients from the business formation regressions in Table 4.8 are presented as odds ratios. That is, they represented a given group's odds of being self-employed relative to (*i.e.*, divided by) the odds of the non-minority males being self-employed. For example, the top row of Table 4.8 shows that in the baseline model (column A), across all industries, the odds of minorities (row 1) as a group being self-employed are only 59 percent as high as the odds of non-minority males being self-employed. When qualifications-related factors are accounted for (column B), the odds ratio increases to 66 percent. When capacity-related factors are also accounted for (column C), the amount falls back to 60 percent. Thus, the qualifications model accounts for just 17 percent of the disparity in business formation while the qualifications plus capacities model accounts for just 2 percent of the disparity.<sup>80</sup>

<sup>78</sup> Disparities in the qualifications plus capacities model for Subcontinent Asians in AECRS and in professional services, are adverse but not large.

<sup>79</sup> Logit regression is used to determine the relationship between a categorical variable—one that can be characterized in terms of a “yes” or a “no” response as opposed to a continuous number—and a set of characteristics that are related to the outcome of the categorical variable. Logit regression produces estimates of the extent to which each characteristic is positively or negatively related to the likelihood that the categorical variable will be a yes or no. In this case, the categorical variable is whether or not an individual is self-employed. Logit regression is one of several techniques that can be used to examine qualitative outcomes. Generally, other techniques such as Probit regression yield similar results. For a detailed discussion, see G.S. Maddala (1983). Logit analysis is performed here using the “logit” command in the statistical program STATA.

<sup>80</sup> To see this, first note the odds ratio of 0.588 for minorities in the first row of Table 4.8 is 41.2 percentage points below than parity ( $1.00 - 0.588 = 0.412$ ). In column B of the first row, the odds ratio increases by

If we consider each presumptively disadvantaged minority group separately within the economy as a whole, we see that large, adverse, and statistically significant disparities remain for every group even after accounting for qualifications- and capacities-related factors. For Blacks (row 2), the qualifications model explains just 16 percent of the disparity in the baseline model, and the combined qualifications plus capacities model explains only 25 percent of the disparity in the baseline model. For Hispanics (row 3), the qualifications model explains just 8 percent of the disparity in the baseline model. Accounting for all the variables in the qualifications plus capacities model yields actually worsens the level of disparity for Hispanics relative to the baseline, indicating that this group possesses, on balance, more of the factors that are positively related to business formation than non-minority males possess. For Asian Pacific (row 4) and Subcontinent Asian (row 5), there is a similar pattern. The qualifications model explains 27 percent and 47 percent of the disparity in the baseline model, respectively, but in the qualifications plus capacities model the disparities actually worsen compared to the baseline model. Again, this indicates that Asian Pacifics and Subcontinent Asians possess, on balance, more of the factors that are positively related to business formation than non-minority males possess. For Native Americans (row 6), the qualifications model explains just 6 percent of the disparity in the baseline model, and the combined qualifications plus capacities model explains only 12 percent of the disparity in the baseline model.

Turning to major procurement categories, whether we consider minorities as a group or each presumptively disadvantaged minority group separately, we see that large, adverse, and statistically significant disparities are observed in construction, AECRS, and professional services in all cases. In general services, 92 percent of the disparities are large and adverse, and 100 percent are statistically significant. In CSE, 67 percent of the disparities are large and adverse, and 83 percent of cases are statistically significant.

When considering all of the Plaintiff's NAICS codes combined, we observe large, adverse, and statistically significant disparities for minorities and for each separate minority group with only one exception.<sup>81</sup> When considering the Plaintiff's NAICS code 5416, we again observe large, adverse, and statistically significant disparities for minorities and for each separate minority group with the exception of Native Americans.<sup>82</sup> When considering the Plaintiff's NAICS code 561M, we again observe large, adverse, and statistically significant disparities for minorities and for each separate minority group with the exception of Native Americans, and one instance for the Asian Subcontinent group that is large and adverse but

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7.1 percentage points ( $0.659 - 0.588 = 0.071$ ). Finally, 7.1 percentage points is just 17.2 percent of the baseline disparity of 41.2 percentage points ( $7.1 \div 41.2 = 17.2$ ).

<sup>81</sup> The results for Native Americans are not adverse. However, these results are also not statistically significant. Out of 140,113 observations in this business formation regression analysis, only 623 were Native American, and only 91 were self-employed Native Americans.

<sup>82</sup> The results for Native Americans in NAICS code 5416 are not adverse. However, as with the previous analysis, these results are also not statistically significant. Out of 75,856 observations in this business formation regression analysis, only 211 were Native American, and only 66 were self-employed Native Americans.

not statistically significant.<sup>83</sup> When considering the Plaintiff's NAICS code 5613, we again observe large, adverse, and statistically significant disparities for minorities, Blacks, Hispanics, and Asian Pacifics. For Subcontinent Asians, disparities are large and adverse but not significant in the qualifications model, and they are large, adverse, and statistically significant in the qualifications plus capacities model. For Native Americans, the disparities are again not adverse and not statistically significant.<sup>84</sup>

### c. Findings for Business Owner Earnings

Table 4.9 shows the results for annual business owner earnings. The coefficients from the annual business owner earnings regressions presented in Table 4.9 can be interpreted just as in Table 4.7 for wage and salary earnings. That is, the coefficient shows the given group's earnings, in dollars, for each dollar of earnings in the reference group (non-minority males). For example, the top row of Table 4.9 shows that in the baseline model (column A), minorities as a group across all industries earn just 70¢ for each dollar of non-minority male business owner earnings. When qualifications-related factors are accounted for (column B), this amount rises to 79¢ for each dollar of non-minority male earnings. When capacity-related factors are also accounted for (column C), the amount falls back to 73¢ for each dollar of non-minority male earnings. Thus, of the 30¢ racial deficit observed (\$1.00 minus 70¢), qualifications and capacities account for just 3¢ worth (73¢ minus 70¢) (or 11%), leaving 89 percent unexplained. All of these differences are statistically significant.

If we consider each presumptively disadvantaged minority group separately within the economy as a whole, we see that large, adverse, and statistically significant disparities remain in almost every case even after accounting for qualifications- and capacities-related factors. For Blacks (row 2), the combined qualifications plus capacities model explains just 31 percent of the underlying disparity in annual business owner earnings. For Hispanics (row 3) the figure is 14 percent. For Native Americans (row 6) the figure is 32 percent. For Asian Pacific (row 4) and Subcontinent Asians (row 5), just as was the case in wages and salaries, the figures are actually negative. That is, accounting for qualifications and capacities actually worsens the level of disparity for these two groups relative to the baseline.<sup>85</sup> All of these results are statistically significant.

<sup>83</sup> The results for Native Americans in NAICS code 561M are not adverse. However, as with the previous analysis, these results are also not statistically significant. Out of 16,317 observations in this business formation regression analysis, only 71 were Native American, and only 13 were self-employed Native Americans.

<sup>84</sup> Out of 47,940 observations in the business formation regression analysis for NAICS code 5613, only 341 were Native American, and only 12 were self-employed Native Americans.

<sup>85</sup> In fact, Subcontinent Asians in the baseline model actually have a small but statistically significant advantage in business owner earnings relative to non-minority males. But once qualifications, and then capacities are controlled for, this small statistically significant advantage becomes a large statistically significant disadvantage.

Considering major procurement categories:

- In construction, large, adverse and statistically significant disparities are observed for minorities as a group, Blacks, Hispanics, and Native Americans. For Asian Pacifics, the disparity is adverse in the qualifications model, large and adverse in the qualifications plus capacities model, and statistically significant in both models. For Subcontinent Asians, the disparity is not adverse in the qualifications model and adverse in the qualifications plus capacities model, but neither result is statistically significant.<sup>86</sup>
- In AEGRS, large, adverse and statistically significant disparities are observed for minorities as a group, Blacks, Asian Pacifics, Subcontinent Asians, and Native Americans. For Hispanics, the disparities in both the qualifications model and the qualifications plus capacities model are adverse but they are not statistically significant.<sup>87</sup>
- In professional services, large, adverse and statistically significant disparities are observed for minorities as a group, Blacks, Hispanics, Asian Pacifics, and Native Americans. For Subcontinent Asians, the disparity in the qualifications model is adverse and statistically significant and the disparity in the qualifications plus capacities model is large, adverse, and statistically significant.
- In general services, large, adverse and statistically significant disparities are observed for minorities as a group, Blacks, Hispanics, and Native Americans. For Asian Pacifics, the disparity in the qualifications model is adverse but not statistically significant and the disparity in the qualifications plus capacities model is large, adverse, and statistically significant. For Subcontinent Asians, the disparity in the qualifications model is not adverse but it is statistically significant, while the disparity in the qualifications plus capacities model is large, adverse, and statistically significant.
- In CSE, large, adverse and statistically significant disparities are observed for minorities as a group, Blacks, Hispanics, and Native Americans. For Asian Pacifics, the disparity in the qualifications model is adverse but not statistically significant and the disparity in the qualifications plus capacities model is large, adverse, and statistically significant. For Subcontinent Asians, the disparity in the qualifications model is not adverse but is statistically significant, while the disparity in the qualifications plus capacities model is again large, adverse, and statistically significant.

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<sup>86</sup> Out of 77,023 observations in the business owner earnings regression analysis for construction, only 281 were Subcontinent Asians.

<sup>87</sup> Out of 77,023 observations in the business owner earnings regression analysis for construction, only 281 were Subcontinent Asians.

Considering the Plaintiff's specific industries:

- For all the Plaintiff's NAICS codes combined, large, adverse and statistically significant disparities are observed for minorities as a group, Blacks, Hispanics, and Asian Pacifics. For Subcontinent Asians, the disparity in the qualifications model is not adverse but also not statistically significant, while the disparity in the qualifications plus capacities model is adverse but is not statistically significant. For Native Americans, the disparity in the qualifications model is large and adverse but not statistically significant, while the disparity in the qualifications plus capacities model is adverse but also not statistically significant.<sup>88</sup>
- For NAICS code 5416, large, adverse and statistically significant disparities are observed for minorities as a group, Blacks, Hispanics, and Asian Pacifics. For Subcontinent Asians, the disparity in the qualifications model is adverse but not statistically significant, while the disparity in the qualifications plus capacities model is large and adverse but not statistically significant. For Native Americans, the disparities in both models are not adverse but also not statistically significant.<sup>89</sup>

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<sup>88</sup> Out of 18,301 observations in the business owner earnings regression analysis for construction, only 452 were Subcontinent Asian and only 91 were Native American.

<sup>89</sup> Out of 14,638 observations in the business owner earnings regression analysis for construction, only 396 were Subcontinent Asian and only 66 were Native American.

Table 4.7. Annual Wage Earnings Regressions, 2014-2018

Independent Variables	Specification		
	Baseline model	Qualifications model	Qualifications + capacities model
	(A)	(B)	(C)
<b>All Industries</b>			
Minority	0.593****	0.745****	0.775****
Black	0.517****	0.671****	0.729****
Hispanic	0.550****	0.792****	0.828****
Asian Pacific	0.818****	0.743****	0.772****
Asian Subcontinent	1.178****	0.830****	0.860****
Native American	0.506****	0.694****	0.740****
Two or more races	0.547****	0.748****	0.778****
No. Observations	5591853	5591853	5487468
Adj. R-squared	0.050	0.425	0.432
<b>Construction</b>			
Minority	0.694****	0.773****	0.817****
Black	0.625****	0.651****	0.736****
Hispanic	0.693****	0.811****	0.870****
Asian Pacific	0.896****	0.778****	0.812****
Asian Subcontinent	0.954*	0.804****	0.832****
Native American	0.619****	0.659****	0.723****
Two or more races	0.762****	0.812****	0.846****
No. Observations	355954	355954	355955
Adj. R-squared	0.037	0.188	0.229
<b>AECRS</b>			
Minority	0.773****	0.826****	0.866****
Black	0.709****	0.760****	0.818****
Hispanic	0.693****	0.823****	0.877****
Asian Pacific	0.888****	0.837****	0.877****
Asian Subcontinent	0.980	0.893****	0.940****
Native American	0.616****	0.744****	0.786****
Two or more races	0.804****	0.895****	0.901****
No. Observations	66288	66288	65985
Adj. R-squared	0.041	0.280	0.298
<b>Professional Services</b>			
Minority	0.563****	0.731****	0.752****
Black	0.408****	0.612****	0.677****
Hispanic	0.454****	0.748****	0.789****
Asian Pacific	0.933****	0.784****	0.792****
Asian Subcontinent	1.318****	0.921****	0.945****
Native American	0.418****	0.632****	0.701****
Two or more races	0.627****	0.745****	0.775****
No. Observations	625894	625894	619594
Adj. R-squared	0.083	0.363	0.388

Independent Variables	Specification		
	Baseline model	Qualifications model	Qualifications + capacities model
	(A)	(B)	(C)
<b>General Services</b>			
Minority	0.621****	0.754****	0.779****
Black	0.578****	0.692****	0.738****
Hispanic	0.573****	0.812****	0.841****
Asian Pacific	0.812****	0.743****	0.773****
Asian Subcontinent	1.145****	0.798****	0.824****
Native American	0.520****	0.719****	0.761****
Two or more races	0.536****	0.741****	0.766****
No. Observations	3446186	3446186	3366541
Adj. R-squared	0.044	0.439	0.442
<b>CSE</b>			
Minority	0.586****	0.736****	0.778****
Black	0.495****	0.674****	0.738****
Hispanic	0.556****	0.777****	0.823****
Asian Pacific	0.845****	0.725****	0.768****
Asian Subcontinent	0.997	0.782****	0.830****
Native American	0.517****	0.698****	0.740****
Two or more races	0.544****	0.769****	0.802****
No. Observations	1627594	1627594	1608075
Adj. R-squared	0.065	0.423	0.440
<b>All Plaintiff NAICS codes</b>			
Minority	0.463****	0.669****	0.686****
Black	0.316****	0.522****	0.590****
Hispanic	0.425****	0.745****	0.776****
Asian Pacific	0.786****	0.757****	0.765****
Asian Subcontinent	1.205****	0.898****	0.914****
Native American	0.384****	0.625****	0.691****
Two or more races	0.551****	0.697****	0.730****
No. Observations	126364	126364	124529
Adj. R-squared	0.096	0.340	0.363
<b>Plaintiff NAICS 5416</b>			
Minority	0.645****	0.719****	0.746****
Black	0.534****	0.601****	0.665****
Hispanic	0.551****	0.713****	0.760****
Asian Pacific	0.731****	0.754****	0.779****
Asian Subcontinent	0.999	0.896****	0.946**
Native American	0.570****	0.707****	0.757****
Two or more races	0.628****	0.714****	0.742****
No. Observations	66392	66392	66110
Adj. R-squared	0.052	0.210	0.235



Independent Variables	Specification		
	Baseline model	Qualifications model	Qualifications + capacities model
	(A)	(B)	(C)
<b>Plaintiff NAICS 561M</b>			
Minority	0.553****	0.675****	0.704****
Black	0.482****	0.581****	0.665****
Hispanic	0.519****	0.735****	0.748****
Asian Pacific	0.749****	0.694****	0.697****
Asian Subcontinent	1.045	0.834**	0.812***
Native American	0.628***	0.696***	0.719***
Two or more races	0.597****	0.699****	0.730****
No. Observations	15054	15054	14834
Adj. R-squared	0.054	0.280	0.312
<b>Plaintiff NAICS 5613</b>			
Minority	0.575****	0.692****	0.700****
Black	0.458****	0.562****	0.626****
Hispanic	0.611****	0.841****	0.852****
Asian Pacific	0.997	0.813****	0.786****
Asian Subcontinent	1.465****	0.956	0.883**
Native American	0.503****	0.635****	0.712****
Two or more races	0.665****	0.735****	0.759****
No. Observations	44918	44918	43585
Adj. R-squared	0.068	0.243	0.277

Source: Author's calculations from the 2014-1018 ACS PUMS. Notes: Statistical significance is indicated by asterisks (\* p-value<0.1, \*\* p-value<0.05, \*\*\* p-value<0.01, \*\*\*\* p-value<0.001).

Table 4.8. Business Formation Regressions, 2014-2018

Independent Variables	Specification		
	Baseline model	Qualifications model	Qualifications + capacities model
	(A)	(B)	(C)
<b>All Industries</b>			
Minority	0.588****	0.659****	0.596****
Black	0.394****	0.491****	0.543****
Hispanic	0.648****	0.677****	0.578****
Asian Pacific	0.727****	0.802****	0.621****
Asian Subcontinent	0.668****	0.825****	0.604****
Native American	0.633****	0.654****	0.697****
Two or more races	0.613****	0.828****	0.841****
No. Observations	6046247	6046246	5902242
Pseudo R-squared	0.0100	0.149	0.159
<b>Construction</b>			
Minority	0.617****	0.689****	0.609****
Black	0.582****	0.557****	0.617****
Hispanic	0.605****	0.710****	0.573****
Asian Pacific	0.857****	0.821****	0.650****
Asian Subcontinent	0.729****	0.781****	0.592****
Native American	0.540****	0.583****	0.578****
Two or more races	0.684****	0.806****	0.812****
No. Observations	424047	424047	418943
Pseudo R-squared	0.010	0.056	0.067
<b>AECRS</b>			
Minority	0.597****	0.688****	0.657****
Black	0.511****	0.582****	0.624****
Hispanic	0.678****	0.854****	0.794****
Asian Pacific	0.542****	0.531****	0.456****
Asian Subcontinent	0.510****	0.638****	0.522****
Native American	0.463****	0.474****	0.538****
Two or more races	0.671****	0.859	0.843
No. Observations	69864	69864	69323
Pseudo R-squared	0.008	0.081	0.095
<b>Professional Services</b>			
Minority	0.586****	0.635****	0.614****
Black	0.439****	0.485****	0.527****
Hispanic	0.753****	0.825****	0.756****
Asian Pacific	0.511****	0.543****	0.470****
Asian Subcontinent	0.313****	0.396****	0.341****
Native American	0.751****	0.812****	0.867****
Two or more races	0.655****	0.827****	0.851****
No. Observations	705758	705758	693999
Pseudo R-squared	0.012	0.077	0.084

Independent Variables	Specification		
	Baseline model	Qualifications model	Qualifications + capacities model
	(A)	(B)	(C)
<b>General Services</b>			
Minority	0.661****	0.760****	0.675****
Black	0.467****	0.596****	0.639****
Hispanic	0.708****	0.781****	0.662****
Asian Pacific	0.902****	0.890****	0.669****
Asian Subcontinent	0.871****	1.119****	0.802****
Native American	0.527****	0.565****	0.612****
Two or more races	0.638****	0.887****	0.888****
No. Observations	3738400	3738400	3634589
Pseudo R-squared	0.009	0.129	0.136
<b>CSE</b>			
Minority	0.688****	0.685****	0.547****
Black	0.308****	0.320****	0.362****
Hispanic	0.654****	0.685****	0.534****
Asian Pacific	1.176****	0.984	0.637****
Asian Subcontinent	1.618****	1.438****	0.850****
Native American	1.002	0.985	1.117**
Two or more races	0.780****	0.868****	0.862****
No. Observations	1695118	1695118	1664343
Pseudo R-squared	0.010	0.086	0.107
<b>All Plaintiff NAICS codes</b>			
Minority	0.395****	0.675****	0.704****
Black	0.297****	0.645****	0.717****
Hispanic	0.361****	0.747****	0.725****
Asian Pacific	0.583****	0.611****	0.571****
Asian Subcontinent	0.462****	0.485****	0.440****
Native American	0.564****	1.021	1.128
Two or more races	0.641****	0.983	1.029
No. Observations	140113	140113	136711
Pseudo R-squared	0.025	0.186	0.190
<b>Plaintiff NAICS 5416</b>			
Minority	0.583****	0.751****	0.800****
Black	0.658****	0.828****	0.899**
Hispanic	0.601****	0.848****	0.832****
Asian Pacific	0.555****	0.622****	0.612****
Asian Subcontinent	0.359****	0.480****	0.451****
Native American	0.985	1.118	1.217
Two or more races	0.803****	1.086	1.125*
No. Observations	75856	75856	75193
Pseudo R-squared	0.009	0.108	0.115

Independent Variables	Specification		
	Baseline model	Qualifications model	Qualifications + capacities model
	(A)	(B)	(C)
<b>Plaintiff NAICS 561M</b>			
Minority	0.529****	0.658****	0.637****
Black	0.461****	0.576****	0.679****
Hispanic	0.434****	0.608****	0.528****
Asian Pacific	0.810*	0.756**	0.539****
Asian Subcontinent	0.653*	0.677	0.444****
Native American	1.293	1.306	1.338
Two or more races	0.731	0.906	0.935
No. Observations	16317	16317	15946
Pseudo R-squared	0.016	0.086	0.101
<b>Plaintiff NAICS 5613</b>			
Minority	0.392****	0.502****	0.509****
Black	0.309****	0.406****	0.459****
Hispanic	0.379****	0.559****	0.536****
Asian Pacific	0.562****	0.477****	0.392****
Asian Subcontinent	0.894	0.709*	0.581***
Native American	0.595*	0.808	0.954
Two or more races	0.560***	0.706*	0.742
No. Observations	47940	47940	45572
Pseudo R-squared	0.023	0.096	0.122

Source and Notes: See Table 4.7.

Table 4.9. Business Owner Earnings Regressions, 2014-2018

Independent Variables	Specification		
	Baseline model	Qualifications model	Qualifications + capacities model
	(A)	(B)	(C)
<b>All Industries</b>			
Minority	0.701****	0.791****	0.733****
Black	0.538****	0.635****	0.683****
Hispanic	0.731****	0.838****	0.768****
Asian Pacific	0.873****	0.919****	0.781****
Asian Subcontinent	1.081****	1.058****	0.860****
Native American	0.557****	0.627****	0.699****
Two or more races	0.532****	0.662****	0.673****
No. Observations	555388	555388	549731
Adj. R-squared	0.0275	0.120	0.124
<b>Construction</b>			
Minority	0.827****	0.842****	0.799****
Black	0.597****	0.611****	0.686****
Hispanic	0.876****	0.919****	0.865****
Asian Pacific	0.981	0.904**	0.793****
Asian Subcontinent	1.088	1.041	0.900
Native American	0.697****	0.712****	0.795****
Two or more races	0.685****	0.711****	0.743****
No. Observations	77023	77023	76687
Adj. R-squared	0.014	0.037	0.062
<b>AECRS</b>			
Minority	0.700****	0.761****	0.722****
Black	0.408****	0.454****	0.491****
Hispanic	0.837*	0.980	0.936
Asian Pacific	0.789**	0.765**	0.706***
Asian Subcontinent	0.717	0.708*	0.647**
Native American	0.339**	0.329**	0.333**
Two or more races	0.638**	0.743*	0.788
No. Observations	6266	6266	6256
Adj. R-squared	0.021	0.084	0.099
<b>Professional Services</b>			
Minority	0.643****	0.766****	0.732****
Black	0.462****	0.563****	0.619****
Hispanic	0.668****	0.891****	0.848****
Asian Pacific	0.807****	0.742****	0.673****
Asian Subcontinent	1.018	0.919*	0.803****
Native American	0.475****	0.612****	0.695****
Two or more races	0.582****	0.693****	0.712****
No. Observations	102486	102486	101890
Adj. R-squared	0.019	0.116	0.130

Independent Variables	Specification		
	Baseline model	Qualifications model	Qualifications + capacities model
	(A)	(B)	(C)
<b>General Services</b>			
Minority	0.731****	0.817****	0.755****
Black	0.622****	0.713****	0.740****
Hispanic	0.717****	0.826****	0.762****
Asian Pacific	0.954***	0.976	0.838****
Asian Subcontinent	1.206****	1.065**	0.881****
Native American	0.525****	0.599****	0.657****
Two or more races	0.528****	0.671****	0.669****
No. Observations	371402	371402	366905
Adj. R-squared	0.024	0.130	0.130
<b>CSE</b>			
Minority	0.808****	0.790****	0.669****
Black	0.455****	0.503****	0.556****
Hispanic	0.848****	0.826****	0.705****
Asian Pacific	1.094***	0.983	0.727****
Asian Subcontinent	1.360****	1.250****	0.874****
Native American	0.605****	0.618****	0.688****
Two or more races	0.574****	0.659****	0.672****
No. Observations	75049	75049	74377
Adj. R-squared	0.026	0.083	0.099
<b>All Plaintiff NAICS codes</b>			
Minority	0.598****	0.726****	0.739****
Black	0.425****	0.559****	0.644****
Hispanic	0.624****	0.806****	0.803****
Asian Pacific	0.676****	0.702****	0.673****
Asian Subcontinent	1.034	1.014	0.928
Native American	0.619**	0.858	0.955
Two or more races	0.652****	0.818**	0.828**
No. Observations	18301	18301	18187
Adj. R-squared	0.019	0.092	0.107
<b>Plaintiff NAICS 5416</b>			
Minority	0.650****	0.714****	0.714****
Black	0.510****	0.572****	0.629****
Hispanic	0.660****	0.770****	0.770****
Asian Pacific	0.683****	0.683****	0.637****
Asian Subcontinent	0.952	0.948	0.888
Native American	0.952	1.075	1.130
Two or more races	0.639****	0.739***	0.752***
No. Observations	14638	14638	14588
Adj. R-squared	0.016	0.059	0.075

Independent Variables	Specification		
	Baseline model	Qualifications model	Qualifications + capacities model
	(A)	(B)	(C)
<b>Plaintiff NAICS 561M</b>			
Minority	0.739**	0.872	0.936
Black	0.777	0.841	0.930
Hispanic	0.723*	0.810	0.823
Asian Pacific	0.519***	0.700	0.888
Asian Subcontinent	1.701	1.744	1.205
Native American	0.470	0.471	0.460
Two or more races	1.073	1.683	1.707
No. Observations	1599	1599	1590
Adj. R-squared	0.009	0.058	0.062
<b>Plaintiff NAICS 5613</b>			
Minority	0.654****	0.788**	0.899
Black	0.440****	0.542****	0.748*
Hispanic	0.824	1.077	1.147
Asian Pacific	0.975	0.884	0.841
Asian Subcontinent	1.415	1.377	1.212
Native American	0.459	0.610	0.797
Two or more races	0.827	1.018	1.061
No. Observations	2064	2064	2009
Adj. R-squared	0.014	0.080	0.127

Source and Notes: See Table 4.7.

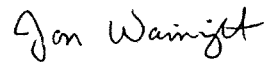
This section has shown that when we examine the status of minorities compared to non-minority males in the industry segments relevant to the SBA Section 8(a) Business Development Program in general, and the Plaintiff's specific lines of work in particular, the results look very similar to what we observe elsewhere in the economy.

That is, even when other non-discriminatory factors are held constant using the statistical technique of regression analysis, the disparities in salaries and wages, business formation rates, and business owner earnings, between Blacks, Hispanics, Asians, and Native Americans, on the one hand, and their non-minority male counterparts, on the other, remain large, adverse, and statistically significant in the vast majority of cases. I have documented such disparities in this report for the nation as a whole and throughout the states, and in the economy as a whole as well as in all major procurement categories and industry sectors, including those within which the Plaintiff operates.

These results are fully consistent with the conclusion that discrimination continues to adversely affect minorities and women operating in United States business markets, and in particular those markets that are relevant to the SBA Section 8(a) Business Development Program.

## V. Overall Conclusions

In preparing this report, I conducted extensive original research using over 200 previously produced disparity studies, as well as Census Bureau data from the *Survey of Business Owners*, the *Annual Business Survey*, and the *American Community Survey*. After reviewing this material, and based on the findings presented in this report, I conclude that, taken as a whole, they provide strong evidence of large, adverse, and statistically significant disparities facing minority-owned business enterprises in the United States. Moreover, these disparities cannot be adequately explained by differences between the relevant populations in factors untainted by the effects of discrimination and are therefore consistent with the presence of discrimination in the business market. This is the case in all major markets for government contracting and procurement including construction, AECRS, professional services, general services, and CSE, including those industries specific to the Plaintiff in this matter.



Jon Wainwright, Ph.D.

February 4, 2022

This report is subject to revision upon access to additional data or testimony.

My rate for work done on this matter is \$600 per hour. My qualifications are documented above in Section I and in my curriculum vitae, which is attached as Exhibit A. At this time, I have not prepared any exhibits that I expect to use as summary of or support for my positions other than those contained herein. I may prepare such exhibits in the future as part of the trial preparation process.



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**VII. Appendix Tables**

Table 4.1A. Annual Wage Earnings Regressions, Construction, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.694**** (-105.80)	0.773**** (-74.00)	0.817**** (-47.83)
WBE	0.771**** (-44.88)	0.667**** (-75.20)	0.674**** (-75.54)
Year	1.037**** (33.24)	1.037**** (35.87)	1.021**** (13.86)
Age		1.132**** (150.12)	1.096**** (102.37)
Age squared		0.999**** (-128.18)	0.999**** (-103.58)
Schooling		.	.
Nursery school/preschool		1.025* (1.95)	1.035*** (2.87)
Grade 9		0.977 (-1.62)	0.970** (-2.21)
Grade 10		0.916**** (-6.13)	0.912**** (-6.63)
Grade 11		0.915**** (-6.43)	0.911**** (-6.96)
12th grade - no diploma		1.068**** (4.82)	1.039*** (2.90)
Regular high school diploma		1.242**** (19.35)	1.206**** (17.21)
GED or alternative credential		1.043**** (3.41)	1.036*** (2.89)
Some college, but less than 1 year		1.309**** (22.22)	1.255**** (19.29)
1 or more years college credit, no degree		1.360**** (26.63)	1.300**** (23.33)
Associate's degree		1.460**** (31.13)	1.359**** (25.96)
Bachelor's degree		1.923**** (55.29)	1.696**** (45.86)
Master's degree		2.250**** (53.70)	1.929**** (44.81)
Professional degree beyond a bachelor's degree		2.265**** (28.02)	1.914**** (23.04)
Doctorate degree		1.996**** (14.13)	1.803**** (12.41)
NRCS region		.	.
Northeast		0.994 (-1.45)	0.939**** (-13.10)
Southeast		0.885**** (-30.17)	0.932**** (-16.33)
West		1.037**** (8.79)	0.976**** (-5.35)

Independent Variables	Specification		
	Model A	Model B	Model C
Construction			
Interest and dividend income (log)			1.011**** (25.35)
Home is owned free and clear			1.060**** (15.98)
Property value			1.000**** (53.97)
Married, spouse present			1.384**** (94.35)
Number of children in family			0.995**** (-3.82)
Number of workers in family			0.893**** (-54.40)
Lived in same house 1 year ago			1.013*** (3.04)
Foreign born			1.151**** (18.01)
Years in U.S., if immigrant			1.009**** (31.18)
Speaks English well or very well			1.047**** (10.15)
Veteran			0.986** (-2.37)
Statewide general population			1.000**** (-9.46)
Statewide unemployment rate			1.003 (1.33)
Statewide government FTEs			1.000**** (10.24)
Statewide per capita income (log)			1.510**** (30.72)
Constant	37294.345**** (2686.38)	1815.553**** (372.23)	38.896**** (25.03)
Adj. R-squared	0.035	0.186	0.228
Number of Obs.	355954	355954	353955

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.



Table 4.1B. Annual Wage Earnings Regressions, AECRS, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.773**** (-30.33)	0.826**** (-25.69)	0.866**** (-16.61)
WBE	0.676**** (-45.84)	0.701**** (-48.01)	0.718**** (-45.26)
Year	1.015**** (6.28)	1.016**** (7.61)	0.999 (-0.35)
Age		1.152**** (77.64)	1.124**** (55.85)
Age squared		0.999**** (-66.23)	0.999**** (-52.60)
Schooling		.	.
Nursery school/preschool		0.914 (-0.98)	0.936 (-0.73)
Grade 9		0.896 (-1.10)	0.901 (-1.07)
Grade 10		0.765*** (-3.00)	0.788*** (-2.74)
Grade 11		0.584**** (-6.33)	0.581**** (-6.55)
12th grade - no diploma		0.989 (-0.14)	0.994 (-0.07)
Regular high school diploma		1.106 (1.46)	1.106 (1.49)
GED or alternative credential		1.098 (1.29)	1.101 (1.36)
Some college, but less than 1 year		1.219*** (2.85)	1.215*** (2.86)
1 or more years college credit, no degree		1.248*** (3.22)	1.237*** (3.16)
Associate's degree		1.332**** (4.16)	1.295**** (3.85)
Bachelor's degree		1.938**** (9.68)	1.796**** (8.78)
Master's degree		2.260**** (11.90)	2.036**** (10.62)
Professional degree beyond a bachelor's degree		2.139**** (10.68)	1.915**** (9.34)
Doctorate degree		2.490**** (12.71)	2.259**** (11.62)
NRCS region		.	.
Northeast		0.997 (-0.31)	0.962**** (-3.84)
Southeast		0.960**** (-4.79)	0.988 (-1.42)
West		0.980** (-2.41)	0.935**** (-7.34)
Profess., Tech. & Sci. Services		.	.

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			1.010**** (15.90)
Home is owned free and clear			1.030**** (3.52)
Property value			1.000**** (19.95)
Married, spouse present			1.268**** (31.23)
Number of children in family			0.985**** (-4.58)
Number of workers in family			0.860**** (-31.54)
Lived in same house 1 year ago			1.007 (0.83)
Foreign born			1.040** (2.24)
Years in U.S., if immigrant			1.004**** (6.25)
Speaks English well or very well			0.979* (-1.91)
Veteran			1.042**** (3.85)
Statewide general population			1.000**** (-3.83)
Statewide unemployment rate			0.988*** (-2.65)
Statewide government FTEs			1.000**** (5.07)
Statewide per capita income (log)			1.361**** (11.49)
Constant	68697.515**** (1329.82)	1487.095**** (93.29)	112.172**** (15.69)
Adj. R-squared	0.036	0.280	0.297
Number of Obs.	66288	66288	65985

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.1C. Annual Wage Earnings Regressions, Professional Services ex AECRS, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.564**** (-159.81)	0.724**** (-106.03)	0.744**** (-86.07)
WBE	0.670**** (-108.95)	0.659**** (-137.25)	0.683**** (-128.17)
Year	1.046**** (42.40)	1.030**** (33.76)	1.007**** (5.31)
Age		1.173**** (219.71)	1.135**** (158.72)
Age squared		0.998**** (-192.29)	0.999**** (-156.83)
Schooling		.	.
Nursery school/preschool		0.986 (-0.84)	0.991 (-0.56)
Grade 9		0.902**** (-5.26)	0.902**** (-5.39)
Grade 10		0.770**** (-13.68)	0.770**** (-14.10)
Grade 11		0.765**** (-15.06)	0.771**** (-14.99)
12th grade - no diploma		0.988 (-0.66)	0.973 (-1.60)
Regular high school diploma		1.207**** (13.21)	1.188**** (12.36)
GED or alternative credential		1.019 (1.20)	1.028* (1.81)
Some college, but less than 1 year		1.300**** (17.68)	1.279**** (16.95)
1 or more years college credit, no degree		1.388**** (22.85)	1.353**** (21.60)
Associate's degree		1.449**** (25.36)	1.373**** (22.24)
Bachelor's degree		2.303**** (58.72)	1.997**** (49.89)
Master's degree		2.826**** (71.68)	2.313**** (59.31)
Professional degree beyond a bachelor's degree		3.371**** (80.71)	2.704**** (67.57)
Doctorate degree		3.128**** (68.84)	2.526**** (57.45)
NRCS region		.	.
Northeast		1.058**** (15.96)	0.963**** (-9.14)
Southeast		0.975**** (-6.91)	1.015**** (3.99)
West		1.091**** (24.05)	0.980**** (-5.23)
Management of Companies		1.191****	1.204****

Independent Variables	Specification		
	Model A	Model B	Model C
		(16.09)	(17.71)
Admin. & Supportive Services		0.625****	0.669****
		(-157.68)	(-137.83)
Interest and dividend income (log)			1.015****
			(47.76)
Home is owned free and clear			1.029****
			(9.05)
Property value			1.000****
			(78.40)
Married, spouse present			1.372****
			(103.95)
Number of children in family			0.975****
			(-19.58)
Number of workers in family			0.839****
			(-91.41)
Lived in same house 1 year ago			1.009**
			(2.52)
Foreign born			1.144****
			(20.81)
Years in U.S., if immigrant			1.006****
			(27.04)
Speaks English well or very well			1.040****
			(9.82)
Veteran			1.018***
			(3.10)
Statewide general population			1.000****
			(-6.51)
Statewide unemployment rate			1.001
			(0.56)
Statewide government FTEs			1.000****
			(9.36)
Statewide per capita income (log)			1.768****
			(50.02)
Constant	48182.221****	932.295****	4.745****
	(2650.64)	(332.38)	(12.49)
Adj. R-squared	0.044	0.360	0.386
Number of Obs.	625894	625894	619594

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.1D. Annual Wage Earnings Regressions, General Services, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.590**** (-312.51)	0.747**** (-217.85)	0.772**** (-173.91)
WBE	0.653**** (-260.73)	0.699**** (-274.56)	0.705**** (-270.42)
Year	1.028**** (58.42)	1.022**** (61.29)	1.011**** (19.13)
Age		1.182**** (610.03)	1.145**** (438.07)
Age squared		0.998**** (-522.58)	0.998**** (-431.93)
Schooling		.	.
Nursery school/preschool		1.026**** (3.55)	1.019**** (2.61)
Grade 9		0.871**** (-16.96)	0.839**** (-22.08)
Grade 10		0.702**** (-48.43)	0.667**** (-56.53)
Grade 11		0.755**** (-41.16)	0.708**** (-51.29)
12th grade - no diploma		1.030**** (4.09)	0.973**** (-3.86)
Regular high school diploma		1.238**** (35.95)	1.167**** (26.36)
GED or alternative credential		1.095**** (13.89)	1.049**** (7.36)
Some college, but less than 1 year		1.296**** (42.18)	1.241**** (35.54)
1 or more years college credit, no degree		1.357**** (51.10)	1.293**** (43.52)
Associate's degree		1.599**** (77.48)	1.450**** (62.14)
Bachelor's degree		2.202**** (132.81)	1.883**** (107.78)
Master's degree		2.776**** (167.79)	2.280**** (137.09)
Professional degree beyond a bachelor's degree		4.007**** (211.91)	3.145**** (176.99)
Doctorate degree		3.642**** (182.71)	2.886**** (152.27)
NRCS region		.	.
Northeast		1.041**** (28.41)	0.980**** (-11.75)
Southeast		0.981**** (-12.84)	1.010**** (6.69)
West		1.093**** (59.18)	1.006**** (3.98)
Warehousing		0.856****	0.869****

Independent Variables	Specification		
	Model A	Model B	Model C
		(-34.76)	(-32.46)
Information		1.098****	1.082****
		(27.00)	(23.28)
Finance & Insurance		1.277****	1.243****
		(85.06)	(77.77)
Real Estate		0.921****	0.902****
		(-22.13)	(-28.70)
Profess., Tech. & Sci. Services		1.120****	1.094****
		(41.33)	(33.68)
Management of Companies		1.335****	1.311****
		(27.15)	(26.25)
Admin. & Supportive Services		0.698****	0.720****
		(-120.55)	(-113.08)
Educational Services		0.549****	0.610****
		(-199.70)	(-166.30)
Medical Services		0.931****	0.955****
		(-27.29)	(-18.21)
Social Assistance Services		0.512****	0.549****
		(-185.90)	(-168.88)
Arts & Entertainment		0.582****	0.600****
		(-204.46)	(-197.42)
Other Services		0.650****	0.664****
		(-146.90)	(-143.20)
Interest and dividend income (log)			1.014****
			(94.51)
Home is owned free and clear			1.017****
			(12.72)
Property value			1.000****
			(144.21)
Married, spouse present			1.293****
			(202.91)
Number of children in family			0.962****
			(-73.15)
Number of workers in family			0.861****
			(-190.94)
Lived in same house 1 year ago			1.002
			(1.16)
Foreign born			1.152****
			(51.21)
Years in U.S., if immigrant			1.008****
			(79.97)
Speaks English well or very well			1.038****
			(22.24)
Veteran			1.007***
			(2.68)
Statewide general population			1.000****
			(-4.53)
Statewide unemployment rate			1.009****
			(11.06)
Statewide government FTEs			1.000****
			(7.73)

Independent Variables	Specification		
	Model A	Model B	Model C
Statewide per capita income (log)			1.535**** (91.05)
Constant	38278.079**** (5610.49)	680.780**** (772.34)	15.150**** (52.70)
Adj. R-squared	0.032	0.438	0.442
Number of Obs.	3446186	3446186	3366541

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.1E. Annual Wage Earnings Regressions, Goods, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.586**** (-259.26)	0.736**** (-180.90)	0.778**** (-128.89)
WBE	0.578**** (-252.62)	0.681**** (-220.87)	0.696**** (-211.77)
Year	1.022**** (35.68)	1.021**** (42.64)	1.013**** (17.63)
Age		1.177**** (450.09)	1.142**** (327.15)
Age squared		0.998**** (-381.77)	0.999**** (-326.11)
Schooling		.	.
Nursery school/preschool		0.998 (-0.29)	1.006 (0.74)
Grade 9		0.921**** (-8.58)	0.903**** (-10.98)
Grade 10		0.818**** (-23.09)	0.779**** (-29.44)
Grade 11		0.839**** (-21.74)	0.789**** (-29.93)
12th grade - no diploma		1.078**** (9.06)	1.022*** (2.70)
Regular high school diploma		1.323**** (40.68)	1.239**** (31.75)
GED or alternative credential		1.144**** (17.94)	1.087**** (11.34)
Some college, but less than 1 year		1.419**** (48.82)	1.328**** (40.22)
1 or more years college credit, no degree		1.482**** (56.51)	1.375**** (46.57)
Associate's degree		1.584**** (64.43)	1.434**** (51.44)
Bachelor's degree		2.375**** (124.41)	2.016**** (102.58)
Master's degree		3.110**** (152.75)	2.506**** (125.76)
Professional degree beyond a bachelor's degree		3.652**** (118.23)	2.903**** (99.60)
Doctorate degree		4.313**** (140.03)	3.349**** (118.44)
NRCS region		.	.
Northeast		0.979**** (-11.74)	0.965**** (-16.65)
Southeast		0.945**** (-29.51)	0.968**** (-15.57)
West		1.069**** (33.26)	1.008**** (3.50)
Manufacturing-NAICS 32		1.203****	1.174****



Independent Variables	Specification		
	Model A	Model B	Model C
		(55.46)	(49.54)
Manufacturing-NAICS 33		1.199****	1.174****
		(61.39)	(55.69)
Wholesale Trade		1.134****	1.096****
		(37.42)	(27.92)
Retail Trade-NAICS 44		0.782****	0.780****
		(-83.62)	(-86.52)
Retail Trade-NAICS 45		0.656****	0.661****
		(-132.31)	(-132.80)
Interest and dividend income (log)			1.017****
			(82.66)
Home is owned free and clear			1.034****
			(18.76)
Property value			1.000****
			(99.35)
Married, spouse present			1.337****
			(171.44)
Number of children in family			0.980****
			(-28.44)
Number of workers in family			0.868****
			(-139.80)
Lived in same house 1 year ago			0.997
			(-1.24)
Foreign born			1.112****
			(27.41)
Years in U.S., if immigrant			1.009****
			(67.38)
Speaks English well or very well			1.070****
			(28.91)
Veteran			0.962****
			(-12.42)
Statewide general population			1.000****
			(-6.34)
Statewide unemployment rate			1.001
			(0.61)
Statewide government FTEs			1.000****
			(9.86)
Statewide per capita income (log)			1.243****
			(34.37)
Constant	38619.404****	670.841****	135.813****
	(4644.72)	(632.10)	(70.76)
Adj. R-squared	0.055	0.422	0.439
Number of Obs.	1627594	1627594	1608075

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.1F. Annual Wage Earnings Regressions, All Industries, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.593**** (-432.97)	0.745**** (-297.71)	0.775**** (-227.21)
WBE	0.633**** (-377.17)	0.691**** (-369.78)	0.700**** (-361.63)
Year	1.027**** (74.79)	1.023**** (81.66)	1.012**** (27.70)
Age		1.178**** (785.39)	1.141**** (564.17)
Age squared		0.998**** (-671.36)	0.999**** (-559.41)
Schooling		.	.
Nursery school/preschool		1.020**** (4.07)	1.021**** (4.29)
Grade 9		0.910**** (-17.04)	0.886**** (-22.42)
Grade 10		0.759**** (-53.88)	0.726**** (-64.01)
Grade 11		0.793**** (-48.40)	0.750**** (-61.09)
12th grade - no diploma		1.050**** (9.82)	0.999 (-0.30)
Regular high school diploma		1.265**** (57.39)	1.197**** (44.69)
GED or alternative credential		1.102**** (21.45)	1.059**** (12.97)
Some college, but less than 1 year		1.333**** (67.38)	1.273**** (57.40)
1 or more years college credit, no degree		1.391**** (79.89)	1.322**** (68.43)
Associate's degree		1.585**** (109.37)	1.445**** (88.77)
Bachelor's degree		2.231**** (194.91)	1.917**** (160.30)
Master's degree		2.838**** (243.89)	2.332**** (200.80)
Professional degree beyond a bachelor's degree		3.986**** (284.56)	3.129**** (238.14)
Doctorate degree		3.753**** (248.22)	2.973**** (208.40)
NRCS region		.	.
Northeast		1.015**** (14.04)	0.972**** (-22.23)
Southeast		0.961**** (-35.57)	0.991**** (-7.38)
West		1.078**** (66.20)	1.004**** (3.42)
NAICS sector		.	.

Independent Variables	Specification		
	Model A	Model B	Model C
Extractive Industries		2.185**** (137.93)	2.093**** (133.35)
Utilities		2.042**** (131.59)	1.962**** (127.31)
Construction		1.439**** (99.76)	1.407**** (95.13)
Manufacturing-NAICS 31		1.297**** (60.64)	1.312**** (64.38)
Manufacturing-NAICS 32		1.572**** (114.61)	1.560**** (114.77)
Manufacturing-NAICS 33		1.569**** (124.76)	1.560**** (125.18)
Wholesale Trade		1.482**** (99.00)	1.452**** (95.68)
Retail Trade-NAICS 44		1.015**** (4.20)	1.023**** (6.44)
Retail Trade-NAICS 45		0.851**** (-42.24)	0.867**** (-38.14)
Transportation		1.376**** (80.08)	1.366**** (79.62)
Warehousing		1.177**** (32.66)	1.187**** (34.98)
Information		1.518**** (99.72)	1.482**** (95.69)
Finance & Insurance		1.770**** (152.71)	1.700**** (144.29)
Real Estate		1.273**** (55.14)	1.234**** (48.85)
Profess., Tech. & Sci. Services		1.554**** (121.04)	1.501**** (113.31)
Management of Companies		1.849**** (57.66)	1.793**** (56.44)
Admin. & Supportive Services		0.962**** (-10.21)	0.986**** (-3.67)
Educational Services		0.758**** (-72.84)	0.833**** (-48.06)
Medical Services		1.295**** (73.01)	1.312**** (77.91)
Social Assistance Services		0.708**** (-80.77)	0.753**** (-66.92)
Arts & Entertainment		0.796**** (-64.53)	0.817**** (-57.72)
Other Services		0.896**** (-29.01)	0.908**** (-25.93)
Interest and dividend income (log)			1.014**** (127.81)
Home is owned free and clear			1.024**** (23.92)
Property value			1.000**** (183.47)

Independent Variables	Specification		
	Model A	Model B	Model C
Married, spouse present			1.317**** (286.16)
Number of children in family			0.969**** (-77.90)
Number of workers in family			0.863**** (-250.51)
Lived in same house 1 year ago			1.001 (0.68)
Foreign born			1.148**** (64.78)
Years in U.S., if immigrant			1.009**** (111.01)
Speaks English well or very well			1.049**** (37.41)
Veteran			0.988**** (-6.41)
Statewide general population			1.000**** (-11.89)
Statewide unemployment rate			1.005**** (8.61)
Statewide government FTEs			1.000**** (16.77)
Statewide per capita income (log)			1.434**** (100.60)
Constant	38596.278**** (7836.65)	529.763**** (947.08)	23.890**** (80.63)
Adj. R-squared	0.040	0.424	0.432
Number of Obs.	5591853	5591853	5487468

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.1G. Annual Wage Earnings Regressions, Construction, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.625**** (-59.33)	0.651**** (-58.49)	0.736**** (-42.32)
Hispanic	0.693**** (-95.55)	0.811**** (-52.42)	0.870**** (-26.50)
Asian Pacific	0.896**** (-8.16)	0.778**** (-20.05)	0.812**** (-16.48)
Subcontinent Asian	0.954* (-1.67)	0.804**** (-8.35)	0.832**** (-7.16)
Alaska Native	0.619**** (-29.54)	0.659**** (-27.83)	0.723**** (-22.25)
Other race	0.713**** (-9.06)	0.775**** (-7.43)	0.809**** (-6.38)
Two or more races	0.762**** (-19.79)	0.812**** (-16.49)	0.846**** (-13.68)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.771**** (-44.93)	0.666**** (-75.56)	0.673**** (-75.85)
Year	1.037**** (33.05)	1.037**** (35.38)	1.022**** (14.22)
Age		1.132**** (150.18)	1.096**** (102.89)
Age squared		0.999**** (-127.90)	0.999**** (-104.00)
Schooling		.	.
Nursery school/preschool		1.014 (1.09)	1.027** (2.24)
Grade 9		0.977 (-1.63)	0.969** (-2.34)
Grade 10		0.933**** (-4.87)	0.920**** (-6.05)
Grade 11		0.935**** (-4.85)	0.920**** (-6.23)
12th grade - no diploma		1.084**** (5.93)	1.047**** (3.50)
Regular high school diploma		1.272**** (21.40)	1.220**** (18.24)
GED or alternative credential		1.070**** (5.44)	1.048**** (3.84)
Some college, but less than 1 year		1.341**** (24.20)	1.270**** (20.24)
1 or more years college credit, no degree		1.398**** (28.92)	1.318**** (24.53)
Associate's degree		1.499**** (33.23)	1.378**** (27.08)
Bachelor's degree		1.969**** (57.15)	1.720**** (46.98)
Master's degree		2.305****	1.965****

Independent Variables	Specification		
	Model A	Model B	Model C
		(55.14)	(45.92)
Professional degree beyond a bachelor's degree		2.311****	1.942****
		(28.73)	(23.56)
Doctorate degree		2.040****	1.841****
		(14.59)	(12.86)
NRCS region		.	.
Northeast		1.002	0.942****
		(0.52)	(-12.38)
Southeast		0.896****	0.939****
		(-26.97)	(-14.70)
West		1.032****	0.975****
		(7.58)	(-5.73)
Construction		.	.
Interest and dividend income (log)			1.011****
			(25.23)
Home is owned free and clear			1.060****
			(15.84)
Property value			1.000****
			(54.24)
Married, spouse present			1.381****
			(93.70)
Number of children in family			0.994****
			(-4.19)
Number of workers in family			0.893****
			(-54.47)
Lived in same house 1 year ago			1.013***
			(3.00)
Foreign born			1.124****
			(14.74)
Years in U.S., if immigrant			1.009****
			(31.56)
Speaks English well or very well			1.026****
			(5.55)
Veteran			0.987**
			(-2.10)
Statewide general population			1.000****
			(-10.71)
Statewide unemployment rate			1.005**
			(2.30)
Statewide government FTEs			1.000****
			(10.89)
Statewide per capita income (log)			1.520****
			(31.20)
Constant	37322.081****	1761.079****	34.969****
	(2689.31)	(370.66)	(24.29)
Adj. R-squared	0.037	0.188	0.229
Number of Obs.	355954	355954	353955

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.1H. Annual Wage Earnings Regressions, AECRS, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.709**** (-19.10)	0.760**** (-17.46)	0.818**** (-12.93)
Hispanic	0.693**** (-29.28)	0.823**** (-17.59)	0.877**** (-10.74)
Asian Pacific	0.888**** (-7.91)	0.837**** (-13.38)	0.877**** (-8.79)
Subcontinent Asian	0.980 (-0.82)	0.893**** (-5.33)	0.940**** (-2.73)
Alaska Native	0.616**** (-8.01)	0.744**** (-5.64)	0.786**** (-4.66)
Other race	0.820** (-2.26)	0.858** (-2.01)	0.901 (-1.41)
Two or more races	0.804**** (-8.53)	0.895**** (-5.00)	0.901**** (-4.79)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.676**** (-45.95)	0.701**** (-48.03)	0.718**** (-45.26)
Year	1.015**** (6.18)	1.015**** (7.52)	0.999 (-0.33)
Age		1.153**** (77.77)	1.124**** (55.98)
Age squared		0.999**** (-66.33)	0.999**** (-52.74)
Schooling		.	.
Nursery school/preschool		0.915 (-0.97)	0.936 (-0.73)
Grade 9		0.901 (-1.05)	0.904 (-1.04)
Grade 10		0.766*** (-2.98)	0.787*** (-2.74)
Grade 11		0.586**** (-6.29)	0.582**** (-6.52)
12th grade - no diploma		0.990 (-0.12)	0.994 (-0.07)
Regular high school diploma		1.108 (1.48)	1.106 (1.50)
GED or alternative credential		1.100 (1.31)	1.102 (1.36)
Some college, but less than 1 year		1.220*** (2.85)	1.214*** (2.85)
1 or more years college credit, no degree		1.249*** (3.23)	1.237*** (3.17)
Associate's degree		1.333**** (4.17)	1.296**** (3.85)
Bachelor's degree		1.933**** (9.64)	1.795**** (8.76)
Master's degree		2.250****	2.033****

Independent Variables	Specification		
	Model A	Model B	Model C
		(11.84)	(10.60)
Professional degree beyond a bachelor's degree		2.131****	1.913****
		(10.63)	(9.32)
Doctorate degree		2.467****	2.255****
		(12.58)	(11.58)
NRCS region		.	.
Northeast		0.998	0.962****
		(-0.27)	(-3.83)
Southeast		0.963****	0.989
		(-4.49)	(-1.26)
West		0.977***	0.934****
		(-2.70)	(-7.41)
Profess., Tech. & Sci. Services		.	.
Interest and dividend income (log)			1.010****
			(15.75)
Home is owned free and clear			1.029****
			(3.42)
Property value			1.000****
			(19.82)
Married, spouse present			1.265****
			(30.86)
Number of children in family			0.986****
			(-4.50)
Number of workers in family			0.861****
			(-31.44)
Lived in same house 1 year ago			1.008
			(0.88)
Foreign born			1.032*
			(1.80)
Years in U.S., if immigrant			1.004****
			(6.34)
Speaks English well or very well			0.970***
			(-2.63)
Veteran			1.044****
			(3.95)
Statewide general population			1.000****
			(-3.92)
Statewide unemployment rate			0.989**
			(-2.54)
Statewide government FTEs			1.000****
			(5.11)
Statewide per capita income (log)			1.361****
			(11.50)
Constant	68752.423****	1481.471****	110.338****
	(1332.89)	(93.24)	(15.63)
Adj. R-squared	0.041	0.280	0.298
Number of Obs.	66288	66288	65985

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.



Table 4.11. Annual Wage Earnings Regressions, Professional Services ex AECRS, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.409**** (-158.99)	0.605**** (-104.65)	0.672**** (-83.17)
Hispanic	0.454**** (-171.75)	0.742**** (-71.56)	0.783**** (-52.35)
Asian Pacific	0.949**** (-7.34)	0.779**** (-41.29)	0.785**** (-36.96)
Subcontinent Asian	1.375**** (39.12)	0.920**** (-11.95)	0.943**** (-7.46)
Alaska Native	0.413**** (-38.15)	0.623**** (-24.46)	0.695**** (-19.16)
Other race	0.581**** (-16.36)	0.686**** (-13.62)	0.710**** (-12.80)
Two or more races	0.622**** (-43.07)	0.732**** (-33.87)	0.764**** (-29.93)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.670**** (-111.23)	0.659**** (-137.70)	0.682**** (-128.73)
Year	1.043**** (40.26)	1.029**** (33.17)	1.008**** (5.55)
Age		1.172**** (218.83)	1.135**** (158.71)
Age squared		0.998**** (-190.95)	0.999**** (-157.39)
Schooling		.	.
Nursery school/preschool		0.976 (-1.46)	0.984 (-0.99)
Grade 9		0.903**** (-5.17)	0.899**** (-5.57)
Grade 10		0.785**** (-12.67)	0.771**** (-13.99)
Grade 11		0.787**** (-13.46)	0.775**** (-14.69)
12th grade - no diploma		1.008 (0.42)	0.978 (-1.26)
Regular high school diploma		1.238**** (14.95)	1.193**** (12.69)
GED or alternative credential		1.046*** (2.84)	1.032** (2.01)
Some college, but less than 1 year		1.334**** (19.37)	1.283**** (17.15)
1 or more years college credit, no degree		1.429**** (24.85)	1.362**** (22.00)
Associate's degree		1.483**** (26.92)	1.380**** (22.51)
Bachelor's degree		2.324**** (59.19)	1.994**** (49.54)
Master's degree		2.792****	2.291****

Independent Variables	Specification		
	Model A	Model B	Model C
		(70.47)	(58.18)
Professional degree beyond a bachelor's degree		3.422****	2.707****
		(81.59)	(67.42)
Doctorate degree		3.130****	2.543****
		(68.67)	(57.61)
NRCS region		.	.
Northeast		1.061****	0.965****
		(17.00)	(-8.48)
Southeast		0.989***	1.024****
		(-2.93)	(6.43)
West		1.076****	0.975****
		(20.15)	(-6.41)
Management of Companies		1.200****	1.209****
		(16.83)	(18.11)
Admin. & Supportive Services		0.636****	0.676****
		(-150.98)	(-133.90)
Interest and dividend income (log)			1.014****
			(46.93)
Home is owned free and clear			1.024****
			(7.59)
Property value			1.000****
			(78.47)
Married, spouse present			1.356****
			(99.86)
Number of children in family			0.976****
			(-18.64)
Number of workers in family			0.841****
			(-90.09)
Lived in same house 1 year ago			1.012****
			(3.37)
Foreign born			1.117****
			(17.01)
Years in U.S., if immigrant			1.007****
			(30.47)
Speaks English well or very well			1.000
			(-0.06)
Veteran			1.020****
			(3.50)
Statewide general population			1.000****
			(-7.28)
Statewide unemployment rate			1.002
			(1.25)
Statewide government FTEs			1.000****
			(9.88)
Statewide per capita income (log)			1.769****
			(50.10)
Constant	48645.115****	923.995****	4.581****
	(2708.19)	(331.92)	(12.21)
Adj. R-squared	0.083	0.363	0.388
Number of Obs.	625894	625894	619594

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.IJ. Annual Wage Earnings Regressions, General Services, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.522**** (-265.94)	0.674**** (-204.49)	0.725**** (-165.25)
Hispanic	0.531**** (-293.67)	0.797**** (-129.88)	0.828**** (-94.89)
Asian Pacific	0.808**** (-66.49)	0.749**** (-115.62)	0.774**** (-92.37)
Subcontinent Asian	1.261**** (46.46)	0.848**** (-42.53)	0.875**** (-32.70)
Alaska Native	0.476**** (-85.96)	0.703**** (-53.07)	0.750**** (-43.99)
Other race	0.591**** (-35.68)	0.728**** (-28.16)	0.746**** (-26.51)
Two or more races	0.535**** (-127.57)	0.738**** (-80.25)	0.765**** (-71.38)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.653**** (-262.39)	0.698**** (-276.37)	0.704**** (-271.86)
Year	1.027**** (56.75)	1.022**** (60.13)	1.011**** (19.71)
Age		1.182**** (609.86)	1.145**** (439.14)
Age squared		0.998**** (-521.76)	0.998**** (-432.70)
Schooling		.	.
Nursery school/preschool		1.006 (0.77)	1.001 (0.13)
Grade 9		0.870**** (-17.11)	0.836**** (-22.54)
Grade 10		0.715**** (-45.98)	0.674**** (-55.06)
Grade 11		0.772**** (-37.92)	0.717**** (-49.32)
12th grade - no diploma		1.045**** (6.07)	0.983** (-2.45)
Regular high school diploma		1.265**** (39.49)	1.182**** (28.54)
GED or alternative credential		1.118**** (17.00)	1.061**** (9.14)
Some college, but less than 1 year		1.325**** (45.77)	1.258**** (37.71)
1 or more years college credit, no degree		1.390**** (55.08)	1.312**** (46.01)
Associate's degree		1.633**** (80.88)	1.470**** (64.40)
Bachelor's degree		2.244**** (135.93)	1.910**** (110.01)
Master's degree		2.818****	2.309****

Independent Variables	Specification		
	Model A	Model B	Model C
		(170.04)	(138.85)
Professional degree beyond a bachelor's degree		4.058****	3.178****
		(213.73)	(178.37)
Doctorate degree		3.694****	2.932****
		(184.64)	(154.34)
NRCS region		.	.
Northeast		1.046****	0.983****
		(32.22)	(-10.23)
Southeast		0.994****	1.018****
		(-4.17)	(11.27)
West		1.083****	1.003**
		(52.62)	(2.02)
Warehousing		0.858****	0.868****
		(-34.31)	(-32.59)
Information		1.096****	1.079****
		(26.52)	(22.67)
Finance & Insurance		1.273****	1.240****
		(84.04)	(76.83)
Real Estate		0.918****	0.899****
		(-23.19)	(-29.49)
Profess., Tech. & Sci. Services		1.114****	1.089****
		(39.07)	(32.00)
Management of Companies		1.331****	1.307****
		(26.84)	(25.96)
Admin. & Supportive Services		0.697****	0.718****
		(-121.05)	(-114.12)
Educational Services		0.549****	0.609****
		(-199.82)	(-166.60)
Medical Services		0.933****	0.956****
		(-26.41)	(-17.76)
Social Assistance Services		0.514****	0.550****
		(-184.53)	(-168.43)
Arts & Entertainment		0.581****	0.599****
		(-205.59)	(-198.47)
Other Services		0.648****	0.662****
		(-148.13)	(-144.04)
Interest and dividend income (log)			1.014****
			(93.60)
Home is owned free and clear			1.014****
			(10.27)
Property value			1.000****
			(145.27)
Married, spouse present			1.287****
			(198.63)
Number of children in family			0.962****
			(-72.96)
Number of workers in family			0.861****
			(-191.11)
Lived in same house 1 year ago			1.002
			(1.54)

Independent Variables	Specification		
	Model A	Model B	Model C
Foreign born			1.142**** (47.60)
Years in U.S., if immigrant			1.008**** (80.77)
Speaks English well or very well			1.004** (2.56)
Veteran			1.008*** (3.14)
Statewide general population			1.000**** (-7.29)
Statewide unemployment rate			1.010**** (12.69)
Statewide government FTEs			1.000**** (9.15)
Statewide per capita income (log)			1.538**** (91.46)
Constant	38388.267**** (5647.14)	667.254**** (770.14)	14.504**** (51.86)
Adj. R-squared	0.044	0.439	0.442
Number of Obs.	3446186	3446186	3366541

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.1K. Annual Wage Earnings Regressions, Goods, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.495**** (-211.62)	0.674**** (-147.46)	0.738**** (-112.95)
Hispanic	0.556**** (-221.51)	0.777**** (-112.85)	0.823**** (-73.34)
Asian Pacific	0.845**** (-38.41)	0.725**** (-90.93)	0.768**** (-66.32)
Subcontinent Asian	0.997 (-0.40)	0.782**** (-41.35)	0.830**** (-29.89)
Alaska Native	0.517**** (-57.00)	0.698**** (-39.46)	0.740**** (-33.76)
Other race	0.542**** (-28.06)	0.724**** (-18.85)	0.772**** (-15.50)
Two or more races	0.544**** (-87.84)	0.769**** (-48.05)	0.802**** (-41.01)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.578**** (-253.91)	0.681**** (-221.18)	0.696**** (-211.91)
Year	1.022**** (34.88)	1.021**** (42.09)	1.014**** (18.17)
Age		1.177**** (450.13)	1.142**** (327.59)
Age squared		0.998**** (-381.55)	0.999**** (-326.47)
Schooling		.	.
Nursery school/preschool		0.982** (-2.15)	0.993 (-0.90)
Grade 9		0.918**** (-8.99)	0.898**** (-11.53)
Grade 10		0.827**** (-21.80)	0.783**** (-28.76)
Grade 11		0.851**** (-19.98)	0.795**** (-28.94)
12th grade - no diploma		1.089**** (10.27)	1.029**** (3.47)
Regular high school diploma		1.343**** (42.87)	1.250**** (33.02)
GED or alternative credential		1.160**** (19.72)	1.095**** (12.29)
Some college, but less than 1 year		1.442**** (50.95)	1.340**** (41.45)
1 or more years college credit, no degree		1.508**** (58.91)	1.390**** (48.01)
Associate's degree		1.610**** (66.60)	1.449**** (52.83)
Bachelor's degree		2.412**** (126.45)	2.038**** (103.96)
Master's degree		3.152****	2.535****

Independent Variables	Specification		
	Model A	Model B	Model C
		(154.11)	(126.85)
Professional degree beyond a bachelor's degree		3.696****	2.933****
		(119.31)	(100.48)
Doctorate degree		4.377****	3.407****
		(141.20)	(119.81)
NRCS region		.	.
Northeast		0.983****	0.966****
		(-9.47)	(-16.00)
Southeast		0.957****	0.974****
		(-22.57)	(-12.46)
West		1.060****	1.005**
		(28.73)	(2.19)
Manufacturing-NAICS 32		1.202****	1.174****
		(55.44)	(49.61)
Manufacturing-NAICS 33		1.200****	1.176****
		(61.59)	(56.10)
Wholesale Trade		1.131****	1.095****
		(36.75)	(27.70)
Retail Trade-NAICS 44		0.782****	0.781****
		(-83.84)	(-86.42)
Retail Trade-NAICS 45		0.658****	0.662****
		(-131.49)	(-132.15)
Interest and dividend income (log)			1.017****
			(82.43)
Home is owned free and clear			1.031****
			(17.44)
Property value			1.000****
			(100.60)
Married, spouse present			1.334****
			(169.95)
Number of children in family			0.979****
			(-28.70)
Number of workers in family			0.867****
			(-140.30)
Lived in same house 1 year ago			0.998
			(-1.15)
Foreign born			1.106****
			(25.65)
Years in U.S., if immigrant			1.009****
			(67.39)
Speaks English well or very well			1.046****
			(18.49)
Veteran			0.963****
			(-12.14)
Statewide general population			1.000****
			(-8.54)
Statewide unemployment rate			1.002*
			(1.65)
Statewide government FTEs			1.000****
			(11.26)

Independent Variables	Specification		
	Model A	Model B	Model C
Statewide per capita income (log)			1.242**** (34.21)
Constant	38689.263**** (4669.06)	658.341**** (629.98)	134.745**** (70.66)
Adj. R-squared	0.065	0.423	0.440
Number of Obs.	1627594	1627594	1608075

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.



Table 4.1L. Annual Wage Earnings Regressions, All Industries, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.517**** (-352.56)	0.671**** (-265.36)	0.729**** (-208.87)
Hispanic	0.550**** (-390.05)	0.792**** (-182.02)	0.828**** (-126.15)
Asian Pacific	0.818**** (-80.75)	0.743**** (-149.75)	0.772**** (-117.34)
Subcontinent Asian	1.178**** (40.64)	0.830**** (-58.85)	0.860**** (-45.12)
Alaska Native	0.506**** (-107.80)	0.694**** (-74.05)	0.740**** (-62.06)
Other race	0.586**** (-46.24)	0.729**** (-35.08)	0.757**** (-31.71)
Two or more races	0.547**** (-158.39)	0.748**** (-97.53)	0.778**** (-85.31)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.633**** (-379.19)	0.690**** (-372.50)	0.699**** (-363.67)
Year	1.026**** (72.85)	1.022**** (80.29)	1.012**** (28.54)
Age		1.178**** (785.17)	1.141**** (565.38)
Age squared		0.998**** (-670.36)	0.999**** (-560.29)
Schooling		.	.
Nursery school/preschool		1.003 (0.53)	1.006 (1.16)
Grade 9		0.908**** (-17.33)	0.882**** (-23.10)
Grade 10		0.773**** (-50.48)	0.733**** (-62.05)
Grade 11		0.810**** (-43.91)	0.759**** (-58.47)
12th grade - no diploma		1.065**** (12.73)	1.008* (1.67)
Regular high school diploma		1.293**** (62.66)	1.213**** (47.82)
GED or alternative credential		1.125**** (26.07)	1.071**** (15.55)
Some college, but less than 1 year		1.364**** (72.67)	1.290**** (60.50)
1 or more years college credit, no degree		1.426**** (85.74)	1.342**** (71.99)
Associate's degree		1.621**** (114.51)	1.466**** (92.06)
Bachelor's degree		2.277**** (199.60)	1.945**** (163.52)
Master's degree		2.886****	2.364****

Independent Variables	Specification		
	Model A	Model B	Model C
		(247.24)	(203.35)
Professional degree beyond a bachelor's degree		4.043****	3.164****
		(287.26)	(240.10)
Doctorate degree		3.814****	3.025****
		(250.93)	(211.27)
NRCS region		.	.
Northeast		1.020****	0.974****
		(18.98)	(-20.48)
Southeast		0.974****	0.998
		(-23.60)	(-1.55)
West		1.068****	1.001
		(57.68)	(0.97)
NAICS sector		.	.
Extractive Industries		2.197****	2.103****
		(138.99)	(134.30)
Utilities		2.059****	1.975****
		(133.20)	(128.51)
Construction		1.441****	1.410****
		(100.15)	(95.74)
Manufacturing-NAICS 31		1.307****	1.319****
		(62.46)	(65.82)
Manufacturing-NAICS 32		1.583****	1.569****
		(116.47)	(116.31)
Manufacturing-NAICS 33		1.580****	1.571****
		(126.83)	(127.09)
Wholesale Trade		1.488****	1.459****
		(100.21)	(96.95)
Retail Trade-NAICS 44		1.022****	1.029****
		(6.18)	(8.17)
Retail Trade-NAICS 45		0.861****	0.874****
		(-39.30)	(-35.94)
Transportation		1.392****	1.379****
		(82.95)	(82.04)
Warehousing		1.193****	1.198****
		(35.37)	(36.85)
Information		1.532****	1.493****
		(101.98)	(97.47)
Finance & Insurance		1.784****	1.711****
		(154.90)	(146.09)
Real Estate		1.282****	1.242****
		(56.82)	(50.38)
Profess., Tech. & Sci. Services		1.561****	1.509****
		(122.43)	(114.69)
Management of Companies		1.862****	1.804****
		(58.42)	(57.07)
Admin. & Supportive Services		0.972****	0.993*
		(-7.57)	(-1.87)
Educational Services		0.766****	0.840****
		(-69.98)	(-45.86)

Independent Variables	Specification		
	Model A	Model B	Model C
Medical Services		1.312**** (76.84)	1.326**** (80.90)
Social Assistance Services		0.719**** (-76.90)	0.762**** (-64.24)
Arts & Entertainment		0.803**** (-62.08)	0.823**** (-55.64)
Other Services		0.903**** (-26.95)	0.915**** (-23.98)
Interest and dividend income (log)			1.014**** (126.97)
Home is owned free and clear			1.022**** (21.32)
Property value			1.000**** (185.20)
Married, spouse present			1.312**** (281.78)
Number of children in family			0.969**** (-78.08)
Number of workers in family			0.863**** (-251.07)
Lived in same house 1 year ago			1.001 (0.97)
Foreign born			1.137**** (59.73)
Years in U.S., if immigrant			1.009**** (111.70)
Speaks English well or very well			1.020**** (14.61)
Veteran			0.989**** (-5.90)
Statewide general population			1.000**** (-15.75)
Statewide unemployment rate			1.006**** (10.71)
Statewide government FTEs			1.000**** (18.87)
Statewide per capita income (log)			1.436**** (100.98)
Constant	38691.300**** (7879.97)	513.579**** (941.74)	22.825**** (79.48)
Adj. R-squared	0.050	0.425	0.432
Number of Obs.	5591853	5591853	5487468

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.2A. Annual Wage Earnings Regressions, All Plaintiff NAICS, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.463**** (-90.06)	0.669**** (-53.26)	0.686**** (-45.44)
WBE	0.697**** (-41.30)	0.726**** (-43.25)	0.741**** (-41.48)
Year	1.056**** (21.63)	1.035**** (16.19)	1.007** (2.11)
Age		1.159**** (82.49)	1.124**** (59.76)
Age squared		0.998**** (-73.14)	0.999**** (-61.06)
Schooling		.	.
Nursery school/preschool		0.990 (-0.20)	0.993 (-0.14)
Grade 9		0.843*** (-3.14)	0.886** (-2.25)
Grade 10		0.706**** (-6.75)	0.760**** (-5.42)
Grade 11		0.803**** (-4.64)	0.843**** (-3.66)
12th grade - no diploma		0.952 (-1.02)	0.960 (-0.88)
Regular high school diploma		1.258**** (5.80)	1.235**** (5.44)
GED or alternative credential		0.981 (-0.46)	1.014 (0.34)
Some college, but less than 1 year		1.369**** (7.71)	1.326**** (7.05)
1 or more years college credit, no degree		1.600**** (11.88)	1.533**** (10.97)
Associate's degree		1.697**** (13.14)	1.574**** (11.46)
Bachelor's degree		2.834**** (26.62)	2.373**** (22.45)
Master's degree		3.277**** (29.98)	2.594**** (24.47)
Professional degree beyond a bachelor's degree		3.716**** (29.42)	2.856**** (24.00)
Doctorate degree		3.451**** (27.14)	2.686**** (22.13)
NRCS region		.	.
Northeast		1.033**** (3.89)	0.947**** (-5.56)
Southeast		0.970**** (-3.47)	1.016* (1.84)
West		0.999 (-0.16)	0.897**** (-11.54)
Admin. & Supportive Services		0.605****	0.664****

Independent Variables	Specification		
	Model A	Model B	Model C
		(-75.26)	(-62.81)
Interest and dividend income (log)			1.012****
			(16.14)
Home is owned free and clear			1.071****
			(8.91)
Property value			1.000****
			(31.71)
Married, spouse present			1.440****
			(48.17)
Number of children in family			0.969****
			(-9.64)
Number of workers in family			0.832****
			(-38.33)
Lived in same house 1 year ago			1.001
			(0.14)
Foreign born			1.197****
			(11.18)
Years in U.S., if immigrant			1.008****
			(13.03)
Speaks English well or very well			1.072****
			(7.07)
Veteran			1.009
			(0.66)
Statewide general population			1.000**
			(-2.10)
Statewide unemployment rate			0.991**
			(-2.11)
Statewide government FTEs			1.000****
			(4.14)
Statewide per capita income (log)			1.765****
			(20.72)
Constant	47068.124****	1063.495****	5.330****
	(1120.23)	(129.56)	(5.56)
Adj. R-squared	0.064	0.334	0.360
Number of Obs.	126364	126364	124529

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.2B. Annual Wage Earnings Regressions, NAICS 5416, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.645**** (-42.45)	0.719**** (-34.30)	0.746**** (-27.09)
WBE	0.641**** (-46.27)	0.667**** (-46.14)	0.690**** (-42.79)
Year	1.020**** (6.70)	1.019**** (7.01)	0.993* (-1.68)
Age		1.177**** (68.23)	1.145**** (50.07)
Age squared		0.998**** (-62.16)	0.998**** (-50.66)
Schooling		.	.
Nursery school/preschool		1.039 (0.33)	1.077 (0.66)
Grade 9		0.810* (-1.65)	0.796* (-1.84)
Grade 10		0.734** (-2.57)	0.749** (-2.47)
Grade 11		0.794** (-2.11)	0.820* (-1.86)
12th grade - no diploma		0.996 (-0.04)	0.991 (-0.09)
Regular high school diploma		1.106 (1.16)	1.097 (1.10)
GED or alternative credential		1.048 (0.51)	1.043 (0.47)
Some college, but less than 1 year		1.197** (2.05)	1.177* (1.91)
1 or more years college credit, no degree		1.284**** (2.89)	1.245**** (2.61)
Associate's degree		1.299**** (3.01)	1.233** (2.48)
Bachelor's degree		2.117**** (8.74)	1.825**** (7.21)
Master's degree		2.486**** (10.60)	2.040**** (8.54)
Professional degree beyond a bachelor's degree		2.724**** (11.29)	2.177**** (9.02)
Doctorate degree		2.580**** (10.68)	2.104**** (8.62)
NRCS region		.	.
Northeast		1.054**** (5.01)	0.939**** (-5.11)
Southeast		0.981* (-1.74)	1.015 (1.35)
West		0.956**** (-4.05)	0.864**** (-12.39)
Profess., Tech. & Sci. Services		.	.

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			1.010**** (13.36)
Home is owned free and clear			1.028*** (2.67)
Property value			1.000**** (27.90)
Married, spouse present			1.328**** (28.72)
Number of children in family			0.971**** (-6.97)
Number of workers in family			0.819**** (-30.99)
Lived in same house 1 year ago			0.984 (-1.55)
Foreign born			1.136**** (6.14)
Years in U.S., if immigrant			1.005**** (7.09)
Speaks English well or very well			0.990 (-0.80)
Veteran			1.038** (2.23)
Statewide general population			1.000*** (-2.68)
Statewide unemployment rate			0.997 (-0.46)
Statewide government FTEs			1.000**** (3.28)
Statewide per capita income (log)			1.858**** (17.97)
Constant	74530.706**** (1027.77)	1062.938**** (69.98)	3.272**** (3.07)
Adj. R-squared	0.041	0.207	0.233
Number of Obs.	66392	66392	66110

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.2C. Annual Wage Earnings Regressions, NAICS 561M, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.553**** (-26.38)	0.675**** (-19.39)	0.704**** (-15.61)
WBE	0.715**** (-14.84)	0.671**** (-20.19)	0.687**** (-19.52)
Year	1.031**** (4.71)	1.029**** (5.08)	1.019** (2.20)
Age		1.176**** (34.19)	1.136**** (24.68)
Age squared		0.998**** (-29.34)	0.999**** (-24.60)
Schooling		.	.
Nursery school/preschool		1.063 (0.52)	0.983 (-0.15)
Grade 9		1.067 (0.48)	1.020 (0.15)
Grade 10		0.648**** (-3.47)	0.804* (-1.76)
Grade 11		0.866 (-1.22)	0.765** (-2.33)
12th grade - no diploma		1.161 (1.29)	1.026 (0.23)
Regular high school diploma		1.447**** (3.85)	1.268** (2.53)
GED or alternative credential		1.163 (1.46)	1.079 (0.76)
Some college, but less than 1 year		1.567**** (4.54)	1.327*** (2.92)
1 or more years college credit, no degree		1.709**** (5.56)	1.431**** (3.80)
Associate's degree		1.769**** (5.81)	1.459**** (3.94)
Bachelor's degree		2.873**** (11.02)	2.126**** (8.04)
Master's degree		3.635**** (13.06)	2.524**** (9.56)
Professional degree beyond a bachelor's degree		3.413**** (10.03)	2.341**** (7.15)
Doctorate degree		4.198**** (10.02)	2.746**** (7.30)
NRCS region		.	.
Northeast		1.018 (0.78)	0.927*** (-2.86)
Southeast		0.937*** (-2.74)	0.946** (-2.31)
West		0.999 (-0.04)	0.897**** (-4.31)
Admin. & Supportive Services		.	.



Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			1.015**** (6.73)
Home is owned free and clear			1.033 (1.57)
Property value			1.000**** (12.45)
Married, spouse present			1.464**** (19.36)
Number of children in family			0.967**** (-3.90)
Number of workers in family			0.841**** (-14.20)
Lived in same house 1 year ago			0.966 (-1.51)
Foreign born			1.146*** (3.18)
Years in U.S., if immigrant			1.009**** (5.71)
Speaks English well or very well			1.101**** (3.58)
Veteran			0.988 (-0.35)
Statewide general population			1.000 (-0.35)
Statewide unemployment rate			1.026** (2.08)
Statewide government FTEs			1.000 (0.28)
Statewide per capita income (log)			1.696**** (7.11)
Constant	41867.982**** (430.89)	560.133**** (46.49)	4.663* (1.89)
Adj. R-squared	0.046	0.277	0.311
Number of Obs.	15054	15054	14834

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.2D. Annual Wage Earnings Regressions, NAICS 5613, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.575**** (-35.80)	0.692**** (-25.95)	0.700**** (-23.23)
WBE	1.034** (1.99)	0.897**** (-7.05)	0.871**** (-9.17)
Year	1.074**** (16.17)	1.054**** (13.15)	1.021*** (3.28)
Age		1.132**** (38.77)	1.101**** (28.05)
Age squared		0.999**** (-33.77)	0.999**** (-28.92)
Schooling		.	.
Nursery school/preschool		1.019 (0.29)	1.023 (0.36)
Grade 9		0.831** (-2.56)	0.908 (-1.36)
Grade 10		0.729**** (-4.59)	0.785**** (-3.58)
Grade 11		0.813**** (-3.29)	0.895* (-1.78)
12th grade - no diploma		0.858** (-2.34)	0.907 (-1.52)
Regular high school diploma		1.160*** (2.78)	1.186*** (3.23)
GED or alternative credential		0.884** (-2.13)	0.956 (-0.78)
Some college, but less than 1 year		1.232**** (3.72)	1.248**** (4.00)
1 or more years college credit, no degree		1.548**** (8.10)	1.550**** (8.22)
Associate's degree		1.735**** (9.94)	1.658**** (9.25)
Bachelor's degree		3.144**** (21.43)	2.656**** (18.49)
Master's degree		3.412**** (21.67)	2.769**** (18.22)
Professional degree beyond a bachelor's degree		4.746**** (20.65)	3.582**** (17.34)
Doctorate degree		4.044**** (14.42)	3.185**** (12.38)
NRCS region		.	.
Northeast		0.996 (-0.26)	0.964** (-2.05)
Southeast		0.967** (-2.12)	1.023 (1.33)
West		1.046*** (2.77)	0.924**** (-4.41)
Admin. & Supportive Services		.	.

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			1.015**** (8.04)
Home is owned free and clear			1.038*** (2.74)
Property value			1.000**** (18.71)
Married, spouse present			1.521**** (30.54)
Number of children in family			0.980**** (-3.57)
Number of workers in family			0.854**** (-18.59)
Lived in same house 1 year ago			1.025* (1.70)
Foreign born			1.230**** (7.15)
Years in U.S., if immigrant			1.008**** (7.85)
Speaks English well or very well			1.111**** (6.02)
Veteran			0.948** (-2.00)
Statewide general population			1.000 (0.67)
Statewide unemployment rate			0.970**** (-3.52)
Statewide government FTEs			1.000 (1.02)
Statewide per capita income (log)			1.447**** (7.09)
Constant	20597.922**** (557.17)	879.993**** (82.28)	37.400**** (6.38)
Adj. R-squared	0.050	0.235	0.273
Number of Obs.	44918	44918	43585

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.2E. Annual Wage Earnings Regressions, All Plaintiff NAICS, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.316**** (-96.56)	0.522**** (-61.16)	0.590**** (-49.38)
Hispanic	0.425**** (-73.64)	0.745**** (-27.82)	0.776**** (-21.56)
Asian Pacific	0.786**** (-13.78)	0.757**** (-18.44)	0.765**** (-16.51)
Subcontinent Asian	1.205**** (8.53)	0.898**** (-5.69)	0.914**** (-4.42)
Alaska Native	0.384**** (-18.13)	0.625**** (-10.39)	0.691**** (-8.24)
Other race	0.562**** (-7.34)	0.682**** (-5.71)	0.690**** (-5.70)
Two or more races	0.551**** (-22.97)	0.697**** (-16.18)	0.730**** (-14.52)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.697**** (-42.02)	0.725**** (-43.77)	0.738**** (-41.97)
Year	1.052**** (20.58)	1.034**** (15.69)	1.008** (2.42)
Age		1.159**** (82.78)	1.125**** (60.28)
Age squared		0.998**** (-73.15)	0.999**** (-61.62)
Schooling		.	.
Nursery school/preschool		0.955 (-0.96)	0.966 (-0.73)
Grade 9		0.850*** (-2.99)	0.886** (-2.27)
Grade 10		0.742**** (-5.79)	0.776**** (-5.01)
Grade 11		0.860*** (-3.19)	0.868*** (-3.04)
12th grade - no diploma		0.994 (-0.13)	0.982 (-0.39)
Regular high school diploma		1.326**** (7.17)	1.266**** (6.07)
GED or alternative credential		1.037 (0.86)	1.038 (0.88)
Some college, but less than 1 year		1.446**** (9.08)	1.361**** (7.69)
1 or more years college credit, no degree		1.690**** (13.31)	1.574**** (11.66)
Associate's degree		1.777**** (14.33)	1.610**** (12.05)
Bachelor's degree		2.921**** (27.46)	2.413**** (22.86)
Master's degree		3.337****	2.633****

Independent Variables	Specification		
	Model A	Model B	Model C
		(30.48)	(24.80)
Professional degree beyond a bachelor's degree		3.812****	2.906****
		(30.08)	(24.39)
Doctorate degree		3.525****	2.751****
		(27.67)	(22.66)
NRCS region		.	.
Northeast		1.043****	0.953****
		(4.96)	(-4.92)
Southeast		0.999	1.033****
		(-0.16)	(3.60)
West		0.972***	0.886****
		(-3.14)	(-12.80)
Admin. & Supportive Services		0.618****	0.670****
		(-71.97)	(-61.25)
Interest and dividend income (log)			1.011****
			(15.62)
Home is owned free and clear			1.059****
			(7.44)
Property value			1.000****
			(32.05)
Married, spouse present			1.418****
			(46.13)
Number of children in family			0.972****
			(-8.98)
Number of workers in family			0.833****
			(-38.07)
Lived in same house 1 year ago			1.005
			(0.59)
Foreign born			1.155****
			(8.85)
Years in U.S., if immigrant			1.008****
			(14.10)
Speaks English well or very well			0.997
			(-0.30)
Veteran			1.012
			(0.87)
Statewide general population			1.000***
			(-2.76)
Statewide unemployment rate			0.993
			(-1.56)
Statewide government FTEs			1.000****
			(4.46)
Statewide per capita income (log)			1.743****
			(20.28)
Constant	47572.246****	1008.711****	5.749****
	(1141.22)	(128.94)	(5.82)
Adj. R-squared	0.096	0.340	0.363
Number of Obs.	126364	126364	124529

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.2F. Annual Wage Earnings Regressions, NAICS 5416, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.534**** (-34.41)	0.601**** (-30.32)	0.665**** (-24.47)
Hispanic	0.551**** (-37.77)	0.713**** (-22.89)	0.760**** (-17.13)
Asian Pacific	0.731**** (-16.73)	0.754**** (-16.22)	0.779**** (-13.16)
Subcontinent Asian	0.999 (-0.05)	0.896**** (-5.53)	0.946** (-2.48)
Alaska Native	0.570**** (-7.19)	0.707**** (-4.86)	0.757**** (-4.01)
Other race	0.706**** (-3.59)	0.773*** (-2.91)	0.805** (-2.52)
Two or more races	0.628**** (-15.02)	0.714**** (-11.90)	0.742**** (-10.78)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.641**** (-46.53)	0.667**** (-46.26)	0.689**** (-43.03)
Year	1.019**** (6.55)	1.018**** (6.87)	0.993 (-1.62)
Age		1.177**** (68.34)	1.146**** (50.35)
Age squared		0.998**** (-62.13)	0.998**** (-51.01)
Schooling		.	.
Nursery school/preschool		1.043 (0.36)	1.076 (0.66)
Grade 9		0.823 (-1.53)	0.802* (-1.78)
Grade 10		0.740** (-2.50)	0.746** (-2.51)
Grade 11		0.806** (-1.97)	0.819* (-1.88)
12th grade - no diploma		1.004 (0.04)	0.991 (-0.09)
Regular high school diploma		1.115 (1.25)	1.091 (1.03)
GED or alternative credential		1.062 (0.65)	1.038 (0.42)
Some college, but less than 1 year		1.204** (2.11)	1.167* (1.81)
1 or more years college credit, no degree		1.292*** (2.97)	1.236** (2.52)
Associate's degree		1.303*** (3.05)	1.222** (2.38)
Bachelor's degree		2.097**** (8.64)	1.797**** (7.03)
Master's degree		2.436****	2.000****

Independent Variables	Specification		
	Model A	Model B	Model C
		(10.37)	(8.30)
Professional degree beyond a bachelor's degree		2.693****	2.145****
		(11.18)	(8.85)
Doctorate degree		2.537****	2.080****
		(10.50)	(8.49)
NRCS region		.	.
Northeast		1.055****	0.940****
		(5.06)	(-4.99)
Southeast		0.990	1.022**
		(-0.88)	(1.98)
West		0.949****	0.863****
		(-4.61)	(-12.51)
Profess., Tech. & Sci. Services		.	.
Interest and dividend income (log)			1.010****
			(12.96)
Home is owned free and clear			1.025**
			(2.36)
Property value			1.000****
			(27.82)
Married, spouse present			1.312****
			(27.36)
Number of children in family			0.972****
			(-6.68)
Number of workers in family			0.821****
			(-30.55)
Lived in same house 1 year ago			0.987
			(-1.26)
Foreign born			1.101****
			(4.57)
Years in U.S., if immigrant			1.006****
			(7.72)
Speaks English well or very well			0.959***
			(-3.08)
Veteran			1.042**
			(2.50)
Statewide general population			1.000***
			(-2.78)
Statewide unemployment rate			0.998
			(-0.31)
Statewide government FTEs			1.000****
			(3.39)
Statewide per capita income (log)			1.855****
			(17.94)
Constant	74653.882****	1063.269****	3.260***
	(1033.57)	(70.06)	(3.07)
Adj. R-squared	0.052	0.210	0.235
Number of Obs.	66392	66392	66110

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.2G. Annual Wage Earnings Regressions, NAICS 561M, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.482**** (-21.89)	0.581**** (-18.37)	0.665**** (-13.78)
Hispanic	0.519**** (-22.72)	0.735**** (-11.45)	0.748**** (-9.41)
Asian Pacific	0.749**** (-5.91)	0.694**** (-8.44)	0.697**** (-7.71)
Subcontinent Asian	1.045 (0.53)	0.834** (-2.52)	0.812*** (-2.78)
Alaska Native	0.628*** (-3.25)	0.696*** (-2.89)	0.719*** (-2.67)
Other race	0.555*** (-2.68)	0.608*** (-2.60)	0.617*** (-2.64)
Two or more races	0.597**** (-6.95)	0.699**** (-5.51)	0.730**** (-5.05)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.715**** (-14.90)	0.671**** (-20.22)	0.687**** (-19.54)
Year	1.031**** (4.63)	1.028**** (4.95)	1.020** (2.23)
Age		1.176**** (34.22)	1.136**** (24.69)
Age squared		0.998**** (-29.34)	0.999**** (-24.66)
Schooling		.	.
Nursery school/preschool		1.043 (0.36)	0.975 (-0.22)
Grade 9		1.065 (0.47)	1.018 (0.14)
Grade 10		0.669*** (-3.21)	0.814* (-1.66)
Grade 11		0.901 (-0.89)	0.779** (-2.17)
12th grade - no diploma		1.195 (1.54)	1.040 (0.35)
Regular high school diploma		1.502**** (4.23)	1.289*** (2.70)
GED or alternative credential		1.206* (1.82)	1.097 (0.92)
Some college, but less than 1 year		1.636**** (4.97)	1.354*** (3.12)
1 or more years college credit, no degree		1.782**** (5.98)	1.460**** (4.00)
Associate's degree		1.844**** (6.23)	1.490**** (4.15)
Bachelor's degree		2.979**** (11.39)	2.170**** (8.24)
Master's degree		3.743****	2.571****



Independent Variables	Specification		
	Model A	Model B	Model C
		(13.34)	(9.72)
Professional degree beyond a bachelor's degree		3.498****	2.380****
		(10.23)	(7.28)
Doctorate degree		4.261****	2.795****
		(10.12)	(7.42)
NRCS region		.	.
Northeast		1.028	0.930***
		(1.20)	(-2.73)
Southeast		0.956*	0.953**
		(-1.90)	(-2.01)
West		0.986	0.895****
		(-0.60)	(-4.38)
Admin. & Supportive Services		.	.
Interest and dividend income (log)			1.015****
			(6.63)
Home is owned free and clear			1.029
			(1.40)
Property value			1.000****
			(12.53)
Married, spouse present			1.458****
			(19.13)
Number of children in family			0.966****
			(-3.92)
Number of workers in family			0.841****
			(-14.18)
Lived in same house 1 year ago			0.966
			(-1.49)
Foreign born			1.144***
			(3.11)
Years in U.S., if immigrant			1.010****
			(5.92)
Speaks English well or very well			1.069**
			(2.34)
Veteran			0.991
			(-0.26)
Statewide general population			1.000
			(-0.55)
Statewide unemployment rate			1.027**
			(2.17)
Statewide government FTEs			1.000
			(0.44)
Statewide per capita income (log)			1.694****
			(7.09)
Constant	41942.840****	536.586****	4.559*
	(432.69)	(46.19)	(1.87)
Adj. R-squared	0.054	0.280	0.312
Number of Obs.	15054	15054	14834

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.2H. Annual Wage Earnings Regressions, NAICS 5613, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.458**** (-42.26)	0.562**** (-33.69)	0.626**** (-26.89)
Hispanic	0.611**** (-25.60)	0.841**** (-9.41)	0.852**** (-7.51)
Asian Pacific	0.997 (-0.07)	0.813**** (-6.41)	0.786**** (-7.00)
Subcontinent Asian	1.465**** (7.11)	0.956 (-0.92)	0.883** (-2.45)
Alaska Native	0.503**** (-9.11)	0.635**** (-6.66)	0.712**** (-4.97)
Other race	0.668*** (-3.14)	0.679**** (-3.35)	0.637**** (-3.99)
Two or more races	0.665**** (-9.20)	0.735**** (-7.69)	0.759**** (-7.05)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	1.035** (2.02)	0.895**** (-7.24)	0.869**** (-9.35)
Year	1.072**** (15.94)	1.052**** (12.88)	1.022**** (3.44)
Age		1.132**** (38.94)	1.101**** (28.10)
Age squared		0.999**** (-33.79)	0.999**** (-29.13)
Schooling		.	.
Nursery school/preschool		0.960 (-0.64)	0.975 (-0.39)
Grade 9		0.835** (-2.50)	0.900 (-1.49)
Grade 10		0.776**** (-3.69)	0.804*** (-3.22)
Grade 11		0.883** (-1.98)	0.925 (-1.26)
12th grade - no diploma		0.909 (-1.47)	0.935 (-1.05)
Regular high school diploma		1.253**** (4.22)	1.231**** (3.93)
GED or alternative credential		0.960 (-0.71)	0.991 (-0.16)
Some college, but less than 1 year		1.340**** (5.24)	1.299**** (4.73)
1 or more years college credit, no degree		1.687**** (9.72)	1.619**** (9.04)
Associate's degree		1.867**** (11.29)	1.725**** (9.97)
Bachelor's degree		3.326**** (22.53)	2.756**** (19.16)
Master's degree		3.569****	2.879****

Independent Variables	Specification		
	Model A	Model B	Model C
		(22.46)	(18.84)
Professional degree beyond a bachelor's degree		4.941****	3.708****
		(21.27)	(17.82)
Doctorate degree		4.287****	3.378****
		(15.08)	(13.01)
NRCS region		.	.
Northeast		1.016	0.976
		(1.02)	(-1.36)
Southeast		1.016	1.049***
		(1.02)	(2.82)
West		0.994	0.905****
		(-0.34)	(-5.55)
Admin. & Supportive Services		.	.
Interest and dividend income (log)			1.015****
			(7.80)
Home is owned free and clear			1.027**
			(1.96)
Property value			1.000****
			(19.01)
Married, spouse present			1.506****
			(29.80)
Number of children in family			0.980****
			(-3.46)
Number of workers in family			0.852****
			(-18.93)
Lived in same house 1 year ago			1.027*
			(1.81)
Foreign born			1.196****
			(6.14)
Years in U.S., if immigrant			1.009****
			(8.86)
Speaks English well or very well			1.009
			(0.47)
Veteran			0.949*
			(-1.96)
Statewide general population			1.000
			(0.02)
Statewide unemployment rate			0.972***
			(-3.24)
Statewide government FTEs			1.000
			(1.39)
Statewide per capita income (log)			1.423****
			(6.77)
Constant	20701.721****	813.534****	42.177****
	(562.91)	(81.63)	(6.60)
Adj. R-squared	0.068	0.243	0.277
Number of Obs.	44918	44918	43585

Source and Notes: See Table 4.1. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.3A. Business Formation Regressions, Construction, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	-0.482**** (-58.73)	-0.373**** (-40.46)	-0.496**** (-41.65)
WBE	-0.546**** (-36.43)	-0.652**** (-42.39)	-0.662**** (-42.40)
Year	-0.011**** (-4.34)	-0.010**** (-3.67)	-0.043**** (-10.52)
Age		0.125**** (50.35)	0.101**** (37.57)
Age squared		-0.001**** (-33.05)	-0.001**** (-23.96)
Schooling			
Nursery school/preschool		-0.073** (-2.34)	-0.105**** (-3.31)
Grade 9		-0.034 (-0.94)	-0.037 (-1.02)
Grade 10		-0.016 (-0.44)	0.034 (0.96)
Grade 11		-0.083** (-2.38)	-0.028 (-0.79)
12th grade - no diploma		0.001 (0.02)	0.015 (0.43)
Regular high school diploma		-0.113**** (-4.05)	-0.073** (-2.58)
GED or alternative credential		-0.108**** (-3.48)	-0.034 (-1.07)
Some college, but less than 1 year		-0.024 (-0.80)	0.003 (0.11)
1 or more years college credit, no degree		-0.029 (-1.02)	-0.006 (-0.19)
Associate's degree		-0.123**** (-4.03)	-0.122**** (-3.91)
Bachelor's degree		-0.060** (-2.04)	-0.163**** (-5.37)
Master's degree		-0.166**** (-4.33)	-0.336**** (-8.54)
Professional degree beyond a bachelor's degree		0.033 (0.46)	-0.190** (-2.58)
Doctorate degree		-0.193 (-1.54)	-0.341*** (-2.67)
NRCS region			
Northeast		-0.033*** (-3.26)	0.078**** (6.12)
Southeast		0.066**** (6.42)	0.124**** (10.89)
West		-0.013 (-1.19)	-0.003 (-0.27)
Construction			

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			0.035**** (33.53)
Home is owned free and clear			0.004 (0.41)
Property value			0.000**** (28.29)
Married, spouse present			0.125**** (13.42)
Number of children in family			0.081**** (21.93)
Number of workers in family			-0.067**** (-11.75)
Lived in same house 1 year ago			0.119**** (9.27)
Foreign born			0.233**** (10.68)
Years in U.S., if immigrant			0.004**** (4.89)
Speaks English well or very well			0.243**** (19.33)
Veteran			-0.243**** (-15.42)
Statewide general population			0.000**** (9.85)
Statewide unemployment rate			-0.078**** (-13.42)
Statewide government FTEs			-0.000**** (-8.14)
Statewide per capita income (log)			-0.382**** (-10.65)
Constant	-0.904**** (-103.15)	-4.417**** (-73.35)	0.460 (1.17)
Pseudo R-squared	0.009	0.055	0.066
Number of Obs.	424047	424047	418943

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.3B. Business Formation Regressions, AECRS, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	-0.516**** (-15.39)	-0.374**** (-10.73)	-0.420**** (-10.00)
WBE	-0.468**** (-14.09)	-0.394**** (-11.57)	-0.436**** (-12.53)
Year	-0.015* (-1.79)	-0.012 (-1.36)	0.026* (1.87)
Age		0.189**** (18.01)	0.156**** (13.55)
Age squared		-0.001**** (-12.64)	-0.001**** (-9.17)
Schooling		.	.
Nursery school/preschool		-0.432 (-0.91)	-0.425 (-0.89)
Grade 9		0.696 (1.62)	0.735* (1.70)
Grade 10		0.093 (0.22)	0.034 (0.08)
Grade 11		-0.107 (-0.25)	-0.086 (-0.20)
12th grade - no diploma		-0.062 (-0.16)	-0.067 (-0.17)
Regular high school diploma		-0.079 (-0.24)	-0.018 (-0.05)
GED or alternative credential		0.009 (0.03)	0.085 (0.25)
Some college, but less than 1 year		0.022 (0.07)	0.076 (0.23)
1 or more years college credit, no degree		0.145 (0.45)	0.192 (0.59)
Associate's degree		0.115 (0.35)	0.153 (0.47)
Bachelor's degree		0.360 (1.12)	0.270 (0.83)
Master's degree		0.298 (0.93)	0.174 (0.54)
Professional degree beyond a bachelor's degree		0.977*** (2.98)	0.795** (2.41)
Doctorate degree		0.280 (0.84)	0.094 (0.28)
NRCS region		.	.
Northeast		0.062* (1.65)	0.067 (1.45)
Southeast		0.105*** (2.76)	0.100** (2.47)
West		0.398**** (10.85)	0.255**** (6.21)
Profess., Tech. & Sci. Services		.	.

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			0.013**** (5.48)
Home is owned free and clear			-0.192**** (-4.61)
Property value			0.000**** (16.50)
Married, spouse present			0.047 (1.31)
Number of children in family			0.116**** (8.23)
Number of workers in family			-0.010 (-0.49)
Lived in same house 1 year ago			0.117** (2.48)
Foreign born			0.060 (0.74)
Years in U.S., if immigrant			0.006** (2.25)
Speaks English well or very well			0.110** (2.13)
Veteran			-0.688**** (-12.96)
Statewide general population			0.000**** (3.87)
Statewide unemployment rate			0.064*** (3.28)
Statewide government FTEs			-0.000**** (-3.56)
Statewide per capita income (log)			-0.192 (-1.60)
Constant	-1.850**** (-62.63)	-7.889**** (-19.59)	-5.672**** (-4.16)
Pseudo R-squared	0.008	0.080	0.094
Number of Obs.	69864	69864	69323

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.3C. Business Formation Regressions, Professional Services ex AECRS, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	-0.581**** (-76.11)	-0.490**** (-59.00)	-0.518**** (-52.31)
WBE	-0.198**** (-27.28)	-0.173**** (-22.92)	-0.171**** (-22.06)
Year	-0.012**** (-5.58)	-0.010**** (-4.23)	-0.009** (-2.55)
Age		0.113**** (52.26)	0.077**** (32.10)
Age squared		-0.001**** (-31.31)	-0.000**** (-17.81)
Schooling			
Nursery school/preschool		0.149**** (3.90)	0.120*** (3.12)
Grade 9		0.190**** (4.15)	0.166**** (3.59)
Grade 10		0.118**** (2.61)	0.120*** (2.61)
Grade 11		0.066 (1.54)	0.078* (1.77)
12th grade - no diploma		-0.045 (-1.05)	-0.058 (-1.34)
Regular high school diploma		-0.317**** (-9.40)	-0.297**** (-8.69)
GED or alternative credential		-0.309**** (-8.11)	-0.255**** (-6.58)
Some college, but less than 1 year		-0.374**** (-10.53)	-0.363**** (-10.04)
1 or more years college credit, no degree		-0.251**** (-7.41)	-0.238**** (-6.91)
Associate's degree		-0.382**** (-10.97)	-0.376**** (-10.62)
Bachelor's degree		-0.178**** (-5.32)	-0.238**** (-6.99)
Master's degree		-0.211**** (-6.16)	-0.312**** (-8.92)
Professional degree beyond a bachelor's degree		0.658**** (18.83)	0.530**** (14.87)
Doctorate degree		0.053 (1.37)	-0.066* (-1.68)
NRCS region			
Northeast		-0.130**** (-13.88)	-0.009 (-0.82)
Southeast		0.086**** (9.07)	0.107**** (10.60)
West		0.202**** (21.76)	0.189**** (17.98)
Management of Companies		-2.407****	-2.429****



Independent Variables	Specification		
	Model A	Model B	Model C
		(-31.59)	(-31.75)
Admin. & Supportive Services		0.122****	0.177****
		(15.64)	(22.19)
Interest and dividend income (log)			0.020****
			(27.28)
Home is owned free and clear			0.078****
			(8.77)
Property value			0.000****
			(19.71)
Married, spouse present			0.096****
			(11.52)
Number of children in family			0.092****
			(26.50)
Number of workers in family			-0.003
			(-0.60)
Lived in same house 1 year ago			0.133****
			(12.49)
Foreign born			0.254****
			(13.85)
Years in U.S., if immigrant			0.009****
			(14.87)
Speaks English well or very well			0.098****
			(8.73)
Veteran			-0.413****
			(-25.66)
Statewide general population			0.000****
			(8.14)
Statewide unemployment rate			-0.028****
			(-5.41)
Statewide government FTEs			-0.000****
			(-3.43)
Statewide per capita income (log)			-0.512****
			(-16.35)
Constant	-1.211****	-4.574****	1.323****
	(-149.55)	(-78.70)	(3.85)
Pseudo R-squared	0.009	0.074	0.082
Number of Obs.	705758	705758	693999

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.3D. Business Formation Regressions, General Services, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	-0.494**** (-121.89)	-0.330**** (-73.90)	-0.424**** (-79.48)
WBE	-0.427**** (-110.66)	-0.165**** (-39.27)	-0.161**** (-37.10)
Year	-0.002** (-2.01)	-0.001 (-0.83)	-0.025**** (-12.96)
Age		0.138**** (127.62)	0.111**** (91.92)
Age squared		-0.001**** (-91.85)	-0.001**** (-66.76)
Schooling			
Nursery school/preschool		0.125**** (6.16)	0.076**** (3.69)
Grade 9		0.077*** (3.20)	0.061** (2.50)
Grade 10		0.016 (0.67)	0.042* (1.79)
Grade 11		-0.070*** (-3.19)	-0.035 (-1.58)
12th grade - no diploma		-0.004 (-0.20)	0.003 (0.15)
Regular high school diploma		-0.158**** (-9.18)	-0.114**** (-6.47)
GED or alternative credential		-0.204**** (-10.51)	-0.121**** (-6.08)
Some college, but less than 1 year		-0.106**** (-5.86)	-0.068**** (-3.66)
1 or more years college credit, no degree		-0.043** (-2.46)	-0.002 (-0.09)
Associate's degree		-0.209**** (-11.73)	-0.192**** (-10.54)
Bachelor's degree		0.032* (1.88)	-0.035** (-2.00)
Master's degree		-0.009 (-0.50)	-0.137**** (-7.52)
Professional degree beyond a bachelor's degree		1.170**** (63.33)	0.990**** (52.23)
Doctorate degree		0.614**** (29.84)	0.435**** (20.75)
NRCS region			
Northeast		-0.122**** (-24.65)	-0.054**** (-8.71)
Southeast		0.061**** (12.17)	0.099**** (18.19)
West		0.250**** (50.54)	0.198**** (35.08)
Warehousing		-1.017****	-1.005****

Independent Variables	Specification		
	Model A	Model B	Model C
		(-51.47)	(-50.51)
Information		-0.648****	-0.710****
		(-53.62)	(-57.92)
Finance & Insurance		-1.095****	-1.187****
		(-105.33)	(-112.68)
Real Estate		0.714****	0.652****
		(74.94)	(67.51)
Profess., Tech. & Sci. Services		0.137****	0.074****
		(17.14)	(9.13)
Management of Companies		-2.140****	-2.234****
		(-28.01)	(-29.06)
Admin. & Supportive Services		0.419****	0.438****
		(50.12)	(51.75)
Educational Services		-1.134****	-1.126****
		(-99.51)	(-97.47)
Medical Services		-1.282****	-1.310****
		(-143.03)	(-144.36)
Social Assistance Services		0.253****	0.307****
		(24.39)	(29.10)
Arts & Entertainment		-0.361****	-0.350****
		(-42.67)	(-40.87)
Other Services		0.872****	0.870****
		(110.97)	(109.55)
Interest and dividend income (log)			0.027****
			(65.75)
Home is owned free and clear			0.069****
			(14.64)
Property value			0.000****
			(66.71)
Married, spouse present			0.142****
			(32.00)
Number of children in family			0.075****
			(40.48)
Number of workers in family			-0.065****
			(-23.02)
Lived in same house 1 year ago			0.090****
			(15.65)
Foreign born			0.308****
			(32.22)
Years in U.S., if immigrant			0.004****
			(11.05)
Speaks English well or very well			0.088****
			(14.96)
Veteran			-0.326****
			(-36.16)
Statewide general population			0.000****
			(13.82)
Statewide unemployment rate			-0.053****
			(-19.57)
Statewide government FTEs			-0.000****
			(-5.66)

Independent Variables	Specification		
	Model A	Model B	Model C
Statewide per capita income (log)			-0.246**** (-14.50)
Constant	-1.730**** (-394.31)	-5.438**** (-182.16)	-2.089**** (-11.23)
Pseudo R-squared	0.007	0.128	0.136
Number of Obs.	3738400	3738400	3634589

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.3E. Business Formation Regressions, Goods, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	-0.373**** (-42.90)	-0.378**** (-40.31)	-0.604**** (-51.63)
WBE	-0.050**** (-5.97)	-0.250**** (-28.69)	-0.218**** (-24.33)
Year	-0.001 (-0.42)	0.000 (0.14)	-0.038**** (-9.31)
Age		0.168**** (71.15)	0.119**** (45.64)
Age squared		-0.001**** (-52.02)	-0.001**** (-32.28)
Schooling			
Nursery school/preschool		0.193**** (4.79)	0.171**** (4.18)
Grade 9		-0.070 (-1.41)	-0.009 (-0.17)
Grade 10		-0.258**** (-5.42)	-0.146**** (-3.01)
Grade 11		-0.397**** (-8.63)	-0.251**** (-5.36)
12th grade - no diploma		-0.073* (-1.75)	-0.004 (-0.09)
Regular high school diploma		-0.334**** (-9.75)	-0.212**** (-6.05)
GED or alternative credential		-0.469**** (-12.05)	-0.305**** (-7.68)
Some college, but less than 1 year		-0.149**** (-4.17)	-0.051 (-1.39)
1 or more years college credit, no degree		-0.023 (-0.68)	0.054 (1.53)
Associate's degree		-0.056 (-1.57)	-0.008 (-0.22)
Bachelor's degree		0.283**** (8.28)	0.148**** (4.20)
Master's degree		0.154**** (4.22)	-0.168**** (-4.48)
Professional degree beyond a bachelor's degree		0.348**** (7.16)	-0.010 (-0.20)
Doctorate degree		-0.090 (-1.60)	-0.577**** (-10.09)
NRCS region			
Northeast		0.035**** (3.49)	0.073**** (5.94)
Southeast		0.112**** (10.87)	0.193**** (16.82)
West		0.336**** (32.61)	0.235**** (19.79)
Manufacturing-NAICS 32		-0.422****	-0.450****

Independent Variables	Specification		
	Model A	Model B	Model C
		(-21.33)	(-22.49)
Manufacturing-NAICS 33		-0.564****	-0.609****
		(-32.38)	(-34.50)
Wholesale Trade		0.469****	0.406****
		(27.13)	(23.13)
Retail Trade-NAICS 44		0.419****	0.427****
		(25.95)	(26.12)
Retail Trade-NAICS 45		0.934****	0.997****
		(56.55)	(59.44)
Interest and dividend income (log)			0.039****
			(46.99)
Home is owned free and clear			0.143****
			(13.65)
Property value			0.000****
			(55.58)
Married, spouse present			0.444****
			(46.55)
Number of children in family			0.107****
			(27.79)
Number of workers in family			-0.075****
			(-13.22)
Lived in same house 1 year ago			0.064****
			(4.84)
Foreign born			0.418****
			(20.44)
Years in U.S., if immigrant			0.002***
			(3.28)
Speaks English well or very well			0.297****
			(23.30)
Veteran			-0.379****
			(-20.63)
Statewide general population			0.000***
			(3.16)
Statewide unemployment rate			-0.070****
			(-12.13)
Statewide government FTEs			0.000
			(0.35)
Statewide per capita income (log)			-0.140****
			(-3.97)
Constant	-2.809****	-7.581****	-5.019****
	(-314.19)	(-119.01)	(-13.00)
Pseudo R-squared	0.003	0.082	0.106
Number of Obs.	1695118	1695118	1664343

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.3F. Business Formation Regressions, All Industries, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	-0.531**** (-166.03)	-0.417**** (-115.33)	-0.517**** (-117.46)
WBE	-0.439**** (-139.40)	-0.248**** (-70.09)	-0.239**** (-66.06)
Year	-0.001 (-0.68)	-0.003*** (-2.59)	-0.037**** (-23.47)
Age		0.138**** (155.85)	0.109**** (111.08)
Age squared		-0.001**** (-110.16)	-0.001**** (-78.43)
Schooling			
Nursery school/preschool		0.009 (0.60)	-0.029* (-1.85)
Grade 9		0.040** (2.20)	0.033* (1.79)
Grade 10		0.033* (1.88)	0.061**** (3.46)
Grade 11		-0.049*** (-2.90)	-0.014 (-0.80)
12th grade - no diploma		0.067**** (4.08)	0.069**** (4.17)
Regular high school diploma		-0.056**** (-4.19)	-0.023* (-1.71)
GED or alternative credential		-0.129**** (-8.64)	-0.055**** (-3.64)
Some college, but less than 1 year		0.016 (1.15)	0.038*** (2.68)
1 or more years college credit, no degree		0.082**** (6.10)	0.102**** (7.45)
Associate's degree		-0.031** (-2.22)	-0.037*** (-2.65)
Bachelor's degree		0.191**** (14.30)	0.083**** (6.07)
Master's degree		0.119**** (8.46)	-0.067**** (-4.69)
Professional degree beyond a bachelor's degree		1.218**** (81.64)	0.976**** (63.80)
Doctorate degree		0.654**** (38.03)	0.405**** (23.12)
NRCS region			
Northeast		-0.115**** (-29.08)	-0.038**** (-7.85)
Southeast		0.023**** (5.73)	0.082**** (18.60)
West		0.161**** (40.38)	0.128**** (28.23)
NAICS sector			

Independent Variables	Specification		
	Model A	Model B	Model C
Extractive Industries		-2.745**** (-104.22)	-2.795**** (-105.13)
Utilities		-3.754**** (-100.69)	-3.798**** (-100.83)
Construction		-0.560**** (-71.28)	-0.572**** (-71.49)
Manufacturing-NAICS 31		-2.569**** (-158.35)	-2.558**** (-156.24)
Manufacturing-NAICS 32		-3.002**** (-202.61)	-3.015**** (-201.59)
Manufacturing-NAICS 33		-3.118**** (-271.51)	-3.140**** (-269.98)
Wholesale Trade		-2.073**** (-182.98)	-2.109**** (-183.56)
Retail Trade-NAICS 44		-2.183**** (-230.16)	-2.171**** (-225.46)
Retail Trade-NAICS 45		-1.657**** (-164.93)	-1.616**** (-158.18)
Transportation		-1.312**** (-136.55)	-1.285**** (-131.64)
Warehousing		-2.316**** (-116.34)	-2.274**** (-113.18)
Information		-1.969**** (-160.24)	-2.008**** (-160.42)
Finance & Insurance		-2.417**** (-227.33)	-2.497**** (-230.95)
Real Estate		-0.594**** (-60.62)	-0.634**** (-63.41)
Profess., Tech. & Sci. Services		-1.174**** (-142.24)	-1.214**** (-144.13)
Management of Companies		-3.461**** (-45.29)	-3.542**** (-46.01)
Admin. & Supportive Services		-0.861**** (-99.77)	-0.807**** (-91.75)
Educational Services		-2.431**** (-210.76)	-2.391**** (-203.58)
Medical Services		-2.569**** (-279.49)	-2.571**** (-274.44)
Social Assistance Services		-1.028**** (-97.08)	-0.937**** (-86.73)
Arts & Entertainment		-1.631**** (-188.39)	-1.586**** (-179.79)
Other Services		-0.415**** (-50.93)	-0.384**** (-46.22)
Public Administration			
Interest and dividend income (log)			0.031**** (92.33)
Home is owned free and clear			0.084**** (21.87)



Independent Variables	Specification		
	Model A	Model B	Model C
Property value			0.000**** (94.03)
Married, spouse present			0.192**** (53.39)
Number of children in family			0.077**** (52.15)
Number of workers in family			-0.068**** (-30.05)
Lived in same house 1 year ago			0.097**** (20.16)
Foreign born			0.262**** (32.87)
Years in U.S., if immigrant			0.003**** (11.10)
Speaks English well or very well			0.179**** (37.16)
Veteran			-0.335**** (-47.65)
Statewide general population			0.000**** (17.52)
Statewide unemployment rate			-0.070**** (-31.73)
Statewide government FTEs			-0.000**** (-9.67)
Statewide per capita income (log)			-0.224**** (-16.38)
Constant	-1.815**** (-534.78)	-4.210**** (-176.47)	-0.977**** (-6.50)
Pseudo R-squared	0.008	0.148	0.159
Number of Obs.	6046247	6046246	5902242

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.3G. Business Formation Regressions, Construction, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity			
Black	-0.541**** (-27.42)	-0.585**** (-28.92)	-0.483**** (-23.13)
Hispanic	-0.502**** (-54.04)	-0.343**** (-31.73)	-0.557**** (-37.37)
Asian Pacific	-0.154**** (-5.10)	-0.197**** (-6.34)	-0.430**** (-12.88)
Subcontinent Asian	-0.315**** (-4.65)	-0.247**** (-3.54)	-0.524**** (-7.25)
Alaska Native	-0.616**** (-14.87)	-0.540**** (-12.73)	-0.549**** (-12.58)
Other race	-0.003 (-0.04)	0.150* (1.82)	0.027 (0.33)
Two or more races	-0.380**** (-11.48)	-0.216**** (-6.33)	-0.208**** (-5.99)
Non-Hispanic white female?			
Non-Hispanic white female	-0.546**** (-36.43)	-0.652**** (-42.39)	-0.660**** (-42.29)
Year	-0.011**** (-4.42)	-0.010**** (-3.91)	-0.042**** (-10.29)
Age		0.125**** (50.36)	0.101**** (37.50)
Age squared		-0.001**** (-32.99)	-0.001**** (-23.96)
Schooling			
Nursery school/preschool		-0.075** (-2.40)	-0.097** (-3.05)
Grade 9		-0.027 (-0.75)	-0.034 (-0.93)
Grade 10		0.004 (0.11)	0.027 (0.76)
Grade 11		-0.058* (-1.68)	-0.036 (-1.02)
12th grade - no diploma		0.017 (0.50)	0.007 (0.21)
Regular high school diploma		-0.091*** (-3.25)	-0.084*** (-2.94)
GED or alternative credential		-0.085*** (-2.75)	-0.046 (-1.44)
Some college, but less than 1 year		-0.003 (-0.09)	-0.009 (-0.30)
1 or more years college credit, no degree		-0.005 (-0.18)	-0.019 (-0.64)
Associate's degree		-0.101**** (-3.31)	-0.135**** (-4.35)
Bachelor's degree		-0.044 (-1.50)	-0.178**** (-5.86)
Master's degree		-0.153****	-0.355****

Independent Variables	Specification		
	Model A	Model B	Model C
		(-3.96)	(-8.98)
Professional degree beyond a bachelor's degree	0.047		-0.203***
	(0.66)		(-2.76)
Doctorate degree	-0.184		-0.362***
	(-1.47)		(-2.83)
NRCS region			
Northeast		-0.030***	0.074****
		(-2.95)	(5.80)
Southeast		0.078****	0.120****
		(7.51)	(10.44)
West		-0.023**	-0.006
		(-2.12)	(-0.52)
Construction			
Interest and dividend income (log)			0.035****
			(33.45)
Home is owned free and clear			0.003
			(0.33)
Property value			0.000****
			(27.89)
Married, spouse present			0.125****
			(13.40)
Number of children in family			0.082****
			(22.12)
Number of workers in family			-0.067****
			(-11.66)
Lived in same house 1 year ago			0.120****
			(9.36)
Foreign born			0.254****
			(11.43)
Years in U.S., if immigrant			0.004****
			(5.04)
Speaks English well or very well			0.261****
			(20.28)
Veteran			-0.245****
			(-15.56)
Statewide general population			0.000****
			(10.21)
Statewide unemployment rate			-0.078****
			(-13.32)
Statewide government FTEs			-0.000****
			(-8.34)
Statewide per capita income (log)			-0.398****
			(-11.07)
Constant	-0.904****	-4.445****	0.640
	(-103.06)	(-73.68)	(1.63)
Pseudo R-squared	0.010	0.056	0.067
Number of Obs.	424047	424047	418943

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.3H. Business Formation Regressions, AECRS, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity			
Black	-0.671**** (-8.48)	-0.542**** (-6.72)	-0.472**** (-5.76)
Hispanic	-0.389**** (-8.02)	-0.158*** (-3.11)	-0.231**** (-3.99)
Asian Pacific	-0.613**** (-9.50)	-0.632**** (-9.48)	-0.786**** (-10.34)
Subcontinent Asian	-0.674**** (-6.24)	-0.449**** (-4.05)	-0.650**** (-5.39)
Alaska Native	-0.771*** (-2.78)	-0.746*** (-2.65)	-0.620** (-2.19)
Other race	-0.098 (-0.32)	0.025 (0.08)	0.059 (0.18)
Two or more races	-0.399**** (-3.95)	-0.152 (-1.46)	-0.170 (-1.60)
Non-Hispanic white female?			
Non-Hispanic white female	-0.468**** (-14.08)	-0.393**** (-11.54)	-0.435**** (-12.50)
Year	-0.016* (-1.83)	-0.013 (-1.45)	0.027* (1.91)
Age		0.190**** (18.08)	0.156**** (13.56)
Age squared		-0.001**** (-12.70)	-0.001**** (-9.15)
Schooling			
Nursery school/preschool		-0.495 (-1.04)	-0.496 (-1.04)
Grade 9		0.685 (1.59)	0.728* (1.68)
Grade 10		0.108 (0.25)	0.062 (0.14)
Grade 11		-0.078 (-0.18)	-0.043 (-0.10)
12th grade - no diploma		-0.055 (-0.14)	-0.054 (-0.14)
Regular high school diploma		-0.041 (-0.13)	0.032 (0.10)
GED or alternative credential		0.032 (0.09)	0.122 (0.35)
Some college, but less than 1 year		0.059 (0.18)	0.128 (0.39)
1 or more years college credit, no degree		0.184 (0.57)	0.244 (0.75)
Associate's degree		0.154 (0.48)	0.206 (0.63)
Bachelor's degree		0.408 (1.26)	0.331 (1.02)
Master's degree		0.350	0.238

Independent Variables	Specification		
	Model A	Model B	Model C
		(1.08)	(0.73)
Professional degree beyond a bachelor's degree		1.017***	0.846**
		(3.10)	(2.56)
Doctorate degree		0.353	0.175
		(1.06)	(0.52)
NRCS region		.	.
Northeast		0.071*	0.066
		(1.89)	(1.44)
Southeast		0.108***	0.097**
		(2.84)	(2.40)
West		0.407****	0.264****
		(11.04)	(6.41)
Profess., Tech. & Sci. Services		.	.
Interest and dividend income (log)			0.014****
			(5.61)
Home is owned free and clear			-0.183****
			(-4.38)
Property value			0.000****
			(16.51)
Married, spouse present			0.049
			(1.38)
Number of children in family			0.115****
			(8.15)
Number of workers in family			-0.011
			(-0.51)
Lived in same house 1 year ago			0.119**
			(2.53)
Foreign born			0.134*
			(1.66)
Years in U.S., if immigrant			0.006**
			(2.18)
Speaks English well or very well			0.096*
			(1.82)
Veteran			-0.690****
			(-12.99)
Statewide general population			0.000****
			(3.64)
Statewide unemployment rate			0.067****
			(3.42)
Statewide government FTEs			-0.000****
			(-3.36)
Statewide per capita income (log)			-0.177
			(-1.47)
Constant	-1.849****	-7.967****	-5.925****
	(-62.59)	(-19.74)	(-4.34)
Pseudo R-squared	0.008	0.081	0.095
Number of Obs.	69864	69864	69323

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.3I. Business Formation Regressions, Professional Services ex AECRS, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	-0.882**** (-61.93)	-0.763**** (-51.61)	-0.675**** (-44.05)
Hispanic	-0.329**** (-34.35)	-0.218**** (-19.77)	-0.302**** (-23.11)
Asian Pacific	-0.699**** (-40.06)	-0.641**** (-35.38)	-0.779**** (-38.70)
Subcontinent Asian	-1.232**** (-49.11)	-1.017**** (-39.51)	-1.158**** (-41.30)
Alaska Native	-0.309**** (-6.34)	-0.208**** (-4.13)	-0.147**** (-2.87)
Other race	-0.211**** (-3.11)	-0.022 (-0.31)	-0.038 (-0.53)
Two or more races	-0.457**** (-18.46)	-0.220**** (-8.58)	-0.185**** (-7.10)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	-0.198**** (-27.28)	-0.173**** (-22.96)	-0.169**** (-21.83)
Year	-0.012**** (-5.62)	-0.010**** (-4.66)	-0.008** (-2.26)
Age	.	0.114**** (52.52)	0.078**** (32.81)
Age squared	.	-0.001**** (-31.48)	-0.000**** (-18.07)
Schooling	.	.	.
Nursery school/preschool	.	0.078** (2.03)	0.055 (1.42)
Grade 9	.	0.180**** (3.94)	0.157**** (3.40)
Grade 10	.	0.203**** (4.46)	0.202**** (4.39)
Grade 11	.	0.165**** (3.82)	0.170**** (3.86)
12th grade - no diploma	.	0.030 (0.70)	0.014 (0.33)
Regular high school diploma	.	-0.203**** (-5.99)	-0.188**** (-5.45)
GED or alternative credential	.	-0.193**** (-5.04)	-0.142**** (-3.65)
Some college, but less than 1 year	.	-0.251**** (-7.01)	-0.242**** (-6.64)
1 or more years college credit, no degree	.	-0.123**** (-3.61)	-0.116**** (-3.32)
Associate's degree	.	-0.254**** (-7.26)	-0.251**** (-7.04)
Bachelor's degree	.	-0.034 (-1.01)	-0.095**** (-2.77)
Master's degree	.	-0.033	-0.135****

Independent Variables	Specification		
	Model A	Model B	Model C
		(-0.97)	(-3.82)
Professional degree beyond a bachelor's degree		0.792****	0.661****
		(22.50)	(18.38)
Doctorate degree		0.214****	0.089**
		(5.46)	(2.23)
NRCS region			
Northeast		-0.113****	-0.004
		(-12.06)	(-0.30)
Southeast		0.105****	0.114****
		(11.02)	(11.24)
West		0.186****	0.181****
		(19.94)	(17.22)
Management of Companies		-2.417****	-2.439****
		(-31.72)	(-31.88)
Admin. & Supportive Services		0.113****	0.162****
		(14.39)	(20.21)
Interest and dividend income (log)			0.020****
			(27.55)
Home is owned free and clear			0.080****
			(8.96)
Property value			0.000****
			(20.89)
Married, spouse present			0.108****
			(12.92)
Number of children in family			0.087****
			(25.04)
Number of workers in family			-0.012**
			(-2.32)
Lived in same house 1 year ago			0.126****
			(11.81)
Foreign born			0.287****
			(15.68)
Years in U.S., if immigrant			0.008****
			(12.79)
Speaks English well or very well			0.085****
			(7.40)
Veteran			-0.411****
			(-25.53)
Statewide general population			0.000****
			(6.64)
Statewide unemployment rate			-0.025****
			(-4.79)
Statewide government FTEs			-0.000**
			(-2.25)
Statewide per capita income (log)			-0.513****
			(-16.37)
Constant	-1.211****	-4.727****	1.198****
	(-149.38)	(-81.03)	(3.48)
Pseudo R-squared	0.012	0.077	0.084
Number of Obs.	705758	705758	693999

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.3J. Business Formation Regressions, General Services, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	-0.843**** (-119.88)	-0.582**** (-78.26)	-0.509**** (-65.79)
Hispanic	-0.371**** (-71.47)	-0.235**** (-39.76)	-0.375**** (-53.14)
Asian Pacific	-0.289**** (-37.40)	-0.242**** (-29.20)	-0.481**** (-50.28)
Subcontinent Asian	-0.466**** (-35.47)	-0.291**** (-21.22)	-0.575**** (-38.56)
Alaska Native	-0.647**** (-26.86)	-0.491**** (-19.57)	-0.417**** (-16.33)
Other race	-0.210**** (-6.06)	0.040 (1.08)	-0.042 (-1.14)
Two or more races	-0.490**** (-38.06)	-0.145**** (-10.69)	-0.134**** (-9.70)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	-0.427**** (-110.66)	-0.167**** (-39.71)	-0.161**** (-37.10)
Year	-0.003*** (-2.98)	-0.002 (-1.56)	-0.024**** (-12.47)
Age		0.138**** (127.56)	0.111**** (92.58)
Age squared		-0.001**** (-91.53)	-0.001**** (-67.05)
Schooling			
Nursery school/preschool		0.103**** (5.08)	0.054*** (2.64)
Grade 9		0.080**** (3.32)	0.052** (2.13)
Grade 10		0.054** (2.33)	0.053** (2.24)
Grade 11		-0.020 (-0.92)	-0.023 (-1.01)
12th grade - no diploma		0.027 (1.26)	0.014 (0.66)
Regular high school diploma		-0.114**** (-6.59)	-0.100**** (-5.65)
GED or alternative credential		-0.161**** (-8.24)	-0.109**** (-5.46)
Some college, but less than 1 year		-0.060**** (-3.32)	-0.053*** (-2.88)
1 or more years college credit, no degree		0.007 (0.41)	0.014 (0.78)
Associate's degree		-0.165**** (-9.20)	-0.177**** (-9.67)
Bachelor's degree		0.072**** (4.18)	-0.017 (-0.97)
Master's degree		0.032* (1.64)	-0.113**** (-4.54)



Independent Variables	Specification		
	Model A	Model B	Model C
	(1.76)		(-6.20)
Professional degree beyond a bachelor's degree	1.205****		1.006****
	(65.00)		(52.95)
Doctorate degree	0.647****		0.456****
	(31.36)		(21.66)
NRCS region			
Northeast	-0.115****		-0.052****
	(-23.11)		(-8.50)
Southeast	0.082****		0.103****
	(16.08)		(18.90)
West	0.229****		0.192****
	(45.89)		(33.88)
Warehousing	-1.014****		-1.006****
	(-51.30)		(-50.53)
Information	-0.653****		-0.710****
	(-54.03)		(-57.95)
Finance & Insurance	-1.103****		-1.187****
	(-105.99)		(-112.72)
Real Estate	0.704****		0.647****
	(73.85)		(67.00)
Profess., Tech. & Sci. Services	0.127****		0.074****
	(15.87)		(9.11)
Management of Companies	-2.149****		-2.236****
	(-28.14)		(-29.09)
Admin. & Supportive Services	0.417****		0.433****
	(49.77)		(51.14)
Educational Services	-1.138****		-1.130****
	(-99.81)		(-97.75)
Medical Services	-1.283****		-1.308****
	(-142.98)		(-144.09)
Social Assistance Services	0.262****		0.307****
	(25.14)		(29.04)
Arts & Entertainment	-0.370****		-0.353****
	(-43.72)		(-41.20)
Other Services	0.861****		0.867****
	(109.40)		(109.00)
Interest and dividend income (log)			0.027****
			(65.58)
Home is owned free and clear			0.068****
			(14.40)
Property value			0.000****
			(67.16)
Married, spouse present			0.142****
			(31.88)
Number of children in family			0.074****
			(40.09)
Number of workers in family			-0.066****
			(-23.29)
Lived in same house 1 year ago			0.090****
			(15.59)

Independent Variables	Specification		
	Model A	Model B	Model C
Foreign born			0.316**** (32.83)
Years in U.S., if immigrant			0.003**** (9.95)
Speaks English well or very well			0.080**** (13.34)
Veteran			-0.326**** (-36.14)
Statewide general population			0.000**** (12.87)
Statewide unemployment rate			-0.051**** (-18.72)
Statewide government FTEs			-0.000**** (-4.92)
Statewide per capita income (log)			-0.247**** (-14.56)
Constant	-1.727**** (-393.51)	-5.480**** (-183.28)	-2.116**** (-11.37)
Pseudo R-squared	0.009	0.129	0.136
Number of Obs.	3738400	3738400	3634589

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.3K. Business Formation Regressions, Goods, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	-1.177**** (-56.80)	-1.139**** (-53.90)	-1.015**** (-46.23)
Hispanic	-0.425**** (-36.08)	-0.378**** (-29.19)	-0.628**** (-40.28)
Asian Pacific	0.162**** (10.35)	-0.016 (-0.95)	-0.451**** (-22.78)
Subcontinent Asian	0.481**** (20.60)	0.363**** (14.92)	-0.162**** (-5.89)
Alaska Native	0.002 (0.06)	-0.015 (-0.35)	0.111** (2.45)
Other race	-0.078 (-0.91)	-0.076 (-0.86)	-0.225** (-2.51)
Two or more races	-0.248**** (-8.44)	-0.141**** (-4.70)	-0.148**** (-4.80)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	-0.050**** (-5.97)	-0.254**** (-29.15)	-0.221**** (-24.61)
Year	-0.003 (-1.07)	-0.001 (-0.36)	-0.038**** (-9.21)
Age		0.167**** (70.48)	0.118**** (45.35)
Age squared		-0.001**** (-51.42)	-0.001**** (-32.40)
Schooling		.	.
Nursery school/preschool		0.236**** (5.83)	0.199**** (4.85)
Grade 9		-0.018 (-0.37)	0.003 (0.05)
Grade 10		-0.203**** (-4.26)	-0.160*** (-3.28)
Grade 11		-0.310**** (-6.72)	-0.252**** (-5.38)
12th grade - no diploma		-0.023 (-0.54)	-0.007 (-0.17)
Regular high school diploma		-0.264**** (-7.67)	-0.219**** (-6.23)
GED or alternative credential		-0.405**** (-10.39)	-0.318**** (-7.98)
Some college, but less than 1 year		-0.083** (-2.32)	-0.063* (-1.70)
1 or more years college credit, no degree		0.049 (1.41)	0.047 (1.32)
Associate's degree		0.001 (0.03)	-0.020 (-0.55)
Bachelor's degree		0.311**** (9.05)	0.127**** (3.60)
Master's degree		0.144****	-0.203****

Independent Variables	Specification		
	Model A	Model B	Model C
		(3.91)	(-5.38)
Professional degree beyond a bachelor's degree		0.349****	-0.033
		(7.17)	(-0.66)
Doctorate degree		-0.143**	-0.615****
		(-2.55)	(-10.73)
NRCS region			
Northeast		0.034****	0.076****
		(3.36)	(6.19)
Southeast		0.163****	0.216****
		(15.65)	(18.82)
West		0.286****	0.214****
		(27.41)	(17.94)
Manufacturing-NAICS 32		-0.431****	-0.459****
		(-21.76)	(-22.96)
Manufacturing-NAICS 33		-0.581****	-0.621****
		(-33.33)	(-35.15)
Wholesale Trade		0.454****	0.396****
		(26.24)	(22.55)
Retail Trade-NAICS 44		0.401****	0.411****
		(24.77)	(25.09)
Retail Trade-NAICS 45		0.933****	0.986****
		(56.39)	(58.76)
Interest and dividend income (log)			0.038****
			(46.14)
Home is owned free and clear			0.127****
			(12.05)
Property value			0.000****
			(54.78)
Married, spouse present			0.430****
			(44.97)
Number of children in family			0.110****
			(28.50)
Number of workers in family			-0.073****
			(-12.89)
Lived in same house 1 year ago			0.067****
			(5.11)
Foreign born			0.396****
			(19.09)
Years in U.S., if immigrant			0.004****
			(5.23)
Speaks English well or very well			0.266****
			(20.38)
Veteran			-0.378****
			(-20.54)
Statewide general population			0.000****
			(3.76)
Statewide unemployment rate			-0.069****
			(-11.87)
Statewide government FTEs			-0.000
			(-0.05)

Independent Variables	Specification		
	Model A	Model B	Model C
Statewide per capita income (log)			-0.143****
			(-4.07)
Constant	-2.804****	-7.581****	-4.975****
	(-313.64)	(-118.87)	(-12.87)
Pseudo R-squared	0.010	0.086	0.107
Number of Obs.	1695118	1695118	1664343

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.3L. Business Formation Regressions, All Industries, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	-0.932**** (-152.25)	-0.711**** (-109.29)	-0.611**** (-90.57)
Hispanic	-0.433**** (-106.14)	-0.390**** (-82.15)	-0.548**** (-94.53)
Asian Pacific	-0.318**** (-48.41)	-0.221**** (-30.91)	-0.477**** (-57.88)
Subcontinent Asian	-0.404**** (-36.14)	-0.193**** (-16.36)	-0.504**** (-39.31)
Alaska Native	-0.457**** (-26.09)	-0.424**** (-22.92)	-0.361**** (-19.15)
Other race	-0.188**** (-6.46)	0.006 (0.18)	-0.076** (-2.42)
Two or more races	-0.489**** (-45.23)	-0.189**** (-16.46)	-0.174**** (-14.83)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	-0.439**** (-139.40)	-0.249**** (-70.47)	-0.240**** (-66.05)
Year	-0.002* (-1.77)	-0.003**** (-3.44)	-0.036**** (-22.96)
Age		0.138**** (155.61)	0.109**** (111.32)
Age squared		-0.001**** (-109.70)	-0.001**** (-78.73)
Schooling		.	.
Nursery school/preschool		0.016 (1.07)	-0.019 (-1.24)
Grade 9		0.056*** (3.11)	0.036** (1.99)
Grade 10		0.063**** (3.61)	0.057*** (3.20)
Grade 11		-0.007 (-0.42)	-0.017 (-0.96)
12th grade - no diploma		0.092**** (5.59)	0.067**** (4.01)
Regular high school diploma		-0.022* (-1.69)	-0.029** (-2.13)
GED or alternative credential		-0.096**** (-6.42)	-0.063**** (-4.13)
Some college, but less than 1 year		0.049**** (3.50)	0.030** (2.12)
1 or more years college credit, no degree		0.119**** (8.81)	0.095**** (6.92)
Associate's degree		-0.001 (-0.04)	-0.046*** (-3.24)
Bachelor's degree		0.210**** (15.66)	0.072**** (5.28)
Master's degree		0.131****	-0.078****

Independent Variables	Specification		
	Model A	Model B	Model C
		(9.32)	(-5.40)
Professional degree beyond a bachelor's degree		1.230****	0.965****
		(82.25)	(62.91)
Doctorate degree		0.655****	0.391****
		(38.03)	(22.27)
NRCS region		.	.
Northeast		-0.112****	-0.038****
		(-28.17)	(-7.86)
Southeast		0.044****	0.087****
		(10.90)	(19.60)
West		0.136****	0.118****
		(33.98)	(25.92)
NAICS sector		.	.
Extractive Industries		-2.746****	-2.798****
		(-104.26)	(-105.23)
Utilities		-3.753****	-3.799****
		(-100.65)	(-100.87)
Construction		-0.563****	-0.574****
		(-71.64)	(-71.73)
Manufacturing-NAICS 31		-2.567****	-2.557****
		(-158.18)	(-156.14)
Manufacturing-NAICS 32		-3.003****	-3.017****
		(-202.66)	(-201.64)
Manufacturing-NAICS 33		-3.123****	-3.143****
		(-271.77)	(-270.00)
Wholesale Trade		-2.079****	-2.111****
		(-183.36)	(-183.66)
Retail Trade-NAICS 44		-2.187****	-2.175****
		(-230.37)	(-225.61)
Retail Trade-NAICS 45		-1.654****	-1.618****
		(-164.43)	(-158.24)
Transportation		-1.303****	-1.285****
		(-135.43)	(-131.44)
Warehousing		-2.299****	-2.270****
		(-115.39)	(-112.91)
Information		-1.967****	-2.010****
		(-159.96)	(-160.47)
Finance & Insurance		-2.417****	-2.498****
		(-227.16)	(-230.90)
Real Estate		-0.593****	-0.636****
		(-60.42)	(-63.53)
Profess., Tech. & Sci. Services		-1.180****	-1.217****
		(-142.73)	(-144.28)
Management of Companies		-3.462****	-3.543****
		(-45.30)	(-46.03)
Admin. & Supportive Services		-0.847****	-0.804****
		(-98.04)	(-91.35)
Educational Services		-2.423****	-2.392****
		(-209.96)	(-203.53)

Independent Variables	Specification		
	Model A	Model B	Model C
Medical Services	-2.564****	-2.572****	-2.572****
	(-278.32)	(-273.99)	(-273.99)
Social Assistance Services	-1.006****	-0.934****	-0.934****
	(-94.83)	(-86.33)	(-86.33)
Arts & Entertainment	-1.634****	-1.590****	-1.590****
	(-188.45)	(-180.00)	(-180.00)
Other Services	-0.418****	-0.387****	-0.387****
	(-51.18)	(-46.46)	(-46.46)
Public Administration	.	.	.
Interest and dividend income (log)			0.031****
			(91.68)
Home is owned free and clear			0.079****
			(20.54)
Property value			0.000****
			(93.22)
Married, spouse present			0.189****
			(52.30)
Number of children in family			0.078****
			(52.81)
Number of workers in family			-0.066****
			(-29.53)
Lived in same house 1 year ago			0.098****
			(20.48)
Foreign born			0.266****
			(32.93)
Years in U.S., if immigrant			0.003****
			(11.82)
Speaks English well or very well			0.181****
			(36.53)
Veteran			-0.336****
			(-47.74)
Statewide general population			0.000****
			(17.90)
Statewide unemployment rate			-0.068****
			(-30.96)
Statewide government FTEs			-0.000****
			(-9.78)
Statewide per capita income (log)			-0.228****
			(-16.63)
Constant	-1.812****	-4.238****	-0.953****
	(-533.85)	(-177.25)	(-6.34)
Pseudo R-squared	0.010	0.149	0.159
Number of Obs.	6046247	6046246	5902242

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.



Table 4.4A. Business Formation Regressions, All Plaintiff NAICS, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	-0.929**** (-50.47)	-0.392**** (-19.18)	-0.351**** (-14.76)
WBE	-0.167**** (-10.56)	-0.034* (-1.96)	-0.029 (-1.63)
Year	0.013** (2.57)	-0.006 (-1.15)	-0.015* (-1.70)
Age		0.164**** (27.85)	0.136**** (20.78)
Age squared		-0.001**** (-17.94)	-0.001**** (-12.66)
Schooling			
Nursery school/preschool		-0.387** (-2.01)	-0.499** (-2.55)
Grade 9		-0.014 (-0.07)	-0.036 (-0.17)
Grade 10		-0.282 (-1.34)	-0.347 (-1.62)
Grade 11		-0.303 (-1.54)	-0.375* (-1.87)
12th grade - no diploma		0.127 (0.74)	-0.019 (-0.11)
Regular high school diploma		-0.015 (-0.11)	-0.097 (-0.67)
GED or alternative credential		-0.048 (-0.31)	-0.091 (-0.58)
Some college, but less than 1 year		0.256* (1.76)	0.177 (1.21)
1 or more years college credit, no degree		0.482**** (3.38)	0.382*** (2.67)
Associate's degree		0.306** (2.13)	0.213 (1.47)
Bachelor's degree		0.632**** (4.47)	0.449*** (3.15)
Master's degree		0.778**** (5.49)	0.564**** (3.96)
Professional degree beyond a bachelor's degree		1.159**** (7.88)	0.902**** (6.08)
Doctorate degree		1.165**** (7.90)	0.941**** (6.34)
NRCS region			
Northeast		-0.018 (-0.82)	0.117**** (4.31)
Southeast		0.083**** (3.61)	0.110**** (4.57)
West		0.460**** (20.58)	0.434**** (17.56)
Admin. & Supportive Services		-1.442****	-1.389****

Independent Variables	Specification		
	Model A	Model B	Model C
		(-73.55)	(-69.89)
Interest and dividend income (log)			0.017****
			(10.77)
Home is owned free and clear			-0.078****
			(-3.49)
Property value			0.000****
			(15.95)
Married, spouse present			0.137****
			(6.54)
Number of children in family			0.069****
			(7.82)
Number of workers in family			-0.035**
			(-2.53)
Lived in same house 1 year ago			0.049**
			(1.98)
Foreign born			-0.020
			(-0.44)
Years in U.S., if immigrant			0.003**
			(1.97)
Speaks English well or very well			0.049*
			(1.69)
Veteran			-0.402****
			(-11.44)
Statewide general population			0.000****
			(4.72)
Statewide unemployment rate			-0.042****
			(-3.52)
Statewide government FTEs			-0.000**
			(-2.28)
Statewide per capita income (log)			-0.552****
			(-7.55)
Constant	-1.230****	-6.476****	0.234
	(-67.61)	(-33.34)	(0.29)
Pseudo R-squared	0.022	0.185	0.189
Number of Obs.	140113	140113	136711

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.4B. Business Formation Regressions, NAICS 5416, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	-0.539**** (-25.03)	-0.287**** (-12.34)	-0.223**** (-8.28)
WBE	-0.094**** (-5.12)	-0.015 (-0.76)	-0.008 (-0.40)
Year	-0.012** (-2.01)	-0.010* (-1.67)	-0.001 (-0.05)
Age		0.161**** (23.99)	0.141**** (18.73)
Age squared		-0.001**** (-14.92)	-0.001**** (-11.02)
Schooling			
Nursery school/preschool		-0.782*** (-2.73)	-0.876*** (-3.02)
Grade 9		-0.153 (-0.50)	-0.226 (-0.74)
Grade 10		-0.423 (-1.41)	-0.556* (-1.83)
Grade 11		-0.561** (-1.99)	-0.675** (-2.37)
12th grade - no diploma		-0.396* (-1.65)	-0.494** (-2.04)
Regular high school diploma		-0.467** (-2.37)	-0.544**** (-2.75)
GED or alternative credential		-0.315 (-1.49)	-0.394* (-1.85)
Some college, but less than 1 year		-0.225 (-1.13)	-0.289 (-1.45)
1 or more years college credit, no degree		0.020 (0.10)	-0.067 (-0.34)
Associate's degree		-0.230 (-1.17)	-0.299 (-1.51)
Bachelor's degree		0.075 (0.39)	-0.060 (-0.31)
Master's degree		0.236 (1.22)	0.086 (0.44)
Professional degree beyond a bachelor's degree		0.652*** (3.29)	0.462** (2.31)
Doctorate degree		0.655**** (3.30)	0.500** (2.50)
NRCS region			
Northeast		-0.022 (-0.88)	0.148**** (4.85)
Southeast		0.074*** (2.84)	0.083*** (3.06)
West		0.483**** (19.06)	0.471**** (16.95)
Profess., Tech. & Sci. Services			

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			0.014**** (8.55)
Home is owned free and clear			-0.173**** (-6.65)
Property value			0.000**** (12.12)
Married, spouse present			0.086**** (3.57)
Number of children in family			0.069**** (6.94)
Number of workers in family			-0.043**** (-2.73)
Lived in same house 1 year ago			0.028 (1.01)
Foreign born			-0.074 (-1.40)
Years in U.S., if immigrant			0.002 (1.33)
Speaks English well or very well			0.004 (0.13)
Veteran			-0.388**** (-9.97)
Statewide general population			0.000**** (4.97)
Statewide unemployment rate			-0.024* (-1.77)
Statewide government FTEs			-0.000*** (-2.99)
Statewide per capita income (log)			-0.745**** (-9.04)
Constant	-0.738**** (-34.94)	-5.966**** (-24.25)	2.631*** (2.84)
Pseudo R-squared	0.008	0.107	0.113
Number of Obs.	75856	75856	75193

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.4C. Business Formation Regressions, NAICS 561M, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	-0.636**** (-10.22)	-0.419**** (-6.37)	-0.451**** (-5.80)
WBE	0.129** (2.46)	0.096* (1.78)	0.095* (1.70)
Year	-0.022 (-1.35)	-0.025 (-1.49)	-0.098**** (-3.62)
Age		0.161**** (8.98)	0.125**** (6.38)
Age squared		-0.001**** (-6.32)	-0.001**** (-4.08)
Schooling			
Nursery school/preschool		0.088 (0.17)	-0.066 (-0.12)
Grade 9		0.914* (1.72)	0.917* (1.72)
Grade 10		-0.250 (-0.40)	-0.252 (-0.40)
Grade 11		0.615 (1.18)	0.614 (1.18)
12th grade - no diploma		1.025** (2.19)	0.662 (1.37)
Regular high school diploma		0.720* (1.68)	0.622 (1.45)
GED or alternative credential		0.534 (1.19)	0.472 (1.04)
Some college, but less than 1 year		1.134*** (2.63)	1.006** (2.32)
1 or more years college credit, no degree		1.222*** (2.87)	1.070** (2.50)
Associate's degree		1.083** (2.52)	0.922** (2.13)
Bachelor's degree		1.468**** (3.46)	1.159*** (2.71)
Master's degree		1.501**** (3.50)	1.075** (2.49)
Professional degree beyond a bachelor's degree		1.611**** (3.49)	1.142** (2.45)
Doctorate degree		1.460*** (2.96)	0.926* (1.85)
NRCS region			
Northeast		-0.040 (-0.57)	-0.009 (-0.10)
Southeast		0.164** (2.30)	0.245*** (3.21)
West		0.473**** (6.83)	0.442**** (5.67)
Admin. & Supportive Services			

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			0.026**** (4.86)
Home is owned free and clear			-0.011 (-0.16)
Property value			0.000**** (6.75)
Married, spouse present			0.280**** (4.38)
Number of children in family			0.085*** (3.06)
Number of workers in family			-0.004 (-0.10)
Lived in same house 1 year ago			-0.108 (-1.36)
Foreign born			0.005 (0.04)
Years in U.S., if immigrant			-0.001 (-0.29)
Speaks English well or very well			0.153* (1.66)
Veteran			-0.599**** (-5.01)
Statewide general population			-0.000 (-0.75)
Statewide unemployment rate			-0.114**** (-3.00)
Statewide government FTEs			0.000 (1.29)
Statewide per capita income (log)			-0.095 (-0.40)
Constant	-1.696**** (-28.23)	-7.610**** (-13.04)	-5.038* (-1.92)
Pseudo R-squared	0.014	0.084	0.099
Number of Obs.	16317	16317	15946

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.4D. Business Formation Regressions, NAICS 5613, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	-0.937**** (-15.88)	-0.689**** (-11.23)	-0.675**** (-9.32)
WBE	-0.094* (-1.73)	-0.217**** (-3.90)	-0.231**** (-4.01)
Year	0.032* (1.93)	0.015 (0.91)	-0.055** (-1.97)
Age		0.178**** (10.17)	0.140**** (7.29)
Age squared		-0.001**** (-7.40)	-0.001**** (-5.26)
Schooling			
Nursery school/preschool		0.115 (0.33)	-0.089 (-0.25)
Grade 9		-0.297 (-0.68)	-0.280 (-0.64)
Grade 10		-0.051 (-0.13)	-0.029 (-0.07)
Grade 11		-0.316 (-0.83)	-0.318 (-0.81)
12th grade - no diploma		0.281 (0.81)	0.228 (0.65)
Regular high school diploma		-0.101 (-0.35)	-0.170 (-0.57)
GED or alternative credential		-0.296 (-0.92)	-0.246 (-0.75)
Some college, but less than 1 year		0.044 (0.15)	-0.040 (-0.13)
1 or more years college credit, no degree		0.345 (1.19)	0.259 (0.88)
Associate's degree		0.517* (1.77)	0.406 (1.37)
Bachelor's degree		0.974**** (3.41)	0.633** (2.19)
Master's degree		1.203**** (4.15)	0.797*** (2.71)
Professional degree beyond a bachelor's degree		1.357**** (4.28)	0.810** (2.51)
Doctorate degree		1.149*** (3.14)	0.771** (2.08)
NRCS region			
Northeast		0.030 (0.45)	-0.004 (-0.05)
Southeast		0.068 (0.98)	0.197*** (2.61)
West		0.204*** (2.95)	0.030 (0.36)
Admin. & Supportive Services			

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			0.025**** (4.47)
Home is owned free and clear			0.107 (1.63)
Property value			0.000**** (12.32)
Married, spouse present			0.149** (2.44)
Number of children in family			0.131**** (5.05)
Number of workers in family			-0.012 (-0.29)
Lived in same house 1 year ago			0.303**** (3.68)
Foreign born			0.157 (1.10)
Years in U.S., if immigrant			0.005 (1.13)
Speaks English well or very well			0.096 (1.09)
Veteran			-0.348*** (-2.95)
Statewide general population			-0.000 (-0.48)
Statewide unemployment rate			-0.089** (-2.27)
Statewide government FTEs			0.000 (1.49)
Statewide per capita income (log)			0.285 (1.23)
Constant	-2.884**** (-46.59)	-8.362**** (-17.26)	-10.567**** (-4.12)
Pseudo R-squared	0.020	0.095	0.121
Number of Obs.	47940	47940	45572

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.



Table 4.4E. Business Formation Regressions, All Plaintiff NAICS, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	-1.215**** (-39.53)	-0.439**** (-13.05)	-0.333**** (-9.54)
Hispanic	-1.018**** (-36.18)	-0.292**** (-9.26)	-0.322**** (-9.07)
Asian Pacific	-0.540**** (-14.62)	-0.493**** (-12.30)	-0.561**** (-12.43)
Subcontinent Asian	-0.772**** (-15.04)	-0.724**** (-13.37)	-0.822**** (-13.68)
Alaska Native	-0.572**** (-5.02)	0.021 (0.17)	0.121 (0.96)
Other race	-0.409** (-2.56)	0.085 (0.48)	0.104 (0.59)
Two or more races	-0.445**** (-8.40)	-0.017 (-0.29)	0.028 (0.48)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	-0.167**** (-10.55)	-0.033* (-1.91)	-0.026 (-1.45)
Year	0.011** (2.27)	-0.006 (-1.16)	-0.015* (-1.68)
Age		0.165**** (28.00)	0.136**** (20.75)
Age squared		-0.001**** (-18.11)	-0.001**** (-12.64)
Schooling		.	.
Nursery school/preschool		-0.413** (-2.15)	-0.523**** (-2.67)
Grade 9		-0.028 (-0.13)	-0.051 (-0.24)
Grade 10		-0.269 (-1.27)	-0.322 (-1.50)
Grade 11		-0.289 (-1.47)	-0.356* (-1.78)
12th grade - no diploma		0.142 (0.83)	0.001 (0.00)
Regular high school diploma		0.008 (0.06)	-0.066 (-0.46)
GED or alternative credential		-0.032 (-0.20)	-0.064 (-0.41)
Some college, but less than 1 year		0.280* (1.92)	0.210 (1.43)
1 or more years college credit, no degree		0.505**** (3.54)	0.414*** (2.88)
Associate's degree		0.332** (2.30)	0.247* (1.70)
Bachelor's degree		0.667**** (4.71)	0.493**** (3.45)
Master's degree		0.824****	0.615****

Independent Variables	Specification		
	Model A	Model B	Model C
		(5.80)	(4.30)
Professional degree beyond a bachelor's degree		1.201****	0.949****
		(8.15)	(6.38)
Doctorate degree		1.210****	0.984****
		(8.18)	(6.60)
NRCS region			
Northeast		-0.013	0.117****
		(-0.59)	(4.31)
Southeast		0.084****	0.107****
		(3.65)	(4.41)
West		0.456****	0.431****
		(20.25)	(17.39)
Admin. & Supportive Services		-1.444****	-1.394****
		(-73.46)	(-69.99)
Interest and dividend income (log)			0.017****
			(11.00)
Home is owned free and clear			-0.072***
			(-3.19)
Property value			0.000****
			(15.98)
Married, spouse present			0.148****
			(7.02)
Number of children in family			0.067****
			(7.60)
Number of workers in family			-0.037***
			(-2.71)
Lived in same house 1 year ago			0.046*
			(1.85)
Foreign born			0.059
			(1.25)
Years in U.S., if immigrant			0.003*
			(1.77)
Speaks English well or very well			0.081***
			(2.71)
Veteran			-0.409****
			(-11.64)
Statewide general population			0.000****
			(4.64)
Statewide unemployment rate			-0.041****
			(-3.47)
Statewide government FTEs			-0.000**
			(-2.17)
Statewide per capita income (log)			-0.549****
			(-7.47)
Constant	-1.225****	-6.527****	0.159
	(-67.36)	(-33.55)	(0.19)
Pseudo R-squared	0.025	0.186	0.190
Number of Obs.	140113	140113	136711

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.4F. Business Formation Regressions, NAICS 5416, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	-0.419**** (-11.02)	-0.189**** (-4.68)	-0.107** (-2.57)
Hispanic	-0.509**** (-15.09)	-0.165**** (-4.52)	-0.183**** (-4.50)
Asian Pacific	-0.588**** (-14.23)	-0.475**** (-10.75)	-0.492**** (-9.91)
Subcontinent Asian	-1.025**** (-18.44)	-0.734**** (-12.62)	-0.797**** (-12.31)
Alaska Native	-0.015 (-0.10)	0.111 (0.70)	0.196 (1.23)
Other race	-0.356* (-1.77)	-0.039 (-0.18)	-0.013 (-0.06)
Two or more races	-0.220**** (-3.59)	0.083 (1.25)	0.117* (1.76)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	-0.094**** (-5.12)	-0.014 (-0.73)	-0.004 (-0.20)
Year	-0.011* (-1.95)	-0.010 (-1.63)	-0.001 (-0.08)
Age		0.162**** (24.11)	0.139**** (18.57)
Age squared		-0.001**** (-15.10)	-0.001**** (-10.91)
Schooling		.	.
Nursery school/preschool		-0.816*** (-2.85)	-0.906*** (-3.12)
Grade 9		-0.189 (-0.62)	-0.262 (-0.86)
Grade 10		-0.430 (-1.43)	-0.551* (-1.81)
Grade 11		-0.580** (-2.05)	-0.673** (-2.36)
12th grade - no diploma		-0.390 (-1.62)	-0.481** (-1.99)
Regular high school diploma		-0.459** (-2.32)	-0.520*** (-2.62)
GED or alternative credential		-0.321 (-1.51)	-0.378* (-1.78)
Some college, but less than 1 year		-0.217 (-1.09)	-0.264 (-1.32)
1 or more years college credit, no degree		0.029 (0.15)	-0.043 (-0.22)
Associate's degree		-0.218 (-1.10)	-0.272 (-1.37)
Bachelor's degree		0.105 (0.54)	-0.018 (-0.09)
Master's degree		0.281	0.134

Independent Variables	Specification		
	Model A	Model B	Model C
		(1.44)	(0.69)
Professional degree beyond a bachelor's degree		0.691****	0.506**
		(3.47)	(2.52)
Doctorate degree		0.701****	0.539***
		(3.52)	(2.69)
NRCS region		.	.
Northeast		-0.017	0.148****
		(-0.66)	(4.83)
Southeast		0.068***	0.075***
		(2.62)	(2.76)
West		0.489****	0.474****
		(19.16)	(17.00)
Profess., Tech. & Sci. Services		.	.
Interest and dividend income (log)			0.015****
			(8.90)
Home is owned free and clear			-0.163****
			(-6.27)
Property value			0.000****
			(12.20)
Married, spouse present			0.105****
			(4.32)
Number of children in family			0.067****
			(6.69)
Number of workers in family			-0.047***
			(-3.00)
Lived in same house 1 year ago			0.024
			(0.84)
Foreign born			0.034
			(0.64)
Years in U.S., if immigrant			0.002
			(1.20)
Speaks English well or very well			0.050
			(1.47)
Veteran			-0.400****
			(-10.27)
Statewide general population			0.000****
			(4.95)
Statewide unemployment rate			-0.024*
			(-1.78)
Statewide government FTEs			-0.000***
			(-2.95)
Statewide per capita income (log)			-0.736****
			(-8.91)
Constant	-0.739****	-6.008****	2.518***
	(-34.97)	(-24.37)	(2.71)
Pseudo R-squared	0.009	0.108	0.115
Number of Obs.	75856	75856	75193

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.4G. Business Formation Regressions, NAICS 561M, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	-0.774**** (-7.60)	-0.552**** (-5.25)	-0.388**** (-3.52)
Hispanic	-0.834**** (-9.24)	-0.498**** (-5.15)	-0.638**** (-5.69)
Asian Pacific	-0.211* (-1.68)	-0.280** (-2.14)	-0.619**** (-4.00)
Subcontinent Asian	-0.426* (-1.83)	-0.391 (-1.63)	-0.811*** (-3.13)
Alaska Native	0.257 (0.83)	0.267 (0.83)	0.291 (0.89)
Other race	0.571 (1.32)	0.685 (1.49)	0.685 (1.47)
Two or more races	-0.314 (-1.59)	-0.098 (-0.48)	-0.067 (-0.33)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.129** (2.46)	0.097* (1.79)	0.095* (1.70)
Year	-0.021 (-1.31)	-0.024 (-1.44)	-0.098**** (-3.63)
Age		0.161**** (8.97)	0.125**** (6.37)
Age squared		-0.001**** (-6.32)	-0.001**** (-4.06)
Schooling		.	.
Nursery school/preschool		0.119 (0.22)	-0.048 (-0.09)
Grade 9		0.928* (1.75)	0.902* (1.69)
Grade 10		-0.256 (-0.41)	-0.296 (-0.47)
Grade 11		0.618 (1.19)	0.560 (1.07)
12th grade - no diploma		1.017** (2.17)	0.616 (1.28)
Regular high school diploma		0.705* (1.65)	0.563 (1.31)
GED or alternative credential		0.512 (1.14)	0.410 (0.90)
Some college, but less than 1 year		1.118*** (2.59)	0.945** (2.18)
1 or more years college credit, no degree		1.200*** (2.81)	1.002** (2.33)
Associate's degree		1.059** (2.46)	0.852** (1.97)
Bachelor's degree		1.442**** (3.39)	1.097** (2.56)
Master's degree		1.473****	1.012**

Independent Variables	Specification		
	Model A	Model B	Model C
	(3.43)		(2.33)
Professional degree beyond a bachelor's degree		1.578****	1.077**
		(3.41)	(2.30)
Doctorate degree		1.419***	0.873*
		(2.87)	(1.74)
NRCS region		.	.
Northeast		-0.043	-0.013
		(-0.60)	(-0.15)
Southeast		0.173**	0.240***
		(2.42)	(3.14)
West		0.456****	0.435****
		(6.54)	(5.55)
Admin. & Supportive Services		.	.
Interest and dividend income (log)			0.026****
			(4.83)
Home is owned free and clear			-0.004
			(-0.05)
Property value			0.000****
			(6.69)
Married, spouse present			0.282****
			(4.39)
Number of children in family			0.085***
			(3.07)
Number of workers in family			-0.002
			(-0.05)
Lived in same house 1 year ago			-0.109
			(-1.36)
Foreign born			0.045
			(0.30)
Years in U.S., if immigrant			-0.002
			(-0.41)
Speaks English well or very well			0.229**
			(2.38)
Veteran			-0.609****
			(-5.09)
Statewide general population			-0.000
			(-0.62)
Statewide unemployment rate			-0.116****
			(-3.07)
Statewide government FTEs			0.000
			(1.22)
Statewide per capita income (log)			-0.099
			(-0.42)
Constant	-1.698****	-7.588****	-4.920*
	(-28.24)	(-12.99)	(-1.87)
Pseudo R-squared	0.016	0.086	0.101
Number of Obs.	16317	16317	15946

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.4H. Business Formation Regressions, NAICS 5613, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	-1.174**** (-13.99)	-0.902**** (-10.45)	-0.778**** (-8.42)
Hispanic	-0.969**** (-11.66)	-0.582**** (-6.53)	-0.624**** (-5.88)
Asian Pacific	-0.577**** (-4.05)	-0.740**** (-5.09)	-0.937**** (-5.72)
Subcontinent Asian	-0.112 (-0.63)	-0.344* (-1.89)	-0.543*** (-2.66)
Alaska Native	-0.518* (-1.75)	-0.213 (-0.71)	-0.047 (-0.15)
Other race	0.052 (0.13)	0.205 (0.51)	0.118 (0.28)
Two or more races	-0.579*** (-3.29)	-0.348* (-1.94)	-0.298 (-1.61)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	-0.094* (-1.73)	-0.218**** (-3.92)	-0.232**** (-4.02)
Year	0.030* (1.85)	0.014 (0.84)	-0.054* (-1.93)
Age		0.179**** (10.18)	0.140**** (7.29)
Age squared		-0.001**** (-7.39)	-0.001**** (-5.25)
Schooling		.	.
Nursery school/preschool		0.085 (0.24)	-0.112 (-0.32)
Grade 9		-0.296 (-0.67)	-0.286 (-0.65)
Grade 10		-0.012 (-0.03)	-0.002 (-0.01)
Grade 11		-0.257 (-0.68)	-0.293 (-0.74)
12th grade - no diploma		0.318 (0.92)	0.248 (0.71)
Regular high school diploma		-0.056 (-0.19)	-0.145 (-0.49)
GED or alternative credential		-0.251 (-0.78)	-0.225 (-0.68)
Some college, but less than 1 year		0.089 (0.29)	-0.017 (-0.06)
1 or more years college credit, no degree		0.389 (1.34)	0.284 (0.96)
Associate's degree		0.556* (1.90)	0.430 (1.45)
Bachelor's degree		1.007**** (3.51)	0.663** (2.28)
Master's degree		1.229****	0.824****

Independent Variables	Specification		
	Model A	Model B	Model C
		(4.22)	(2.78)
Professional degree beyond a bachelor's degree		1.381****	0.837***
		(4.34)	(2.58)
Doctorate degree		1.176***	0.800**
		(3.20)	(2.15)
NRCS region			
Northeast		0.037	-0.002
		(0.55)	(-0.03)
Southeast		0.090	0.206***
		(1.30)	(2.71)
West		0.183***	0.025
		(2.62)	(0.31)
Admin. & Supportive Services			
Interest and dividend income (log)			0.025****
			(4.43)
Home is owned free and clear			0.105
			(1.60)
Property value			0.000****
			(12.24)
Married, spouse present			0.143**
			(2.33)
Number of children in family			0.131****
			(5.05)
Number of workers in family			-0.009
			(-0.23)
Lived in same house 1 year ago			0.305****
			(3.70)
Foreign born			0.183
			(1.27)
Years in U.S., if immigrant			0.005
			(1.14)
Speaks English well or very well			0.079
			(0.86)
Veteran			-0.347***
			(-2.94)
Statewide general population			-0.000
			(-0.55)
Statewide unemployment rate			-0.085**
			(-2.16)
Statewide government FTEs			0.000
			(1.58)
Statewide per capita income (log)			0.284
			(1.22)
Constant	-2.880****	-8.415****	-10.623****
	(-46.55)	(-17.33)	(-4.14)
Pseudo R-squared	0.023	0.096	0.122
Number of Obs.	47940	47940	45572

Source and Notes: See Table 4.3. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.



Table 4.5A. Annual Business Owner Earnings Regressions, Construction, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.827**** (-16.56)	0.842**** (-13.92)	0.799**** (-14.63)
WBE	0.544**** (-25.22)	0.532**** (-26.23)	0.532**** (-26.64)
Year	1.032**** (8.85)	1.034**** (9.55)	1.002 (0.31)
Age		1.121**** (33.73)	1.082**** (22.27)
Age squared		0.999**** (-31.25)	0.999**** (-22.61)
Schooling		.	.
Nursery school/preschool		1.168**** (3.75)	1.130*** (2.99)
Grade 9		1.033 (0.68)	1.058 (1.22)
Grade 10		0.927 (-1.62)	0.976 (-0.52)
Grade 11		0.961 (-0.86)	1.023 (0.51)
12th grade - no diploma		1.094** (1.99)	1.097** (2.07)
Regular high school diploma		1.143**** (3.59)	1.171**** (4.28)
GED or alternative credential		0.921** (-2.01)	0.989 (-0.26)
Some college, but less than 1 year		1.041 (0.99)	1.059 (1.44)
1 or more years college credit, no degree		1.116*** (2.85)	1.138**** (3.39)
Associate's degree		1.067 (1.57)	1.060 (1.44)
Bachelor's degree		1.216**** (4.93)	1.126*** (3.01)
Master's degree		1.335**** (5.49)	1.188**** (3.30)
Professional degree beyond a bachelor's degree		1.291*** (2.71)	1.131 (1.32)
Doctorate degree		0.917 (-0.51)	0.869 (-0.85)
NRC'S region		.	.
Northeast		1.046*** (3.28)	1.025 (1.48)
Southeast		0.925**** (-5.60)	0.998 (-0.14)
West		1.085**** (5.71)	1.011 (0.68)
Construction		.	.

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			1.006**** (4.64)
Home is owned free and clear			1.024* (1.83)
Property value			1.000**** (23.98)
Married, spouse present			1.357**** (25.14)
Number of children in family			1.042**** (8.64)
Number of workers in family			0.928**** (-9.80)
Lived in same house 1 year ago			1.089**** (5.04)
Foreign born			1.238**** (7.29)
Years in U.S., if immigrant			1.005**** (4.67)
Speaks English well or very well			1.104**** (6.10)
Veteran			0.892**** (-5.51)
Statewide general population			1.000* (1.79)
Statewide unemployment rate			0.968**** (-4.18)
Statewide government FTEs			1.000 (-0.82)
Statewide per capita income (log)			1.333**** (6.11)
Constant	18836.117**** (803.52)	1274.946**** (87.31)	109.364**** (9.11)
Adj. R-squared	0.011	0.034	0.062
Number of Obs.	77023	77023	76687

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.5B. Annual Business Owner Earnings Regressions, AECRS, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.700**** (-5.73)	0.761**** (-4.45)	0.722**** (-4.64)
WBE	0.540**** (-10.38)	0.571**** (-9.67)	0.554**** (-10.20)
Year	0.990 (-0.61)	0.997 (-0.20)	0.999 (-0.04)
Age		1.206**** (11.49)	1.158**** (8.20)
Age squared		0.998**** (-9.46)	0.999**** (-7.11)
Schooling		.	.
Nursery school/preschool		2.643 (1.13)	2.725 (1.17)
Grade 9		1.541 (0.49)	1.653 (0.57)
Grade 10		1.490 (0.47)	1.497 (0.48)
Grade 11		0.901 (-0.13)	0.834 (-0.23)
12th grade - no diploma		2.863 (1.38)	2.699 (1.31)
Regular high school diploma		1.852 (0.94)	1.883 (0.98)
GED or alternative credential		1.414 (0.50)	1.499 (0.60)
Some college, but less than 1 year		1.827 (0.92)	1.881 (0.97)
1 or more years college credit, no degree		1.640 (0.76)	1.677 (0.80)
Associate's degree		1.431 (0.55)	1.443 (0.57)
Bachelor's degree		1.962 (1.04)	1.819 (0.93)
Master's degree		1.932 (1.02)	1.722 (0.85)
Professional degree beyond a bachelor's degree		2.443 (1.36)	2.102 (1.14)
Doctorate degree		2.594 (1.43)	2.235 (1.22)
NRCS region		.	.
Northeast		1.081 (1.20)	0.995 (-0.06)
Southeast		1.041 (0.60)	1.090 (1.21)
West		1.183**** (2.68)	1.037 (0.52)
Profess., Tech. & Sci. Services		.	.

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			0.998 (-0.49)
Home is owned free and clear			1.046 (0.66)
Property value			1.000**** (6.73)
Married, spouse present			1.272**** (3.96)
Number of children in family			1.051** (2.07)
Number of workers in family			0.918** (-2.24)
Lived in same house 1 year ago			0.986 (-0.18)
Foreign born			1.075 (0.52)
Years in U.S., if immigrant			1.009* (1.75)
Speaks English well or very well			1.242** (2.46)
Veteran			0.670**** (-4.34)
Statewide general population			1.000 (0.27)
Statewide unemployment rate			1.039 (1.14)
Statewide government FTEs			1.000 (-0.08)
Statewide per capita income (log)			1.567** (2.15)
Constant	21598.654**** (181.89)	74.188**** (5.82)	0.908 (-0.04)
Adj. R-squared	0.019	0.081	0.097
Number of Obs.	6266	6266	6256

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.5C. Annual Business Owner Earnings Regressions, Professional Services ex AECRS, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.642**** (-32.66)	0.763**** (-19.71)	0.730**** (-20.08)
WBE	0.646**** (-34.68)	0.639**** (-37.19)	0.646**** (-36.24)
Year	1.015**** (3.88)	1.017**** (4.67)	1.004 (0.63)
Age		1.176**** (48.71)	1.135**** (35.02)
Age squared		0.998**** (-41.27)	0.999**** (-32.33)
Schooling		.	.
Nursery school/preschool		1.041 (0.67)	1.017 (0.29)
Grade 9		0.881* (-1.79)	0.877* (-1.87)
Grade 10		0.648**** (-6.16)	0.668**** (-5.76)
Grade 11		0.685**** (-5.58)	0.720**** (-4.88)
12th grade - no diploma		0.999 (-0.01)	1.023 (0.34)
Regular high school diploma		1.004 (0.07)	1.042 (0.78)
GED or alternative credential		0.857** (-2.55)	0.907 (-1.62)
Some college, but less than 1 year		0.889** (-2.09)	0.945 (-1.00)
1 or more years college credit, no degree		0.938 (-1.19)	0.984 (-0.29)
Associate's degree		0.927 (-1.38)	0.950 (-0.92)
Bachelor's degree		1.160*** (2.79)	1.104* (1.86)
Master's degree		1.237**** (3.88)	1.120** (2.08)
Professional degree beyond a bachelor's degree		2.433**** (16.00)	2.141**** (13.71)
Doctorate degree		1.598**** (7.50)	1.437**** (5.84)
NRCS region		.	.
Northeast		1.083**** (5.24)	1.036* (1.89)
Southeast		0.981 (-1.26)	1.031* (1.85)
West		1.165**** (10.40)	1.023 (1.35)
Management of Companies		0.525****	0.517****

Independent Variables	Specification		
	Model A	Model B	Model C
		(-6.75)	(-7.00)
Admin. & Supportive Services		0.787****	0.837****
		(-18.15)	(-13.59)
Interest and dividend income (log)			1.004****
			(3.54)
Home is owned free and clear			0.995
			(-0.38)
Property value			1.000****
			(30.56)
Married, spouse present			1.282****
			(18.97)
Number of children in family			1.020****
			(3.59)
Number of workers in family			0.897****
			(-12.66)
Lived in same house 1 year ago			1.031*
			(1.84)
Foreign born			1.315****
			(9.28)
Years in U.S., if immigrant			1.008****
			(7.88)
Speaks English well or very well			1.067****
			(3.69)
Veteran			0.883****
			(-4.66)
Statewide general population			1.000
			(0.85)
Statewide unemployment rate			1.005
			(0.58)
Statewide government FTEs			1.000
			(1.64)
Statewide per capita income (log)			1.297****
			(5.20)
Constant	19759.534****	318.078****	31.628****
	(695.78)	(64.05)	(6.31)
Adj. R-squared	0.016	0.113	0.129
Number of Obs.	102486	102486	101890

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.5D. Annual Business Owner Earnings Regressions, General Services, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.693**** (-51.03)	0.801**** (-30.84)	0.749**** (-35.12)
WBE	0.565**** (-85.84)	0.659**** (-63.75)	0.663**** (-62.51)
Year	1.023**** (11.20)	1.023**** (12.05)	1.008**** (2.71)
Age		1.179**** (100.82)	1.131**** (66.51)
Age squared		0.998**** (-86.76)	0.999**** (-62.58)
Schooling		.	.
Nursery school/preschool		1.007 (0.22)	1.004 (0.12)
Grade 9		0.887*** (-3.16)	0.887*** (-3.17)
Grade 10		0.783**** (-6.60)	0.781**** (-6.74)
Grade 11		0.784**** (-6.84)	0.784**** (-6.86)
12th grade - no diploma		1.088** (2.42)	1.079** (2.19)
Regular high school diploma		1.142**** (4.74)	1.169**** (5.61)
GED or alternative credential		0.963 (-1.21)	1.006 (0.18)
Some college, but less than 1 year		0.985 (-0.50)	1.046 (1.52)
1 or more years college credit, no degree		1.006 (0.22)	1.055* (1.91)
Associate's degree		0.992 (-0.29)	0.996 (-0.13)
Bachelor's degree		1.130**** (4.36)	1.064** (2.24)
Master's degree		1.151**** (4.89)	1.042 (1.45)
Professional degree beyond a bachelor's degree		2.678**** (32.73)	2.262**** (27.13)
Doctorate degree		1.679**** (15.94)	1.463**** (11.75)
NRCS region		.	.
Northeast		1.026**** (3.39)	0.976*** (-2.61)
Southeast		0.991 (-1.13)	1.039**** (4.48)
West		1.153**** (18.72)	1.007 (0.83)
Warehousing		0.642****	0.671****

Independent Variables	Specification		
	Model A	Model B	Model C
		(-13.92)	(-12.63)
Information		0.564****	0.553****
		(-30.39)	(-31.62)
Finance & Insurance		0.860****	0.818****
		(-8.88)	(-11.91)
Real Estate		1.229****	1.160****
		(12.95)	(9.40)
Profess., Tech. & Sci. Services		0.885****	0.863****
		(-9.06)	(-10.99)
Management of Companies		0.470****	0.450****
		(-7.94)	(-8.48)
Admin. & Supportive Services		0.662****	0.680****
		(-29.69)	(-27.99)
Educational Services		0.332****	0.351****
		(-67.36)	(-63.63)
Medical Services		0.665****	0.670****
		(-26.78)	(-26.48)
Social Assistance Services		0.596****	0.620****
		(-31.20)	(-28.93)
Arts & Entertainment		0.577****	0.591****
		(-38.41)	(-36.93)
Other Services		0.667****	0.680****
		(-31.41)	(-30.19)
Interest and dividend income (log)			1.000
			(-0.47)
Home is owned free and clear			1.028****
			(3.84)
Property value			1.000****
			(56.85)
Married, spouse present			1.245****
			(32.18)
Number of children in family			0.999
			(-0.42)
Number of workers in family			0.891****
			(-25.97)
Lived in same house 1 year ago			1.014
			(1.55)
Foreign born			1.282****
			(16.28)
Years in U.S., if immigrant			1.006****
			(12.00)
Speaks English well or very well			1.096****
			(10.16)
Veteran			0.911****
			(-6.46)
Statewide general population			1.000
			(0.17)
Statewide unemployment rate			1.005
			(1.21)
Statewide government FTEs			1.000****
			(3.89)



Independent Variables	Specification		
	Model A	Model B	Model C
Statewide per capita income (log)			1.376**** (12.23)
Constant	16664.346**** (1268.20)	354.662**** (126.81)	24.732**** (11.22)
Adj. R-squared	0.020	0.128	0.130
Number of Obs.	371402	371402	366905

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.5E. Annual Business Owner Earnings Regressions, Goods, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.808**** (-13.04)	0.790**** (-14.07)	0.669**** (-20.23)
WBE	0.562**** (-37.12)	0.578**** (-35.19)	0.585**** (-34.52)
Year	1.014**** (2.98)	1.021**** (4.77)	1.010 (1.48)
Age		1.176**** (40.91)	1.126**** (26.77)
Age squared		0.998**** (-34.29)	0.999**** (-23.70)
Schooling		.	.
Nursery school/preschool		1.167** (2.02)	1.063 (0.81)
Grade 9		0.893 (-1.23)	0.890 (-1.29)
Grade 10		0.757**** (-3.10)	0.781**** (-2.78)
Grade 11		0.762**** (-3.16)	0.811** (-2.46)
12th grade - no diploma		0.834** (-2.24)	0.827** (-2.37)
Regular high school diploma		0.847** (-2.48)	0.893* (-1.71)
GED or alternative credential		0.736**** (-4.11)	0.799** (-3.04)
Some college, but less than 1 year		0.723**** (-4.68)	0.783**** (-3.57)
1 or more years college credit, no degree		0.759**** (-4.10)	0.804**** (-3.28)
Associate's degree		0.703**** (-5.16)	0.720**** (-4.84)
Bachelor's degree		0.848** (-2.48)	0.786**** (-3.66)
Master's degree		0.793**** (-3.33)	0.682**** (-5.54)
Professional degree beyond a bachelor's degree		1.056 (0.61)	0.850* (-1.83)
Doctorate degree		0.957 (-0.45)	0.784** (-2.55)
NRCS region		.	.
Northeast		1.090**** (4.96)	1.064**** (2.99)
Southeast		1.127**** (6.57)	1.149**** (6.98)
West		1.286**** (14.29)	1.091**** (4.38)
Manufacturing-NAICS 32		0.907****	0.899****

Independent Variables	Specification		
	Model A	Model B	Model C
		(-2.96)	(-3.26)
Manufacturing-NAICS 33		0.896****	0.889****
		(-3.70)	(-4.04)
Wholesale Trade		1.444****	1.383****
		(12.02)	(10.77)
Retail Trade-NAICS 44		1.178****	1.172****
		(5.82)	(5.71)
Retail Trade-NAICS 45		1.074**	1.110****
		(2.51)	(3.70)
Interest and dividend income (log)			1.005****
			(3.68)
Home is owned free and clear			1.039**
			(2.12)
Property value			1.000****
			(31.93)
Married, spouse present			1.275****
			(14.87)
Number of children in family			1.016**
			(2.43)
Number of workers in family			0.892****
			(-11.26)
Lived in same house 1 year ago			0.978
			(-1.04)
Foreign born			1.293****
			(6.71)
Years in U.S., if immigrant			1.002
			(1.63)
Speaks English well or very well			1.263****
			(10.83)
Veteran			0.781****
			(-8.02)
Statewide general population			1.000
			(0.55)
Statewide unemployment rate			0.998
			(-0.17)
Statewide government FTEs			1.000
			(1.37)
Statewide per capita income (log)			1.074
			(1.18)
Constant	12104.624****	225.208****	244.846****
	(571.46)	(49.22)	(8.28)
Adj. R-squared	0.018	0.079	0.098
Number of Obs.	75049	75049	74377

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.5F. Annual Business Owner Earnings Regressions, All Industries, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.701**** (-62.91)	0.791**** (-40.54)	0.733**** (-46.19)
WBE	0.538**** (-115.32)	0.629**** (-83.39)	0.634**** (-82.17)
Year	1.020**** (12.38)	1.022**** (14.21)	1.003 (1.17)
Age		1.170**** (116.86)	1.120**** (75.72)
Age squared		0.998**** (-101.03)	0.999**** (-71.32)
Schooling		.	.
Nursery school/preschool		1.104**** (4.06)	1.071**** (2.85)
Grade 9		0.947* (-1.92)	0.949* (-1.86)
Grade 10		0.810**** (-7.56)	0.824**** (-7.02)
Grade 11		0.814**** (-7.62)	0.836**** (-6.71)
12th grade - no diploma		1.049* (1.80)	1.046* (1.70)
Regular high school diploma		1.097**** (4.33)	1.131**** (5.77)
GED or alternative credential		0.916**** (-3.65)	0.970 (-1.29)
Some college, but less than 1 year		0.960* (-1.80)	1.019 (0.83)
1 or more years college credit, no degree		0.991 (-0.40)	1.041* (1.87)
Associate's degree		0.971 (-1.30)	0.980 (-0.90)
Bachelor's degree		1.099**** (4.37)	1.035 (1.61)
Master's degree		1.109**** (4.60)	0.998 (-0.11)
Professional degree beyond a bachelor's degree		2.491**** (37.80)	2.076**** (30.32)
Doctorate degree		1.588**** (17.26)	1.366**** (11.70)
NRCS region		.	.
Northeast		1.015** (2.39)	0.977*** (-3.15)
Southeast		0.980*** (-3.21)	1.034**** (4.94)
West		1.133**** (20.48)	1.003 (0.45)
NAICS sector		.	.

Independent Variables	Specification		
	Model A	Model B	Model C
Extractive Industries		0.752**** (-7.19)	0.728**** (-8.12)
Utilities		0.341**** (-25.67)	0.340**** (-26.10)
Construction		0.837**** (-15.78)	0.845**** (-14.98)
Manufacturing-NAICS 31		0.452**** (-30.89)	0.451**** (-31.34)
Manufacturing-NAICS 32		0.413**** (-40.82)	0.409**** (-41.69)
Manufacturing-NAICS 33		0.407**** (-54.24)	0.403**** (-55.30)
Wholesale Trade		0.659**** (-22.65)	0.637**** (-24.84)
Retail Trade-NAICS 44		0.530**** (-42.74)	0.531**** (-42.90)
Retail Trade-NAICS 45		0.479**** (-47.26)	0.491**** (-45.97)
Transportation		0.886**** (-8.22)	0.893**** (-7.74)
Warehousing		0.571**** (-18.03)	0.606**** (-16.26)
Information		0.503**** (-38.77)	0.501**** (-39.26)
Finance & Insurance		0.773**** (-16.41)	0.736**** (-19.75)
Real Estate		1.111**** (7.21)	1.051**** (3.41)
Profess., Tech. & Sci. Services		0.803**** (-18.31)	0.788**** (-20.00)
Management of Companies		0.424**** (-9.15)	0.407**** (-9.68)
Admin. & Supportive Services		0.586**** (-42.07)	0.609**** (-39.18)
Educational Services		0.300**** (-79.92)	0.322**** (-74.84)
Medical Services		0.611**** (-35.40)	0.620**** (-34.62)
Social Assistance Services		0.539**** (-39.99)	0.566**** (-37.04)
Arts & Entertainment		0.514**** (-51.09)	0.534**** (-48.24)
Other Services		0.596**** (-44.61)	0.615**** (-42.04)
Interest and dividend income (log)			1.002**** (4.66)
Home is owned free and clear			1.031**** (5.09)
Property value			1.000**** (69.79)

Independent Variables	Specification		
	Model A	Model B	Model C
Married, spouse present			1.279**** (44.76)
Number of children in family			1.012**** (5.30)
Number of workers in family			0.894**** (-31.87)
Lived in same house 1 year ago			1.022*** (2.95)
Foreign born			1.278**** (19.26)
Years in U.S., if immigrant			1.006**** (12.83)
Speaks English well or very well			1.130**** (16.67)
Veteran			0.877**** (-11.89)
Statewide general population			1.000** (1.99)
Statewide unemployment rate			0.995 (-1.46)
Statewide government FTEs			1.000*** (2.61)
Statewide per capita income (log)			1.354**** (14.48)
Constant	16991.705**** (1654.46)	513.906**** (170.30)	44.397**** (16.52)
Adj. R-squared	0.024	0.118	0.124
Number of Obs.	555388	555388	549731

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.5G. Annual Business Owner Earnings Regressions, Construction, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.597**** (-18.32)	0.611**** (-17.57)	0.686**** (-13.46)
Hispanic	0.876**** (-10.21)	0.919**** (-5.90)	0.865**** (-7.54)
Asian Pacific	0.981 (-0.46)	0.904** (-2.40)	0.793**** (-5.29)
Subcontinent Asian	1.088 (0.79)	1.041 (0.38)	0.900 (-1.00)
Alaska Native	0.697**** (-6.23)	0.712**** (-5.92)	0.795**** (-4.06)
Other race	0.888 (-1.03)	0.887 (-1.06)	0.851 (-1.44)
Two or more races	0.685**** (-8.30)	0.711**** (-7.55)	0.743**** (-6.67)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.544**** (-25.26)	0.531**** (-26.33)	0.531**** (-26.72)
Year	1.031**** (8.62)	1.033**** (9.28)	1.002 (0.43)
Age		1.120**** (33.58)	1.083**** (22.36)
Age squared		0.999**** (-30.95)	0.999**** (-22.62)
Schooling		.	.
Nursery school/preschool		1.163**** (3.65)	1.126**** (2.90)
Grade 9		1.041 (0.86)	1.057 (1.20)
Grade 10		0.959 (-0.90)	0.984 (-0.35)
Grade 11		1.006 (0.13)	1.037 (0.80)
12th grade - no diploma		1.130*** (2.71)	1.110** (2.34)
Regular high school diploma		1.194**** (4.76)	1.188**** (4.66)
GED or alternative credential		0.965 (-0.86)	1.003 (0.08)
Some college, but less than 1 year		1.093** (2.19)	1.076* (1.82)
1 or more years college credit, no degree		1.176**** (4.20)	1.158**** (3.84)
Associate's degree		1.121*** (2.78)	1.079* (1.86)
Bachelor's degree		1.273**** (6.06)	1.146**** (3.45)
Master's degree		1.394****	1.212****

Independent Variables	Specification		
	Model A	Model B	Model C
		(6.30)	(3.69)
Professional degree beyond a bachelor's degree		1.345***	1.151
		(3.14)	(1.51)
Doctorate degree		0.957	0.885
		(-0.26)	(-0.74)
NRCS region		.	.
Northeast		1.060****	1.029*
		(4.24)	(1.73)
Southeast		0.944****	1.007
		(-4.09)	(0.45)
West		1.073****	1.008
		(4.91)	(0.52)
Construction		.	.
Interest and dividend income (log)			1.006****
			(4.61)
Home is owned free and clear			1.024*
			(1.77)
Property value			1.000****
			(24.12)
Married, spouse present			1.354****
			(24.95)
Number of children in family			1.042****
			(8.64)
Number of workers in family			0.928****
			(-9.84)
Lived in same house 1 year ago			1.087****
			(4.95)
Foreign born			1.197****
			(6.07)
Years in U.S., if immigrant			1.005****
			(4.63)
Speaks English well or very well			1.078****
			(4.56)
Veteran			0.895****
			(-5.35)
Statewide general population			1.000
			(1.46)
Statewide unemployment rate			0.971****
			(-3.80)
Statewide government FTEs			1.000
			(-0.67)
Statewide per capita income (log)			1.352****
			(6.40)
Constant	18885.417****	1215.677****	90.352****
	(804.71)	(86.74)	(8.72)
Adj. R-squared	0.014	0.037	0.062
Number of Obs.	77023	77023	76687

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.



Table 4.5H. Annual Business Owner Earnings Regressions, AECRS, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.408**** (-6.07)	0.454**** (-5.50)	0.491**** (-4.97)
Hispanic	0.837* (-1.95)	0.980 (-0.23)	0.936 (-0.67)
Asian Pacific	0.789** (-2.04)	0.765** (-2.34)	0.706*** (-2.79)
Subcontinent Asian	0.717 (-1.57)	0.708* (-1.68)	0.647** (-2.01)
Alaska Native	0.339** (-2.20)	0.329** (-2.34)	0.333** (-2.33)
Other race	0.309* (-1.76)	0.288* (-1.93)	0.279** (-1.99)
Two or more races	0.638** (-2.57)	0.743* (-1.75)	0.788 (-1.41)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.540**** (-10.39)	0.572**** (-9.67)	0.555**** (-10.17)
Year	0.990 (-0.65)	0.996 (-0.29)	0.998 (-0.07)
Age		1.207**** (11.59)	1.161**** (8.35)
Age squared		0.998**** (-9.54)	0.999**** (-7.21)
Schooling		.	.
Nursery school/preschool		2.313 (0.97)	2.477 (1.06)
Grade 9		1.440 (0.41)	1.608 (0.54)
Grade 10		1.360 (0.37)	1.399 (0.40)
Grade 11		0.833 (-0.23)	0.799 (-0.29)
12th grade - no diploma		2.857 (1.38)	2.785 (1.36)
Regular high school diploma		1.770 (0.88)	1.843 (0.95)
GED or alternative credential		1.359 (0.45)	1.473 (0.57)
Some college, but less than 1 year		1.719 (0.83)	1.817 (0.92)
1 or more years college credit, no degree		1.571 (0.69)	1.648 (0.77)
Associate's degree		1.365 (0.48)	1.413 (0.54)
Bachelor's degree		1.875 (0.97)	1.790 (0.91)
Master's degree		1.843	1.698

Independent Variables	Specification		
	Model A	Model B	Model C
		(0.94)	(0.82)
Professional degree beyond a bachelor's degree		2.298	2.037
		(1.27)	(1.09)
Doctorate degree		2.546	2.259
		(1.41)	(1.23)
NRCS region		.	.
Northeast		1.089	0.997
		(1.31)	(-0.04)
Southeast		1.051	1.094
		(0.74)	(1.26)
West		1.173**	1.033
		(2.54)	(0.46)
Profess., Tech. & Sci. Services		.	.
Interest and dividend income (log)			0.998
			(-0.46)
Home is owned free and clear			1.041
			(0.58)
Property value			1.000****
			(6.79)
Married, spouse present			1.270****
			(3.94)
Number of children in family			1.051**
			(2.08)
Number of workers in family			0.914**
			(-2.32)
Lived in same house 1 year ago			0.994
			(-0.08)
Foreign born			1.070
			(0.48)
Years in U.S., if immigrant			1.008
			(1.61)
Speaks English well or very well			1.166*
			(1.70)
Veteran			0.673****
			(-4.29)
Statewide general population			1.000
			(0.16)
Statewide unemployment rate			1.042
			(1.22)
Statewide government FTEs			1.000
			(-0.02)
Statewide per capita income (log)			1.579**
			(2.19)
Constant	21636.681****	74.870****	0.812
	(182.07)	(5.84)	(-0.09)
Adj. R-squared	0.021	0.084	0.099
Number of Obs.	6266	6266	6256

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.5I. Annual Business Owner Earnings Regressions, Professional Services ex AECRS, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.465**** (-29.61)	0.564**** (-23.01)	0.622**** (-18.95)
Hispanic	0.665**** (-24.47)	0.886**** (-6.77)	0.842**** (-8.29)
Asian Pacific	0.808**** (-6.85)	0.738**** (-10.20)	0.667**** (-12.67)
Subcontinent Asian	1.038 (0.76)	0.922* (-1.73)	0.803**** (-4.49)
Alaska Native	0.480**** (-8.40)	0.621**** (-5.75)	0.709**** (-4.14)
Other race	0.681*** (-3.18)	0.801* (-1.93)	0.854 (-1.38)
Two or more races	0.579**** (-12.85)	0.688**** (-9.23)	0.708**** (-8.56)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.646**** (-34.73)	0.639**** (-37.29)	0.646**** (-36.32)
Year	1.014**** (3.72)	1.017**** (4.53)	1.004 (0.73)
Age		1.174**** (48.33)	1.135**** (35.08)
Age squared		0.998**** (-40.79)	0.999**** (-32.39)
Schooling		.	.
Nursery school/preschool		1.014 (0.23)	0.994 (-0.09)
Grade 9		0.888* (-1.69)	0.877* (-1.88)
Grade 10		0.689**** (-5.28)	0.693**** (-5.23)
Grade 11		0.741**** (-4.41)	0.753**** (-4.20)
12th grade - no diploma		1.049 (0.70)	1.055 (0.80)
Regular high school diploma		1.084 (1.51)	1.093* (1.67)
GED or alternative credential		0.928 (-1.22)	0.951 (-0.83)
Some college, but less than 1 year		0.969 (-0.56)	0.996 (-0.08)
1 or more years college credit, no degree		1.026 (0.48)	1.040 (0.73)
Associate's degree		1.011 (0.19)	1.005 (0.09)
Bachelor's degree		1.263**** (4.36)	1.170**** (2.94)

Independent Variables	Specification		
	Model A	Model B	Model C
Master's degree		1.345**** (5.38)	1.192**** (3.20)
Professional degree beyond a bachelor's degree		2.643**** (17.40)	2.259**** (14.61)
Doctorate degree		1.743**** (8.85)	1.533**** (6.84)
NRCS region		.	.
Northeast		1.094**** (5.93)	1.041** (2.14)
Southeast		1.003 (0.17)	1.043** (2.56)
West		1.152**** (9.60)	1.021 (1.23)
Management of Companies		0.533**** (-6.61)	0.521**** (-6.92)
Admin. & Supportive Services		0.786**** (-18.29)	0.833**** (-13.92)
Interest and dividend income (log)			1.004**** (3.33)
Home is owned free and clear			0.994 (-0.44)
Property value			1.000**** (30.83)
Married, spouse present			1.278**** (18.73)
Number of children in family			1.018*** (3.24)
Number of workers in family			0.896**** (-12.83)
Lived in same house 1 year ago			1.031* (1.80)
Foreign born			1.289**** (8.52)
Years in U.S., if immigrant			1.008**** (8.03)
Speaks English well or very well			1.029 (1.57)
Veteran			0.889**** (-4.39)
Statewide general population			1.000 (0.37)
Statewide unemployment rate			1.007 (0.82)
Statewide government FTEs			1.000* (1.94)
Statewide per capita income (log)			1.306**** (5.34)
Constant	19796.101**** (697.05)	298.215**** (63.31)	27.530**** (6.06)
Adj. R-squared	0.019	0.116	0.130

Independent Variables	Specification		
	Model A	Model B	Model C
Number of Obs.	102486	102486	101890

Source and Notes: See Table 4.5. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ , \*\*\*\*  $p < 0.001$ .

Table 4.5J. Annual Business Owner Earnings Regressions, General Services, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.565**** (-45.84)	0.673**** (-33.00)	0.711**** (-28.05)
Hispanic	0.695**** (-39.74)	0.841**** (-18.27)	0.783**** (-22.41)
Asian Pacific	0.891**** (-8.25)	0.920**** (-6.20)	0.801**** (-14.85)
Subcontinent Asian	1.131**** (4.94)	1.027 (1.13)	0.859**** (-6.12)
Alaska Native	0.499**** (-16.65)	0.600**** (-12.94)	0.665**** (-10.36)
Other race	0.687**** (-6.01)	0.810**** (-3.57)	0.776**** (-4.32)
Two or more races	0.533**** (-29.02)	0.675**** (-19.10)	0.680**** (-18.76)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.565**** (-85.99)	0.658**** (-63.98)	0.663**** (-62.61)
Year	1.022**** (11.07)	1.023**** (11.93)	1.009*** (2.90)
Age		1.178**** (100.31)	1.131**** (66.55)
Age squared		0.998**** (-86.25)	0.999**** (-62.64)
Schooling		.	.
Nursery school/preschool		1.010 (0.32)	1.003 (0.11)
Grade 9		0.900*** (-2.75)	0.889*** (-3.11)
Grade 10		0.810**** (-5.70)	0.787**** (-6.53)
Grade 11		0.821**** (-5.54)	0.793**** (-6.54)
12th grade - no diploma		1.114**** (3.08)	1.086** (2.38)
Regular high school diploma		1.190**** (6.20)	1.182**** (5.99)
GED or alternative credential		1.006 (0.18)	1.016 (0.51)
Some college, but less than 1 year		1.031 (1.04)	1.058* (1.91)
1 or more years college credit, no degree		1.056* (1.91)	1.069** (2.35)
Associate's degree		1.036 (1.23)	1.009 (0.30)
Bachelor's degree		1.172**** (5.66)	1.075**** (2.59)
Master's degree		1.192****	1.053*

Independent Variables	Specification		
	Model A	Model B	Model C
		(6.08)	(1.81)
Professional degree beyond a bachelor's degree		2.758****	2.280****
		(33.64)	(27.33)
Doctorate degree		1.736****	1.479****
		(16.93)	(12.06)
NRCS region		.	.
Northeast		1.028****	0.976**
		(3.54)	(-2.57)
Southeast		1.004	1.043****
		(0.48)	(4.87)
West		1.139****	1.006
		(17.12)	(0.64)
Warehousing		0.645****	0.670****
		(-13.79)	(-12.68)
Information		0.565****	0.552****
		(-30.26)	(-31.68)
Finance & Insurance		0.857****	0.815****
		(-9.08)	(-12.12)
Real Estate		1.221****	1.156****
		(12.55)	(9.14)
Profess., Tech. & Sci. Services		0.882****	0.860****
		(-9.32)	(-11.23)
Management of Companies		0.470****	0.449****
		(-7.94)	(-8.51)
Admin. & Supportive Services		0.661****	0.678****
		(-29.66)	(-28.09)
Educational Services		0.331****	0.351****
		(-67.31)	(-63.62)
Medical Services		0.664****	0.668****
		(-26.86)	(-26.62)
Social Assistance Services		0.600****	0.620****
		(-30.74)	(-28.93)
Arts & Entertainment		0.573****	0.589****
		(-38.77)	(-37.06)
Other Services		0.664****	0.677****
		(-31.74)	(-30.35)
Interest and dividend income (log)			1.000
			(-0.65)
Home is owned free and clear			1.025****
			(3.39)
Property value			1.000****
			(56.81)
Married, spouse present			1.242****
			(31.73)
Number of children in family			0.999
			(-0.34)
Number of workers in family			0.890****
			(-26.10)
Lived in same house 1 year ago			1.013
			(1.53)

Independent Variables	Specification		
	Model A	Model B	Model C
Foreign born			1.253**** (14.58)
Years in U.S., if immigrant			1.006**** (12.22)
Speaks English well or very well			1.077**** (8.08)
Veteran			0.913**** (-6.32)
Statewide general population			1.000 (-0.07)
Statewide unemployment rate			1.006 (1.50)
Statewide government FTEs			1.000**** (3.95)
Statewide per capita income (log)			1.377**** (12.25)
Constant	16678.945**** (1270.48)	348.630**** (126.49)	24.290**** (11.16)
Adj. R-squared	0.024	0.130	0.130
Number of Obs.	371402	371402	366905

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.



Table 4.5K. Annual Business Owner Earnings Regressions, Goods, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.455**** (-22.46)	0.503**** (-19.97)	0.556**** (-16.87)
Hispanic	0.848**** (-7.40)	0.826**** (-8.31)	0.705**** (-13.22)
Asian Pacific	1.094*** (2.91)	0.983 (-0.55)	0.727**** (-9.06)
Subcontinent Asian	1.360**** (6.31)	1.250**** (4.67)	0.874*** (-2.59)
Alaska Native	0.605**** (-6.57)	0.618**** (-6.44)	0.688**** (-5.02)
Other race	0.614*** (-2.98)	0.608*** (-3.13)	0.575**** (-3.54)
Two or more races	0.574**** (-10.77)	0.659**** (-8.30)	0.672**** (-7.93)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.562**** (-37.26)	0.578**** (-35.20)	0.584**** (-34.57)
Year	1.014*** (2.97)	1.021**** (4.74)	1.011 (1.55)
Age		1.173**** (40.36)	1.126**** (26.70)
Age squared		0.998**** (-33.84)	0.999**** (-23.75)
Schooling		.	.
Nursery school/preschool		1.195** (2.34)	1.073 (0.93)
Grade 9		0.929 (-0.81)	0.897 (-1.21)
Grade 10		0.793*** (-2.60)	0.782*** (-2.76)
Grade 11		0.810** (-2.44)	0.816** (-2.38)
12th grade - no diploma		0.865* (-1.79)	0.833** (-2.29)
Regular high school diploma		0.895* (-1.66)	0.900 (-1.60)
GED or alternative credential		0.781**** (-3.32)	0.804*** (-2.96)
Some college, but less than 1 year		0.764**** (-3.89)	0.787**** (-3.48)
1 or more years college credit, no degree		0.806*** (-3.21)	0.810*** (-3.16)
Associate's degree		0.741**** (-4.38)	0.726**** (-4.72)
Bachelor's degree		0.882* (-1.88)	0.789**** (-3.59)
Master's degree		0.812****	0.683****

Independent Variables	Specification		
	Model A	Model B	Model C
		(-2.99)	(-5.51)
Professional degree beyond a bachelor's degree	1.087	0.852*	0.852*
		(0.93)	(-1.80)
Doctorate degree	0.971	0.790**	0.790**
		(-0.30)	(-2.46)
NRCS region			
Northeast	1.093****	1.068***	1.068***
		(5.12)	(3.15)
Southeast	1.155****	1.161****	1.161****
		(7.87)	(7.47)
West	1.261****	1.087****	1.087****
		(13.16)	(4.17)
Manufacturing-NAICS 32	0.914***	0.901***	0.901***
		(-2.73)	(-3.21)
Manufacturing-NAICS 33	0.899****	0.889****	0.889****
		(-3.63)	(-4.04)
Wholesale Trade	1.437****	1.381****	1.381****
		(11.87)	(10.73)
Retail Trade-NAICS 44	1.165****	1.168****	1.168****
		(5.41)	(5.58)
Retail Trade-NAICS 45	1.074**	1.109****	1.109****
		(2.50)	(3.66)
Interest and dividend income (log)			1.005****
			(3.49)
Home is owned free and clear			1.032*
			(1.72)
Property value			1.000****
			(31.79)
Married, spouse present			1.267****
			(14.49)
Number of children in family			1.016**
			(2.57)
Number of workers in family			0.891****
			(-11.37)
Lived in same house 1 year ago			0.978
			(-1.03)
Foreign born			1.254****
			(5.84)
Years in U.S., if immigrant			1.003**
			(2.08)
Speaks English well or very well			1.230****
			(9.49)
Veteran			0.784****
			(-7.89)
Statewide general population			1.000
			(0.48)
Statewide unemployment rate			0.999
			(-0.07)
Statewide government FTEs			1.000
			(1.41)

Independent Variables	Specification		
	Model A	Model B	Model C
Statewide per capita income (log)			1.070 (1.12)
Constant	12107.029**** (573.60)	228.172**** (49.43)	252.711**** (8.33)
Adj. R-squared	0.026	0.083	0.099
Number of Obs.	75049	75049	74377

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.5L. Annual Business Owner Earnings Regressions, All Industries, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.538**** (-58.11)	0.635**** (-43.57)	0.683**** (-36.18)
Hispanic	0.731**** (-43.64)	0.838**** (-23.67)	0.768**** (-29.93)
Asian Pacific	0.873**** (-11.50)	0.919**** (-7.34)	0.781**** (-19.20)
Subcontinent Asian	1.081**** (3.66)	1.058**** (2.78)	0.860**** (-7.09)
Alaska Native	0.557**** (-19.59)	0.627**** (-16.39)	0.699**** (-12.63)
Other race	0.687**** (-7.20)	0.783**** (-4.94)	0.746**** (-5.94)
Two or more races	0.532**** (-34.88)	0.662**** (-23.87)	0.673**** (-22.91)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.538**** (-115.51)	0.629**** (-83.61)	0.633**** (-82.26)
Year	1.020**** (12.22)	1.022**** (14.03)	1.003 (1.41)
Age		1.169**** (116.17)	1.120**** (75.73)
Age squared		0.998**** (-100.33)	0.999**** (-71.39)
Schooling		.	.
Nursery school/preschool		1.110**** (4.28)	1.072*** (2.90)
Grade 9		0.962 (-1.34)	0.951* (-1.78)
Grade 10		0.839**** (-6.30)	0.829**** (-6.80)
Grade 11		0.853**** (-5.87)	0.844**** (-6.35)
12th grade - no diploma		1.077**** (2.81)	1.052* (1.95)
Regular high school diploma		1.145**** (6.31)	1.142**** (6.21)
GED or alternative credential		0.958* (-1.76)	0.978 (-0.91)
Some college, but less than 1 year		1.006 (0.26)	1.029 (1.27)
1 or more years college credit, no degree		1.042* (1.88)	1.053** (2.39)
Associate's degree		1.016 (0.73)	0.991 (-0.41)
Bachelor's degree		1.141**** (6.12)	1.044** (2.02)
Master's degree		1.147****	1.006

Independent Variables	Specification		
	Model A	Model B	Model C
		(6.11)	(0.28)
Professional degree beyond a bachelor's degree		2.564**** (38.92)	2.089**** (30.52)
Doctorate degree		1.640**** (18.44)	1.379**** (12.03)
NRCS region		.	.
Northeast		1.018*** (2.91)	0.978*** (-2.99)
Southeast		0.995 (-0.80)	1.039**** (5.58)
West		1.119**** (18.40)	1.001 (0.17)
NAICS sector		.	.
Extractive Industries		0.752**** (-7.21)	0.728**** (-8.11)
Utilities		0.341**** (-25.72)	0.340**** (-26.11)
Construction		0.833**** (-16.19)	0.845**** (-15.03)
Manufacturing-NAICS 31		0.449**** (-31.15)	0.450**** (-31.36)
Manufacturing-NAICS 32		0.413**** (-40.90)	0.410**** (-41.65)
Manufacturing-NAICS 33		0.405**** (-54.53)	0.403**** (-55.30)
Wholesale Trade		0.653**** (-23.22)	0.636**** (-24.92)
Retail Trade-NAICS 44		0.522**** (-43.71)	0.529**** (-43.08)
Retail Trade-NAICS 45		0.475**** (-47.71)	0.490**** (-46.03)
Transportation		0.888**** (-8.04)	0.897**** (-7.41)
Warehousing		0.576**** (-17.78)	0.608**** (-16.14)
Information		0.505**** (-38.57)	0.502**** (-39.15)
Finance & Insurance		0.771**** (-16.55)	0.736**** (-19.74)
Real Estate		1.105**** (6.85)	1.051**** (3.42)
Profess., Tech. & Sci. Services		0.801**** (-18.54)	0.788**** (-19.98)
Management of Companies		0.425**** (-9.13)	0.408**** (-9.66)
Admin. & Supportive Services		0.586**** (-42.04)	0.610**** (-39.07)
Educational Services		0.300**** (-79.91)	0.322**** (-74.71)

Independent Variables	Specification		
	Model A	Model B	Model C
Medical Services		0.612**** (-35.38)	0.621**** (-34.52)
Social Assistance Services		0.544**** (-39.36)	0.568**** (-36.77)
Arts & Entertainment		0.511**** (-51.57)	0.534**** (-48.24)
Other Services		0.593**** (-45.03)	0.615**** (-42.01)
Interest and dividend income (log)			1.002**** (4.43)
Home is owned free and clear			1.027**** (4.55)
Property value			1.000**** (69.69)
Married, spouse present			1.275**** (44.17)
Number of children in family			1.012**** (5.48)
Number of workers in family			0.893**** (-32.03)
Lived in same house 1 year ago			1.021*** (2.92)
Foreign born			1.247**** (17.15)
Years in U.S., if immigrant			1.006**** (13.19)
Speaks English well or very well			1.110**** (14.05)
Veteran			0.879**** (-11.68)
Statewide general population			1.000* (1.69)
Statewide unemployment rate			0.996 (-1.07)
Statewide government FTEs			1.000*** (2.68)
Statewide per capita income (log)			1.356**** (14.54)
Constant	17006.243**** (1657.27)	505.023**** (169.88)	43.096**** (16.38)
Adj. R-squared	0.028	0.120	0.124
Number of Obs.	555388	555388	549731

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.6A. Annual Business Owner Earnings Regressions, All Plaintiff NAICS, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.598**** (-14.16)	0.726**** (-8.94)	0.739**** (-7.70)
WBE	0.658**** (-14.04)	0.683**** (-13.21)	0.696**** (-12.49)
Year	1.025**** (2.62)	1.022** (2.40)	0.998 (-0.13)
Age		1.174**** (16.59)	1.127**** (11.34)
Age squared		0.999**** (-14.06)	0.999**** (-9.52)
Schooling		.	.
Nursery school/preschool		1.189 (0.47)	1.096 (0.25)
Grade 9		2.083* (1.82)	1.978* (1.72)
Grade 10		0.840 (-0.43)	1.003 (0.01)
Grade 11		0.885 (-0.34)	1.198 (0.49)
12th grade - no diploma		0.857 (-0.46)	1.135 (0.38)
Regular high school diploma		1.452 (1.28)	1.406 (1.19)
GED or alternative credential		1.262 (0.75)	1.243 (0.72)
Some college, but less than 1 year		1.277 (0.83)	1.250 (0.77)
1 or more years college credit, no degree		1.332 (0.99)	1.287 (0.89)
Associate's degree		1.213 (0.67)	1.144 (0.47)
Bachelor's degree		1.745* (1.94)	1.527 (1.50)
Master's degree		1.890** (2.22)	1.593* (1.65)
Professional degree beyond a bachelor's degree		2.148*** (2.61)	1.701* (1.84)
Doctorate degree		1.859** (2.12)	1.536 (1.48)
NRCS region		.	.
Northeast		1.096** (2.40)	1.055 (1.16)
Southeast		1.034 (0.83)	1.089** (2.08)
West		1.148**** (3.73)	1.027 (0.64)
Admin. & Supportive Services		0.520****	0.556****

Independent Variables	Specification		
	Model A	Model B	Model C
		(-19.55)	(-17.68)
Interest and dividend income (log)			0.997
			(-1.26)
Home is owned free and clear			1.012
			(0.31)
Property value			1.000****
			(15.41)
Married, spouse present			1.286****
			(7.19)
Number of children in family			1.043***
			(2.87)
Number of workers in family			0.874****
			(-5.78)
Lived in same house 1 year ago			0.980
			(-0.49)
Foreign born			1.090
			(1.11)
Years in U.S., if immigrant			1.001
			(0.30)
Speaks English well or very well			1.005
			(0.10)
Veteran			1.010
			(0.16)
Statewide general population			1.000
			(0.40)
Statewide unemployment rate			0.985
			(-0.80)
Statewide government FTEs			1.000
			(0.65)
Statewide per capita income (log)			1.262*
			(1.89)
Constant	25059.427****	253.909****	55.284****
	(293.27)	(15.37)	(2.90)
Adj. R-squared	0.016	0.090	0.106
Number of Obs.	18301	18301	18187

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.



Table 4.6B. Annual Business Owner Earnings Regressions, NAICS 5416, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.650**** (-10.79)	0.714**** (-8.50)	0.714**** (-7.73)
WBE	0.659**** (-13.11)	0.659**** (-13.37)	0.676**** (-12.38)
Year	1.012 (1.16)	1.014 (1.40)	0.990 (-0.66)
Age		1.184**** (15.52)	1.142**** (11.04)
Age squared		0.998**** (-13.41)	0.999**** (-9.46)
Schooling		.	.
Nursery school/preschool		1.714 (1.07)	1.378 (0.64)
Grade 9		2.080 (1.37)	1.827 (1.14)
Grade 10		0.948 (-0.10)	0.867 (-0.26)
Grade 11		1.387 (0.66)	1.223 (0.41)
12th grade - no diploma		1.431 (0.84)	1.274 (0.57)
Regular high school diploma		1.861* (1.73)	1.618 (1.35)
GED or alternative credential		1.873 (1.63)	1.754 (1.47)
Some college, but less than 1 year		1.649 (1.38)	1.509 (1.14)
1 or more years college credit, no degree		1.620 (1.35)	1.455 (1.06)
Associate's degree		1.404 (0.95)	1.237 (0.60)
Bachelor's degree		2.035** (2.01)	1.673 (1.47)
Master's degree		2.278** (2.32)	1.806* (1.68)
Professional degree beyond a bachelor's degree		2.480** (2.52)	1.858* (1.73)
Doctorate degree		2.146** (2.12)	1.670 (1.44)
NRCS region		.	.
Northeast		1.100** (2.28)	1.056 (1.08)
Southeast		1.020 (0.45)	1.055 (1.18)
West		1.159**** (3.64)	1.035 (0.77)
Profess., Tech. & Sci. Services		.	.

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			0.997 (-1.05)
Home is owned free and clear			0.941 (-1.47)
Property value			1.000**** (13.83)
Married, spouse present			1.228**** (5.28)
Number of children in family			1.043*** (2.59)
Number of workers in family			0.867**** (-5.52)
Lived in same house 1 year ago			0.986 (-0.30)
Foreign born			1.062 (0.71)
Years in U.S., if immigrant			1.001 (0.20)
Speaks English well or very well			1.019 (0.36)
Veteran			0.993 (-0.11)
Statewide general population			1.000 (0.00)
Statewide unemployment rate			0.981 (-0.92)
Statewide government FTEs			1.000 (0.73)
Statewide per capita income (log)			1.193 (1.31)
Constant	30095.703**** (279.66)	185.305**** (12.05)	83.297**** (2.90)
Adj. R-squared	0.014	0.058	0.074
Number of Obs.	14638	14638	14588

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.6C. Annual Business Owner Earnings Regressions, NAICS 561M, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.739** (-2.37)	0.872 (-1.05)	0.936 (-0.46)
WBE	0.718*** (-3.12)	0.744*** (-2.83)	0.770** (-2.51)
Year	1.087** (2.53)	1.098*** (2.88)	1.097* (1.83)
Age		1.126**** (3.55)	1.107*** (2.87)
Age squared		0.999*** (-2.71)	0.999** (-2.10)
Schooling		.	.
Nursery school/preschool		1.416 (0.31)	1.356 (0.27)
Grade 9		2.066 (0.67)	2.283 (0.77)
Grade 10		0.899 (-0.10)	0.877 (-0.12)
Grade 11		1.815 (0.56)	1.891 (0.60)
12th grade - no diploma		0.152* (-1.87)	0.826 (-0.19)
Regular high school diploma		1.039 (0.04)	1.063 (0.07)
GED or alternative credential		0.937 (-0.07)	1.004 (0.00)
Some college, but less than 1 year		0.783 (-0.26)	0.815 (-0.22)
1 or more years college credit, no degree		0.758 (-0.30)	0.768 (-0.29)
Associate's degree		0.668 (-0.43)	0.717 (-0.36)
Bachelor's degree		1.140 (0.14)	1.056 (0.06)
Master's degree		1.258 (0.25)	1.099 (0.10)
Professional degree beyond a bachelor's degree		0.860 (-0.15)	0.772 (-0.26)
Doctorate degree		2.289 (0.81)	2.054 (0.72)
NRCS region		.	.
Northeast		1.143 (0.97)	0.941 (-0.37)
Southeast		1.051 (0.35)	1.106 (0.68)
West		0.971 (-0.22)	0.879 (-0.90)
Admin. & Supportive Services		.	.

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			0.999 (-0.15)
Home is owned free and clear			1.022 (0.17)
Property value			1.000**** (4.28)
Married, spouse present			1.324** (2.27)
Number of children in family			0.984 (-0.30)
Number of workers in family			0.878 (-1.61)
Lived in same house 1 year ago			1.011 (0.07)
Foreign born			0.972 (-0.11)
Years in U.S., if immigrant			0.994 (-0.63)
Speaks English well or very well			1.018 (0.10)
Veteran			1.184 (0.75)
Statewide general population			1.000 (-1.46)
Statewide unemployment rate			1.075 (1.03)
Statewide government FTEs			1.000 (1.48)
Statewide per capita income (log)			1.951 (1.48)
Constant	12548.132**** (78.75)	449.585**** (5.13)	0.355 (-0.21)
Adj. R-squared	0.008	0.057	0.063
Number of Obs.	1599	1599	1590

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.6D. Annual Business Owner Earnings Regressions, NAICS 5613, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
MBE or WBE?	.	.	.
MBE	0.654**** (-3.87)	0.788** (-2.19)	0.899 (-0.89)
WBE	0.864 (-1.42)	0.843* (-1.70)	0.827* (-1.92)
Year	1.040 (1.27)	1.031 (1.03)	0.994 (-0.12)
Age		1.137**** (4.53)	1.047 (1.51)
Age squared		0.999**** (-3.51)	1.000 (-0.90)
Schooling		.	.
Nursery school/preschool		0.699 (-0.51)	0.873 (-0.20)
Grade 9		1.203 (0.21)	1.642 (0.59)
Grade 10		0.500 (-0.89)	1.093 (0.11)
Grade 11		0.336 (-1.56)	0.765 (-0.37)
12th grade - no diploma		0.927 (-0.11)	1.233 (0.30)
Regular high school diploma		0.723 (-0.52)	1.042 (0.07)
GED or alternative credential		0.528 (-0.98)	0.712 (-0.54)
Some college, but less than 1 year		0.742 (-0.48)	0.965 (-0.06)
1 or more years college credit, no degree		0.987 (-0.02)	1.313 (0.46)
Associate's degree		1.060 (0.09)	1.246 (0.37)
Bachelor's degree		1.499 (0.66)	1.655 (0.86)
Master's degree		1.193 (0.29)	1.267 (0.40)
Professional degree beyond a bachelor's degree		2.762 (1.56)	2.471 (1.44)
Doctorate degree		2.064 (1.02)	2.270 (1.20)
NRCS region		.	.
Northeast		1.033 (0.27)	1.122 (0.81)
Southeast		1.127 (0.97)	1.275* (1.88)
West		1.188 (1.40)	1.006 (0.04)
Admin. & Supportive Services		.	.

Independent Variables	Specification		
	Model A	Model B	Model C
Interest and dividend income (log)			0.995 (-0.51)
Home is owned free and clear			1.322*** (2.62)
Property value			1.000**** (6.21)
Married, spouse present			1.649**** (4.75)
Number of children in family			1.121** (2.56)
Number of workers in family			0.875* (-1.85)
Lived in same house 1 year ago			0.960 (-0.32)
Foreign born			1.333 (1.11)
Years in U.S., if immigrant			1.004 (0.44)
Speaks English well or very well			0.812 (-1.41)
Veteran			1.025 (0.13)
Statewide general population			1.000* (1.91)
Statewide unemployment rate			0.961 (-0.61)
Statewide government FTEs			1.000 (-0.99)
Statewide per capita income (log)			1.176 (0.40)
Constant	9542.692**** (76.79)	258.339**** (6.45)	160.346 (1.15)
Adj. R-squared	0.007	0.075	0.127
Number of Obs.	2064	2064	2009

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.6E. Annual Business Owner Earnings Regressions, All Pltf. NAICS, Det. Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	-	-	-
Black	0.425**** (-14.00)	0.559**** (-9.72)	0.644**** (-7.28)
Hispanic	0.624**** (-8.26)	0.806**** (-3.83)	0.803**** (-3.65)
Asian Pacific	0.676**** (-5.54)	0.702**** (-5.14)	0.673**** (-5.32)
Subcontinent Asian	1.034 (0.31)	1.014 (0.13)	0.928 (-0.68)
Alaska Native	0.619** (-2.12)	0.858 (-0.70)	0.955 (-0.21)
Other race	0.749 (-0.92)	1.057 (0.18)	1.043 (0.14)
Two or more races	0.652**** (-4.37)	0.818** (-2.12)	0.828** (-2.02)
Non-Hispanic white female?	-	-	-
Non-Hispanic white female	0.658**** (-14.06)	0.683**** (-13.23)	0.695**** (-12.55)
Year	1.024** (2.57)	1.022** (2.36)	0.998 (-0.16)
Age		1.174**** (16.61)	1.128**** (11.43)
Age squared		0.999**** (-14.05)	0.999**** (-9.61)
Schooling		-	-
Nursery school/preschool		1.170 (0.43)	1.077 (0.20)
Grade 9		2.058* (1.79)	1.948* (1.68)
Grade 10		0.853 (-0.40)	1.004 (0.01)
Grade 11		0.958 (-0.12)	1.238 (0.58)
12th grade - no diploma		0.881 (-0.38)	1.148 (0.41)
Regular high school diploma		1.502 (1.40)	1.429 (1.24)
GED or alternative credential		1.303 (0.86)	1.256 (0.75)
Some college, but less than 1 year		1.319 (0.94)	1.269 (0.82)
1 or more years college credit, no degree		1.378 (1.11)	1.307 (0.94)
Associate's degree		1.250 (0.77)	1.161 (0.52)
Bachelor's degree		1.792** (2.04)	1.552 (1.55)
Master's degree		1.936**	1.619*

Independent Variables	Specification		
	Model A	Model B	Model C
		(2.30)	(1.70)
Professional degree beyond a bachelor's degree		2.199***	1.727*
		(2.69)	(1.89)
Doctorate degree		1.917**	1.572
		(2.22)	(1.56)
NRCS region		.	.
Northeast		1.102**	1.058
		(2.55)	(1.22)
Southeast		1.048	1.098**
		(1.18)	(2.27)
West		1.139****	1.024
		(3.51)	(0.58)
Admin. & Supportive Services		0.525****	0.558****
		(-19.28)	(-17.57)
Interest and dividend income (log)			0.997
			(-1.44)
Home is owned free and clear			1.010
			(0.27)
Property value			1.000****
			(15.41)
Married, spouse present			1.275****
			(6.93)
Number of children in family			1.043***
			(2.88)
Number of workers in family			0.877****
			(-5.65)
Lived in same house 1 year ago			0.979
			(-0.51)
Foreign born			1.091
			(1.10)
Years in U.S., if immigrant			1.001
			(0.36)
Speaks English well or very well			0.978
			(-0.46)
Veteran			1.012
			(0.20)
Statewide general population			1.000
			(0.32)
Statewide unemployment rate			0.985
			(-0.78)
Statewide government FTEs			1.000
			(0.74)
Statewide per capita income (log)			1.267*
			(1.92)
Constant	25092.700****	244.133****	50.488****
	(293.75)	(15.25)	(2.84)
Adj. R-squared	0.019	0.092	0.107
Number of Obs.	18301	18301	18187

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.



Table 4.6F. Annual Business Owner Earnings Regressions, NAICS 5416, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.510**** (-9.37)	0.572**** (-7.90)	0.629**** (-6.50)
Hispanic	0.660**** (-6.53)	0.770**** (-4.12)	0.770**** (-3.85)
Asian Pacific	0.683**** (-5.05)	0.683**** (-5.12)	0.637**** (-5.60)
Subcontinent Asian	0.952 (-0.44)	0.948 (-0.49)	0.888 (-1.02)
Alaska Native	0.952 (-0.19)	1.075 (0.28)	1.130 (0.47)
Other race	0.992 (-0.02)	1.077 (0.21)	1.125 (0.33)
Two or more races	0.639**** (-4.22)	0.739*** (-2.90)	0.752*** (-2.75)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.659**** (-13.12)	0.659**** (-13.36)	0.675**** (-12.43)
Year	1.012 (1.15)	1.014 (1.39)	0.989 (-0.70)
Age		1.183**** (15.48)	1.142**** (11.09)
Age squared		0.998**** (-13.35)	0.999**** (-9.51)
Schooling		.	.
Nursery school/preschool		1.668 (1.01)	1.321 (0.56)
Grade 9		1.991 (1.29)	1.725 (1.03)
Grade 10		0.913 (-0.16)	0.824 (-0.35)
Grade 11		1.410 (0.69)	1.213 (0.39)
12th grade - no diploma		1.400 (0.79)	1.238 (0.50)
Regular high school diploma		1.829* (1.68)	1.569 (1.26)
GED or alternative credential		1.838 (1.58)	1.687 (1.37)
Some college, but less than 1 year		1.620 (1.33)	1.461 (1.05)
1 or more years college credit, no degree		1.597 (1.31)	1.414 (0.98)
Associate's degree		1.377 (0.89)	1.198 (0.51)
Bachelor's degree		1.996* (1.95)	1.627 (1.38)
Master's degree		2.230**	1.756

Independent Variables	Specification		
	Model A	Model B	Model C
		(2.26)	(1.60)
Professional degree beyond a bachelor's degree		2.427**	1.804*
		(2.46)	(1.65)
Doctorate degree		2.112**	1.635
		(2.08)	(1.38)
NRCS region		.	.
Northeast		1.103**	1.059
		(2.36)	(1.13)
Southeast		1.030	1.064
		(0.68)	(1.36)
West		1.154****	1.034
		(3.52)	(0.74)
Profess., Tech. & Sci. Services		.	.
Interest and dividend income (log)			0.997
			(-1.22)
Home is owned free and clear			0.941
			(-1.47)
Property value			1.000****
			(13.83)
Married, spouse present			1.219****
			(5.09)
Number of children in family			1.043**
			(2.58)
Number of workers in family			0.869****
			(-5.44)
Lived in same house 1 year ago			0.986
			(-0.30)
Foreign born			1.070
			(0.78)
Years in U.S., if immigrant			1.001
			(0.30)
Speaks English well or very well			0.996
			(-0.08)
Veteran			0.995
			(-0.08)
Statewide general population			1.000
			(-0.01)
Statewide unemployment rate			0.980
			(-0.94)
Statewide government FTEs			1.000
			(0.76)
Statewide per capita income (log)			1.201
			(1.36)
Constant	30104.783****	189.564****	78.094***
	(279.83)	(12.10)	(2.86)
Adj. R-squared	0.016	0.059	0.075
Number of Obs.	14638	14638	14588

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.6G. Annual Business Owner Earnings Regressions, NAICS 561M, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	-	-	-
Black	0.777 (-1.22)	0.841 (-0.85)	0.930 (-0.34)
Hispanic	0.723* (-1.73)	0.810 (-1.11)	0.823 (-0.92)
Asian Pacific	0.519*** (-2.68)	0.700 (-1.44)	0.888 (-0.43)
Subcontinent Asian	1.701 (1.08)	1.744 (1.15)	1.205 (0.37)
Alaska Native	0.470 (-1.06)	0.471 (-1.06)	0.460 (-1.11)
Other race	0.930 (-0.07)	0.927 (-0.07)	0.738 (-0.29)
Two or more races	1.073 (0.20)	1.683 (1.46)	1.707 (1.52)
Non-Hispanic white female?	-	-	-
Non-Hispanic white female	0.718*** (-3.12)	0.744*** (-2.84)	0.771** (-2.48)
Year	1.086** (2.48)	1.097*** (2.84)	1.094* (1.78)
Age	-	1.131**** (3.67)	1.112**** (2.97)
Age squared	-	0.999*** (-2.83)	0.999** (-2.21)
Schooling	-	-	-
Nursery school/preschool	-	1.447 (0.33)	1.373 (0.29)
Grade 9	-	2.215 (0.73)	2.431 (0.83)
Grade 10	-	0.838 (-0.16)	0.817 (-0.18)
Grade 11	-	1.732 (0.51)	1.763 (0.53)
12th grade - no diploma	-	0.157* (-1.83)	0.794 (-0.22)
Regular high school diploma	-	1.012 (0.01)	1.032 (0.03)
GED or alternative credential	-	0.883 (-0.13)	0.952 (-0.05)
Some college, but less than 1 year	-	0.750 (-0.31)	0.778 (-0.27)
1 or more years college credit, no degree	-	0.723 (-0.35)	0.730 (-0.34)
Associate's degree	-	0.635 (-0.49)	0.676 (-0.42)
Bachelor's degree	-	1.100 (0.10)	1.010 (0.01)
Master's degree	-	1.174	1.034

Independent Variables	Specification		
	Model A	Model B	Model C
	(0.17)		(0.04)
Professional degree beyond a bachelor's degree	0.784		0.715
		(-0.25)	(-0.34)
Doctorate degree	2.388		2.085
		(0.85)	(0.73)
NRCS region			
Northeast		1.133	0.938
		(0.90)	(-0.39)
Southeast		1.045	1.106
		(0.31)	(0.67)
West		0.971	0.877
		(-0.22)	(-0.91)
Admin. & Supportive Services			
Interest and dividend income (log)			0.998
			(-0.20)
Home is owned free and clear			1.008
			(0.06)
Property value			1.000****
			(4.21)
Married, spouse present			1.336**
			(2.32)
Number of children in family			0.986
			(-0.27)
Number of workers in family			0.879
			(-1.57)
Lived in same house 1 year ago			1.006
			(0.04)
Foreign born			0.970
			(-0.12)
Years in U.S., if immigrant			0.995
			(-0.54)
Speaks English well or very well			1.064
			(0.34)
Veteran			1.205
			(0.83)
Statewide general population			1.000
			(-1.35)
Statewide unemployment rate			1.069
			(0.95)
Statewide government FTEs			1.000
			(1.39)
Statewide per capita income (log)			1.922
			(1.45)
Constant	12603.275****	423.126****	0.402
	(78.72)	(5.08)	(-0.18)
Adj. R-squared	0.009	0.058	0.062
Number of Obs.	1599	1599	1599

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.

Table 4.6H. Annual Business Owner Earnings Regressions, NAICS 5613, Detailed Race, 2014-2018

Independent Variables	Specification		
	Model A	Model B	Model C
Detailed Race/Ethnicity	.	.	.
Black	0.440**** (-5.60)	0.542**** (-4.19)	0.748* (-1.94)
Hispanic	0.824 (-1.20)	1.077 (0.45)	1.147 (0.77)
Asian Pacific	0.975 (-0.10)	0.884 (-0.51)	0.841 (-0.64)
Subcontinent Asian	1.415 (0.85)	1.377 (0.81)	1.212 (0.47)
Alaska Native	0.459 (-1.52)	0.610 (-0.99)	0.797 (-0.39)
Other race	0.648 (-0.62)	1.395 (0.48)	1.202 (0.27)
Two or more races	0.827 (-0.65)	1.018 (0.06)	1.061 (0.22)
Non-Hispanic white female?	.	.	.
Non-Hispanic white female	0.864 (-1.43)	0.837* (-1.78)	0.822** (-1.98)
Year	1.038 (1.21)	1.029 (0.96)	0.996 (-0.09)
Age		1.143**** (4.70)	1.052 (1.64)
Age squared		0.999**** (-3.65)	1.000 (-1.01)
Schooling		.	.
Nursery school/preschool		0.744 (-0.41)	0.874 (-0.19)
Grade 9		1.438 (0.41)	1.791 (0.68)
Grade 10		0.647 (-0.55)	1.251 (0.28)
Grade 11		0.482 (-1.02)	0.887 (-0.16)
12th grade - no diploma		1.211 (0.26)	1.422 (0.50)
Regular high school diploma		0.968 (-0.05)	1.219 (0.32)
GED or alternative credential		0.711 (-0.51)	0.838 (-0.27)
Some college, but less than 1 year		0.997 (-0.01)	1.139 (0.21)
1 or more years college credit, no degree		1.346 (0.47)	1.540 (0.70)
Associate's degree		1.421 (0.55)	1.465 (0.62)
Bachelor's degree		1.970 (1.08)	1.943 (1.09)
7			
Master's degree		1.567	1.486

Independent Variables	Specification		
	Model A	Model B	Model C
	(0.71)		(0.64)
Professional degree beyond a bachelor's degree	3.506*		2.875
	(1.88)		(1.63)
Doctorate degree	2.752		2.659
	(1.40)		(1.40)
NRCS region			
Northeast	1.060		1.130
	(0.48)		(0.86)
Southeast	1.183		1.307**
	(1.35)		(2.06)
West	1.148		0.994
	(1.12)		(-0.04)
Admin. & Supportive Services			
Interest and dividend income (log)			0.995
			(-0.58)
Home is owned free and clear			1.317**
			(2.57)
Property value			1.000****
			(6.20)
Married, spouse present			1.625****
			(4.59)
Number of children in family			1.123***
			(2.59)
Number of workers in family			0.877*
			(-1.82)
Lived in same house 1 year ago			0.958
			(-0.34)
Foreign born			1.300
			(0.98)
Years in U.S., if immigrant			1.004
			(0.42)
Speaks English well or very well			0.756*
			(-1.83)
Veteran			1.014
			(0.07)
Statewide general population			1.000*
			(1.74)
Statewide unemployment rate			0.964
			(-0.56)
Statewide government FTEs			1.000
			(-0.84)
Statewide per capita income (log)			1.189
			(0.43)
Constant	9600.393****	174.569****	107.218
	(77.01)	(5.90)	(1.06)
Adj. R-squared	0.014	0.080	0.127
Number of Obs.	2064	2064	2009

Source and Notes: See Table 4.5. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01, \*\*\*\* p<0.001.