

Business as Usual:

Entrepreneurs of Color in Arizona Face Challenges in Climate Change and Sustainability in a Post-COVID Economy

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This project builds on LPPI's research portfolio on [ethnic-owned businesses as engines for equitable recovery](#) and the UCLA's Center for Neighborhood Knowledge [COVID-19 Equity Research Initiative](#).

The UCLA Latino Policy and Politics Institute and the Center for Neighborhood Knowledge acknowledge the Gabrielino Tongva peoples as the traditional land caretakers of Tovaangar (the Los Angeles basin and So. Channel Islands). As a land grant institution, we pay our respects to the Honuukvetam (Ancestors), 'Ahihirom (Elders), and 'Eyoohiinkem (our relatives nations) past, present, and emerging.

About Our Centers

The UCLA Latino Policy and Politics Institute addresses the most critical domestic policy challenges facing Latinos and other communities of color through research, advocacy, mobilization, and leadership development to expand genuine opportunities for all Americans.

The UCLA Center for Neighborhood Knowledge specializes in empirical spatial analysis to inform policy and planning action and explicitly emphasizes the study of immigrant enclaves, low-income neighborhoods, and ethnic minority communities.

Disclaimer

The views expressed herein are those of the authors and not necessarily those of the University of California, Los Angeles, as a whole. The authors alone are responsible for the content of this report.

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Advisory Committee

The research team is grateful for the guidance of its stakeholder advisory committee for their feedback on research design, feasibility, participant recruitment, recruitment sites, connection to possible collaborators, interpretation of research findings, and dissemination of research findings.



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Julian Cañete serves as the President and CEO of the California Hispanic Chambers of Commerce (CHCC). Through its network of more than 80 Hispanic chambers and business associations, the CHCC is a leading voice on issues impacting business in California. Julian previously served as the Director of Public Policy and Strategic Partnerships for the California Asian Pacific Chamber of Commerce and as President and CEO of CHCC from 1999 to 2006 and again from 2009 to 2012. He is currently a member of the California Department of General Services Small Business Advisory Board, Californians for Affordable & Reliable Energy (CARE), CalTrans Small Business Council, CA Secretary of State Voters' Choice Act Task Force, the Small Business Development Center Northern CA Network Advisory Board, and the CalVet Foundation.



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Born and raised in Austin, Texas, Paul Saldaña has spent more than 25 years in local government affairs, public policy, public relations, and political consulting. Paul is the Co-Founder of Hispanic Advocates Business Leaders of Austin (HABLA), a local Hispanic Think Tank group committed to developing sustainable solutions to quality of life issues. He serves as a President and Principal of Saldaña Public Relations, a strategic consultant, advisor, and contributor on quality of life issues, including public education, voting, economics, healthcare, redevelopment, gentrification, and affordable housing to governmental entities, clients, and the media.



Marlene Orozco, Ph.D., Los Angeles, CA

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Executive Summary

Arizona is home to roughly 641,000 small businesses,¹ and members of racial and ethnic minorities own a little over a quarter (28%) of small businesses in Arizona.² Studies have demonstrated that ethnic-owned businesses face disproportionate challenges in starting and maintaining their businesses,³ including systemic barriers to accessing financial capital,⁴ challenges in accessing relief funds,⁵ and higher employee turnover during times of crisis.⁶ These challenges have been compounded in recent years by a pandemic as well as an increasing demand to be environmentally conscious and prepared for climate change.

Reliable and accessible data can empower leaders to make decisions that improve the livelihood of ethnic communities. This report presents the results of an exploratory study investigating the experiences of ethnic small business owners on the topics of access to capital, impacts of COVID-19, environmental sustainability practices, and climate change. We present primary data collected through a phone and web survey and interviews with small business representatives in Arizona. Our research sheds light on issue areas in which ethnic-owned small businesses are under-resourced and understudied.

Our survey sample of more than 400 small businesses operating in Arizona, supplemented by five in-depth interviews, yielded four key findings:

1. Black- and Latino-owned businesses face more barriers to accessing financial capital than white-owned businesses.

Black-owned businesses were almost three times more likely to report challenges in accessing capital than white-owned businesses (52% and 18%, respectively). Latino-owned businesses (32%) were almost two times more likely to report barriers to accessing capital relative to white-owned businesses. Among those businesses that reported experiencing challenges in obtaining funds or capital, the most common barrier Black- and Latino-owned businesses identified was an insufficient amount of financial capital (71% and 68%, respectively).

2. Ethnic-owned businesses continue to fight an uphill battle to recover from COVID-19.

Among small businesses surveyed, Black-owned businesses were more likely to report that the COVID-19 pandemic had a “large negative effect” (60%) than Latino- and white-owned businesses (41% and 46%, respectively). Additionally, compared with white-owned businesses, Black-owned businesses were twice as likely to anticipate a need for financial assistance or additional capital in the next six months (26% and 54%, respectively). Over a third of Latino-owned businesses (37%) anticipated this financial need.

3. Ethnic-owned businesses were more likely to acknowledge the impacts of climate change than white-owned businesses.

Latino- (43%) and Black-owned businesses (42%) were more likely than white-owned businesses (29%) to rank the risks resulting from climate change as a high or medium priority.

4. Ethnic-owned businesses are actively engaged in environmental sustainability planning.

Black-owned businesses were twice as likely as white-owned businesses to report that they intended to develop a formal sustainability plan in the future (38% and 19%, respectively). Latino-owned businesses (23%) were also more likely than white-owned businesses to report they will develop a sustainability plan. White- and Latino-owned businesses (55% and 52%, respectively) were more likely than Black-owned (40%) businesses to report they did not anticipate the need to develop a sustainability plan in the future.

Introduction

Access to Capital and the Impacts of the COVID-19 Pandemic

Businesses owned by entrepreneurs of color form a significant part of Arizona's economy and are integral to their communities. However, these business owners also experience outsized challenges not faced by their white counterparts. Many of these challenges stem from an inability to access sufficient funds. Most small business owners obtain capital for their business from banks as opposed to other sources (e.g., personal savings or grants).⁷ However, racial and ethnic minorities are less likely to be approved for loans than equally credit-worthy white entrepreneurs.⁸ When they are approved for loans, their interest rates are often higher⁹ and their loan size smaller.¹⁰ This is especially true for Black business owners.¹¹ Access to funding enables small business owners to navigate the challenges of starting a new business and remain open during economic downturns and crises,¹² such as the COVID-19 pandemic recession.

The pandemic exacerbated inequalities between ethnic-owned businesses and their white-owned counterparts. Surveys of small business owners have found that Black-owned businesses experienced larger drops in sales than white-owned businesses.¹³ From February to April 2020, the number of active Black-, Latino-, and Asian-owned businesses fell more drastically (by 41%, 32%, and 26%, respectively) than white-owned businesses (which fell by 17%).¹⁴ Active immigrant-owned businesses also fell by 36% over the same time period, twice the rate of native-owned businesses (18%).¹⁵ Not only did non-white businesses suffer greater losses, but Paycheck Protection Program (PPP) funds were also disproportionately disbursed to non-minority communities during the early stages of the pandemic.¹⁶

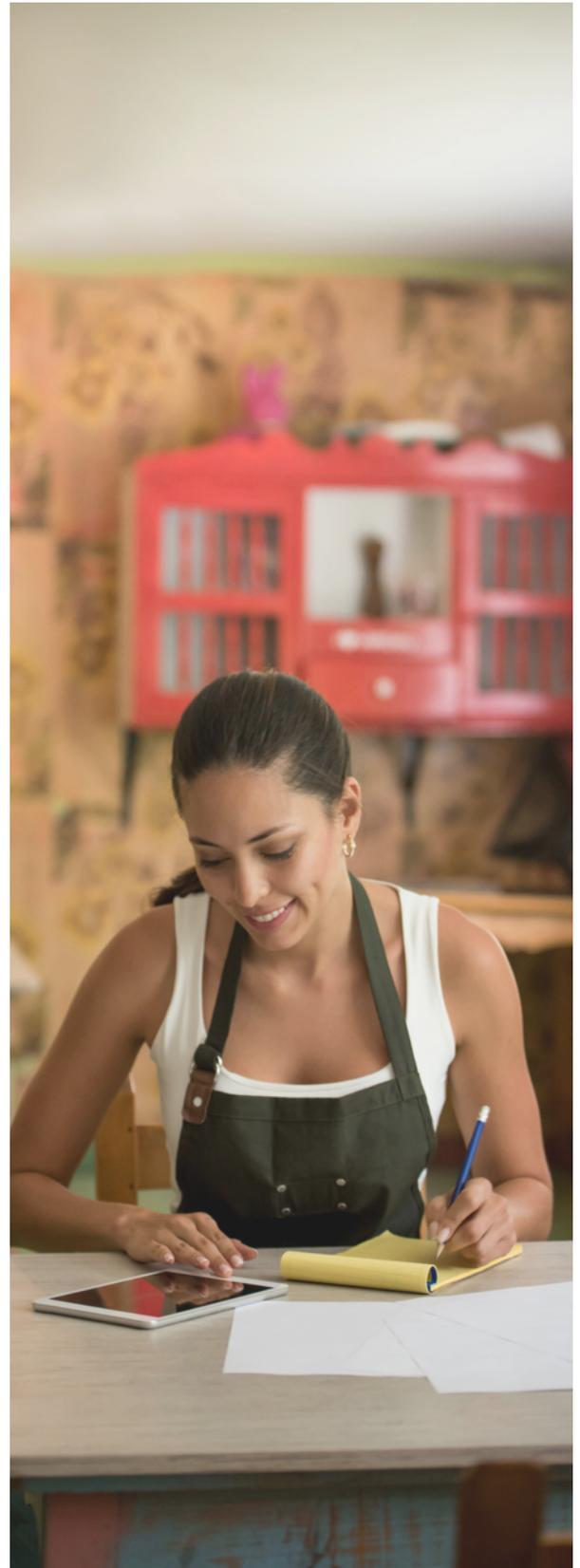


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Environmental Sustainability and Climate Change

Little is known about the perceptions and attitudes of small business owners—especially small business owners of historically underrepresented groups—regarding the effects of climate change and environmental sustainability practices. Studies conducted to understand the unique relationship between business owners, climate change, and sustainability have mostly focused on large corporations or were conducted outside the U.S. Existing research from other countries suggests that access to environmental sustainability practices and regulatory enforcement are associated with small businesses taking greater environmental action (e.g., increased recycling).¹⁷ The lack of U.S.-specific studies indicates a need to better study and support small businesses in the U.S. as they navigate environmental sustainability and climate change.

Additionally, in recent years, climate change has had a perceivable impact on businesses. In 2021, a small survey from the San Francisco Federal Reserve found that about one third of surveyed businesses stated that climate change had already had “an observable impact on [their] firm’s revenues, costs, or investments,” and a majority expected this to be the case in the future.¹⁸ The increasing risk from climate change will likely have a disproportionately greater impact on minority-owned businesses, as they will need to stretch their financial resources to cover risk management strategies in the event of increasing natural disasters.¹⁹ There is a growing recognition of the need for new and targeted public policy and funding to assist these vulnerable businesses.²⁰ Our survey and qualitative interviews provide additional insights into this looming crisis.

Research Contributions

This report presents the results of an exploratory study conducted with small business owners and business executives located in Arizona to understand their experiences recovering from the COVID-19 pandemic, accessing financial capital, and engaging with climate change and environmental sustainability practices. In our study sample, we prioritized business owners, entrepreneurs, and business executives from underrepresented backgrounds to address gaps in the literature on ethnic small business owners and bring to light racial and ethnic disparities. We performed statistical tests to assess whether differences observed among racial and ethnic groups were statistically significant. Significance was assessed at a p-value less than or equal to 0.10.

Study Design

Our approach included a broad examination of attitudes collected through a carefully crafted questionnaire fielded by telephone as well as the web and collecting rich observations through structured interviews with business owners. Throughout the study, we leveraged the expertise of members of an advisory committee made up of representatives from community-based organizations, chambers of commerce, and other business-serving organizations that represent entrepreneurs of color to inform and guide our research. The study was approved by the UCLA Institutional Review Board to protect the privacy and confidentiality of participants.

Telephone Survey and Web Survey

We partnered with survey vendor WestGroup Research to deploy the telephone survey. Given the explorative objective of this baseline research, a telephone survey approach was selected to allow interviewers to probe respondents and clarify complicated topics such as “sustainability” to ensure a full understanding of the questions. This survey mode allowed interviewers to keep the respondents engaged given the length of the survey. This approach also allowed us to target businesses owned by people of color, particularly those with limited access to technology. To reach entrepreneurs of marginalized backgrounds, we used directory lists that focus on Latino-, Black-, and Asian-owned businesses to create the sampling frame. More details on sampling are available in Appendix A.

Unfortunately, getting an adequate oversampling of ethnic-owned businesses was challenging because entrepreneurs of color only own a little over a quarter of all businesses in Arizona.²¹ Given the low participation rate through the telephone survey, we also deployed the survey through the web to increase the sample size. In addition to the directories used for the phone survey, we also reached out to business-serving organizations in Arizona to invite their members to participate in the web survey (see Appendix A). We limited the scope of our study and criteria for participation to business owners,

individuals in executive decision-making positions, or managers overseeing the day-to-day of the business. Respondents also had to represent small businesses, which we define as those with less than 500 employees—the definition used by the U.S. Small Business Administration (SBA).²²

The telephone survey questionnaire consisted of 52 questions and was designed to take 25 minutes to complete, whereas the web survey consisted of 45 questions and was designed to take 20 minutes to complete. More information on the differences between the phone and web surveys is available in Appendix A. In addition to demographic questions related to the business owner, the survey covered the following modules:

1. Firm Characteristics
2. COVID-19 Impacts and Access to Capital
3. Adoption of Technology²³
4. Climate Change Impacts
5. Environmental Sustainability Practices
6. Emergency Preparedness
7. Energy Burden²⁴

A key asset of our team and partnership with WestGroup Research was the collective expertise in surveying minority business owners in a culturally competent manner. First, participants could take both the telephone and web survey in English, Spanish, Korean, or Mandarin. Participants were compensated with a \$10 gift card for their participation in the telephone survey. Given the low participation during the telephone survey, we increased our incentive to \$20 for participants in the web survey. The final sample from the telephone and web surveys was 445 respondents. Survey responses were collected from November 2022 through September 2023. We include the following three major groups in the analysis: Black non-Latino, Latino, and white non-Latino. Due to a low sample size, we do not include Asian non-Latino or “other” identifying race and ethnicity-owned businesses in the analysis.

To examine racial and ethnic differences in the survey responses, we cross tabulated the responses to key questions and the race and ethnicity of the business owners. The findings below are based on cross tabulations that have a p-value of 0.10 or less. The reported proportions and percentages are taken from those tabulations. Future analyses will conduct additional statistical testing for specific within question item responses and outcomes and estimate the independent influence of race and ethnicity after controlling for other characteristics. To examine racial and ethnic differences in the survey, we cross tabulated the responses to key questions and the race and ethnicity of the business owners. The findings below are based on cross tabulations that have a p-value of 0.10 or less. The reported proportions and percentages are taken from those tables. Future analyses will conduct additional statistical testing for specific within question item responses and outcomes, and estimate the independent influence of race and ethnicity after controlling for other characteristics.

Interviews

Our research team conducted five semi-structured, 1-hour long interviews with small business owners and executives in Arizona. The interview guide was designed to be supplementary to the survey and sought to understand the participants' lived experiences with concepts covered in the survey. The interview guide also included a glossary of definitions that interviewers could access if questions arose about the topics discussed. Interviews were conversational in nature and allowed space for both the interviewer and interviewee to discuss relevant topics and stories.

Interviewees were recruited using purposive sampling from the Arizona survey respondents and were selected for diversity in identity (e.g., race and ethnicity, gender, etc.), industry type, and survey responses. Interviews occurred between July 2023 and August 2023 using Zoom. Interview participants were compensated with a \$50

gift card.

Transcripts were used to develop narrative profiles that synthesized interview data to illustrate a story about each business owner or executive. Interviewees were given a choice to opt for anonymity and to review their respective narrative profiles before publication.

Two of the interview participants identify as Latino, one as Black, one as Asian, and the last as multiracial Black, white, and Latino. Three of the businesses are owned by women. All interviewees are owners of or major stakeholders (i.e., executives) in their respective businesses. Two respondents belong to businesses with fewer than five employees, and the remaining have between five and 19 employees. These business owners are located in major metropolitan areas including Phoenix and Tucson.



Phoenix, Arizona downtown skyline.
Photo Credits: Sean Pavone, Stock Photos

Key Findings

Among the 445 survey respondents, half of the businesses sampled had a Latino owner (49%) and close to half (48%) were women-owned (Table 1). Nearly three-quarters of respondents (73%) reported conducting business in a storefront location and half (51%) indicated they were the business owner or a majority stakeholder. Close to two-thirds (62%) of businesses surveyed have less than 10 full- or part-time employees. About two-thirds (63%) of businesses surveyed were located in the Phoenix Metropolitan Statistical Area (MSA). The findings included in this report are unweighted survey responses and exclude data for the answer choices “don’t know/refuse” from total counts.

Participants were asked to describe the sector or industry that best represented their firm. The most common industries represented in

the sample were “construction” (16%), “professional, scientific, and technical services” (16%), and “accommodation and food services” (10%). The sample is not reflective of the distribution of businesses in Arizona as reported in the 2021 Annual Business Survey (ABS)²⁵ (see Table 3 in the Appendix A for comparison). For example, we oversampled businesses in the “construction” and “manufacturing” industries but undersampled businesses in “health care and social assistance” and “retail trade”. Future analyses of survey data will include sample weights to present findings more representative of Arizona small businesses.



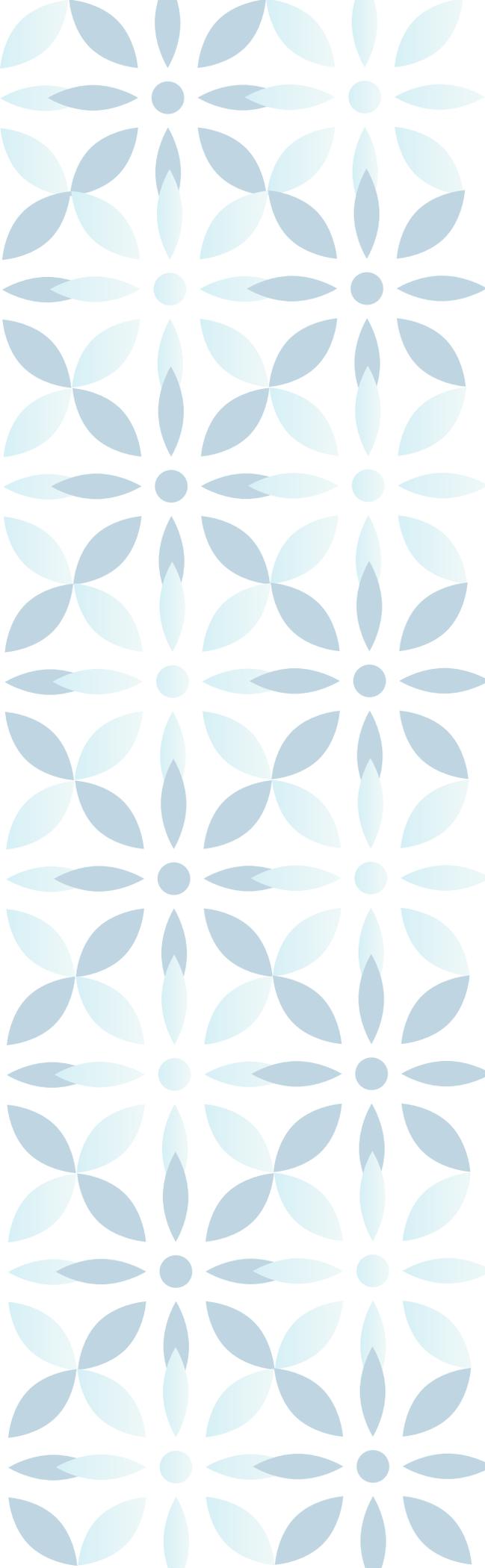
Bisbee Arizona.
Photo Credits Freeprk

Table 1: Sample Characteristics of Survey Respondents

Sample Characteristics	Total Count (n)	Share
Race and Ethnicity		
Latino	216	49%
Black	73	16%
Asian	28	6%
White	106	24%
Other	22	5%
Woman-Owned	213	48%
Business Location		
Home-Based	115	26%
Storefront	326	73%
Role in the Business		
Owner or Major Stakeholder	229	51%
Executive Management	100	22%
Manager Overseeing Day-to-Day	116	26%
Number of Employees		
1 to 9	278	62%
10 to 99	153	34%
100 to 499	14	3%
Metropolitan Statistical Area (MSA)		
Phoenix	282	63%
Tucson	68	15%
Nogales	21	5%
Yuma	19	4%
Rest of Arizona	55	12%
Total Number of Businesses	445	

Notes: The race and ethnicity question was asked in regard to the business owner. "Other" includes survey respondents who selected Native Hawaiian or Other Pacific Islander, American Indian or Alaskan Native Indigenous Community, "Other," "Not sure or don't know," or if the participant selected two or more options that do not include Latino. Given the small sample of respondents representing "Other" race and ethnicity (n=22) and Asian-owned businesses (n=28), their responses are not included in the analysis. MSAs were assigned using zip codes, zip code tabulation areas, and core-based statistical areas (see Appendix A).

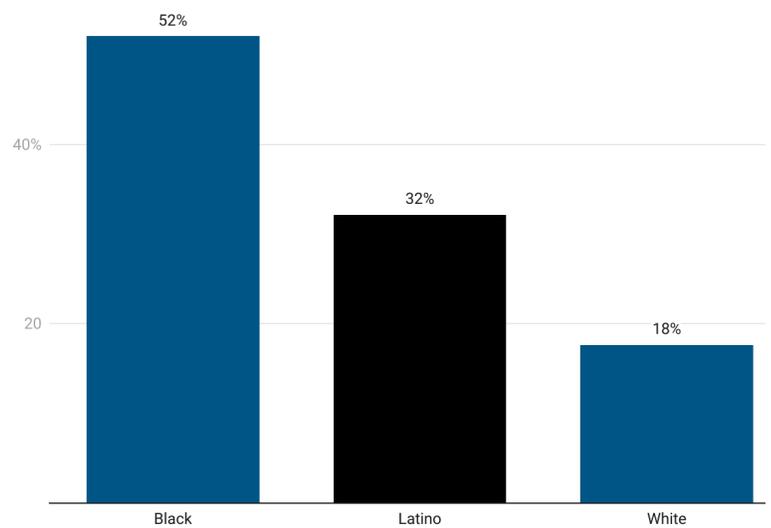
Source: LPPI analysis of original survey data collected by WestGroup Research from November 2022 to September 2023.



Key Finding 1a: Black-owned businesses and Latino-owned businesses were significantly more likely to report challenges to accessing financial capital than white-owned businesses.

Approximately one-third (32%) of surveyed small businesses experienced challenges in accessing capital for their businesses. There were considerable and statistically significant differences in challenges to accessing capital by race and ethnicity. Nearly three times as many Black-owned businesses reported challenges to accessing capital compared with white-owned businesses (52% and 18%, respectively). Latino-owned businesses (32%) reported challenges at a lower rate than Black-owned businesses but at a rate nearly two times higher than white-owned businesses.

Figure 1. Share of Businesses Experiencing Challenges to Accessing Capital by Race and Ethnicity of the Owner



Source: LPPi analysis of original survey data collected by WestGroup Research from November 2022 to September 2023.

Key Finding 1b: Among those who reported experiencing challenges in obtaining funds or capital for their business, a greater percentage of Black- and Latino-owned businesses reported low or poor credit scores, unaffordable interest rates, and an insufficient amount of capital as challenges.

Figure 2 displays the types of capital access challenges business owners reported experiencing (for those who reported facing any challenges). Observed differences by race and ethnicity are statistically significant for all three challenges presented: low or poor credit scores, unaffordable interest rates, and insufficient capital. Black- and Latino-owned businesses were between two and five times more likely to report low or poor credit scores as a barrier to capital access than white-owned businesses (57%, 25%, and 11%, respectively). They were also nearly two times more likely than white-owned businesses to report unaffordable interest rates as a challenge. This pattern continued with insufficient amounts of capital, which Black and Latino-owned businesses were also two times more likely than white-owned businesses to report as a challenge. Over two-thirds of all businesses surveyed (71%) reported the inability to access different forms of capital as a challenge; however, no statistically significant differences by race and ethnicity were observed for this fourth challenge.

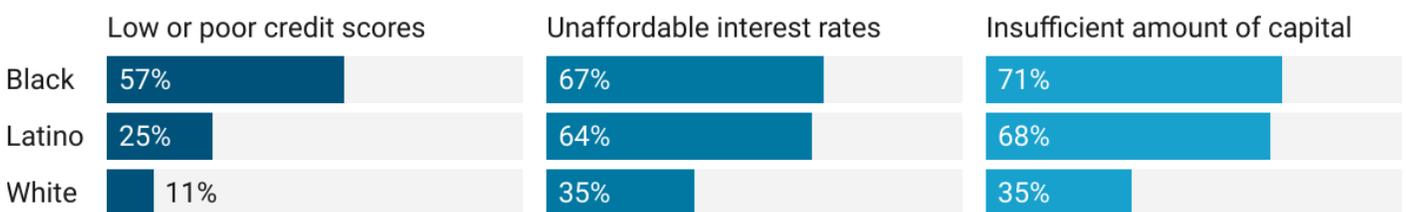
Interviewees shared their experiences with starting their businesses. Kimberly Trevino, owner of It Starts Here, a construction and contracting business, recalled:

“I used my 401K funds to be able to buy things. Shortly after, our storage unit was robbed, and it was about \$5,000 worth of tools. So I had tried to get help to replace the items, but because I had started in the middle of COVID, I was told that I couldn’t [access federal small business financial support].”

Contrary to Kimberly, Courtney Williams, a maternal health technology developer and owner of Emagine Solutions Technology, shared how much her business benefited from grants from public and private institutions:

“The main support has really come from internally as well as the grants, like from the National Science Foundation, Flynn foundation, [and] an Arizona-based organization, the Roddenberry Foundation, is another one that we got a grant from. I could keep [on] going, but mostly the grant organizations have been really helpful for us.”

Figure 2. Challenges Experienced in Accessing Capital by Race and Ethnicity of Business Owner



Note: Only 5% of white-owned businesses surveyed (n=18) reported experiencing challenges in accessing capital.
Source: LPPI analysis of original survey data collected by WestGroup Research from November 2022 to September 2023.

PROFILE: Courtney Williams



Photo Credits: Courtney Williams



Photo Credits: Courtney Williams

Courtney Williams is a Tucson, Arizona native who prides herself in being an Arizonan. She feels that her family has influenced how she views the world, allowing her to be more open-minded. Courtney started her business, Emagine Solutions Technology, in 2017. Emagine Solutions Technology is a maternal health technology business focusing on providing a new level of care for pregnant people by combining handheld ultrasounds and remote patient monitoring software in hospitals, in clinics, to self-

practicing physicians, and for the general public. The services allow users to conduct ultrasounds wherever needed, while the smart device applications enable patients and providers to have remote care monitoring services.

When her sister experienced a difficult pregnancy, Courtney was motivated to explore ways in which maternal health could be made safer. She and her husband submitted the start-up concept to a pitch competition and won. From there, they were awarded a seed grant to initiate their beta prototype of the ultrasound and Emagine Solutions Technology was officially born. Courtney's husband was instrumental in developing the business, as he had software and technology education experience. Emagine Solutions Technology offers services in both English and Spanish, catering to clients across the United States and South America. The business' staff includes technology interns, expert advisors such as physicians and nurses, and information technology professionals who support the development of maternal health technology.

Emagine Solutions Technology has relied on grants and awards to grow as a business. In 2019, the National Science Foundation awarded Emagine Solutions Technology the Small Business Innovation Research Award for ingenuity. In early 2020, Courtney was ready to kickstart their ultrasound technology when COVID-19 hit and stalled the launch. Courtney applied for a few grants during the pandemic and was awarded another Small Business Innovation Research grant in 2021 to expand their patient app and monitoring software. Since 2020, Emagine Solutions Technology has been awarded grants from the Flinn and Roddenberry Foundation. These grants and others allowed the team to keep the start-up afloat and continue the developmental phases of the technology they now offer. A grant from the Arizona Commerce Authority allowed Emagine Solutions Technology to remain open and continue payroll for staff. Courtney recalls the challenges of having stakeholders disregard their ideas initially as a woman-owned business. She discussed how various organizations tried to redirect her to focus on cardiology or kidney care rather than maternal health. Courtney recalled that these stakeholders were "all white men, all heterosexual white men. They were

very homogeneous. They kept trying to tell us that the maternal health opportunity wasn't big enough." Despite these challenges, Emagine Solutions Technology has obtained U.S. Food and Drug Administration clearance for its products and has successfully established itself as a leader in maternal health technology.

Climate change is something that Courtney thinks about every day living in Arizona. She has noticed that the desert is becoming hotter and drier every year. She recalls from childhood that monsoon patterns provided cooling effects during the summer and were predictable weather events. However, between 2000 and 2003, the weather patterns changed drastically, bringing on drought conditions that have only worsened each year. Seeing climate change's impact on her home state, Courtney prides herself on her company's minimal carbon footprint by running all operations remotely.

“Our maternal health app is growing fast, and we’re getting a user base without investing gobs and gobs of money on marketing, but we’re still able to connect with the people.”

She is constantly reimagining ways to reduce extra product packaging to further her business' sustainability. She stated, “I don't want to provide a lot of extra packaging to people or give them things they're just going to throw in the landfill, and [want to] be very purposeful and diligent about making sure that we don't have a carbon impact.” Emagine Solutions Technology has transitioned its marketing efforts digitally and limited the number of unnecessary printed materials, such as flyers for products or advertisements at clinics and hospitals. Because she has to travel frequently to negotiate sales and present devices at conferences, Courtney wants to learn how to offset these carbon emissions.

As a start-up healthcare technology company, Courtney views success for her business in several ways. From a top-level longevity perspective, she sees sustained revenue as the most important determinant of success. However, from a start-up perspective, she also believes that market share, brand recognition, and customer trust can make her organization successful in the long term. She stated, “Our maternal health app is growing fast, and we're getting a user base without investing gobs and gobs of money on marketing, but we're still able to connect with the people.” Over the next couple of years, Courtney hopes that Emagine Solutions Technology's innovations for maternal health will become available for everyone to use during pregnancy. A critical goal for her team is to ensure that maternal health applications can be readily accessible to all, especially with the growing OB/GYN shortage that is being faced in the United States.

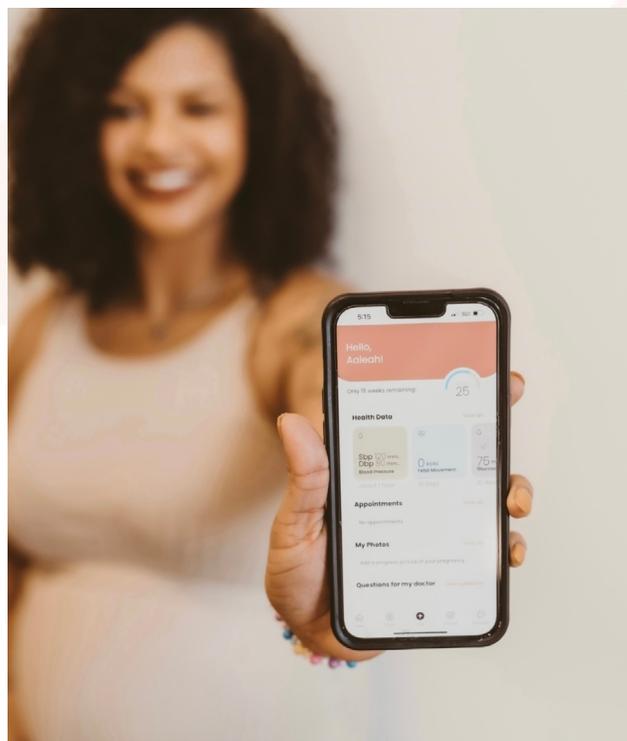


Photo Credits: Courtney Williams

Key Finding 2a: A greater share of Black-owned businesses reported that the COVID-19 pandemic had a “large negative effect” on their businesses.

We asked respondents to describe the impact that COVID-19 had on their businesses. Over half of all respondents (57%) reported that the pandemic had either had a “moderate” or “large” negative impact on their business, whereas about one in eight businesses (13%) reported a positive impact. Among respondents who reported a negative impact, Black-owned businesses were more likely than other groups to report a “large negative effect” (Figure 3). This difference in reported impacts of COVID-19 are statistically significant.

We also asked respondents whether they had applied for financial assistance during the pandemic. Over half (54%) of all businesses surveyed applied for financial assistance from the federal, state, or local government during the pandemic with no statistically significant differences by race and ethnicity of the business owner.

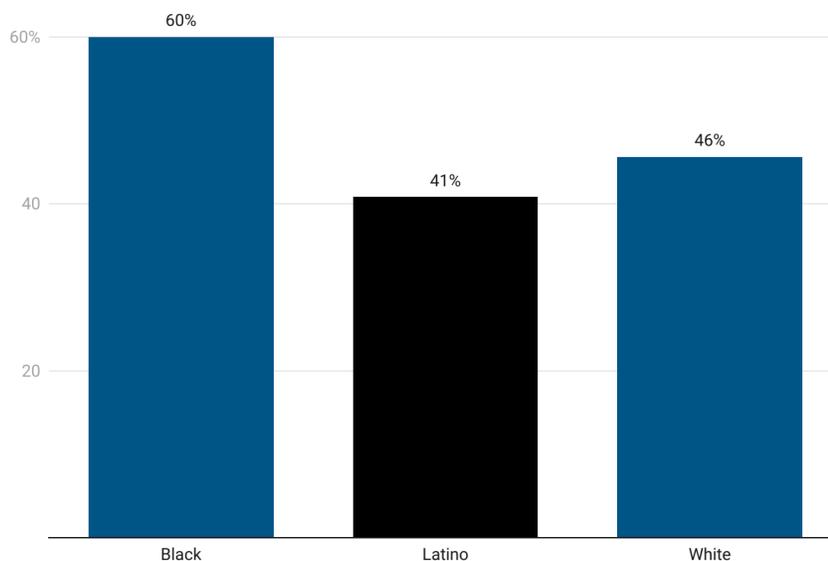
The pandemic disrupted growth plans for many business owners. One interview participant, Jesse Villegas, owns a coffee shop called The Porch. He shared that the pandemic started when he was first opening his business. He accounted for how this massively disabling event left him asking friends and family for help. He stated:

“I bought a business two weeks before COVID. Now I’m applying [for] help with COVID, but I’m so brand new. I got rent and payroll and all these things still needing to be paid. So, the support came from immediate friends and family, because I couldn’t get it from the government at the time. And leading up to buying the business, I just wasn’t calculating that this was going to come and turn the world upside down.”

Similarly, Courtney Williams shared that the pandemic negatively impacted her business (Emagine Solutions Technology):

“What led me to apply to COVID financial assistance was because sales were down. It was weeks we didn’t make anything, and I had to pull from savings just to stay afloat.”

Figure 3. Share of Businesses that Reported a Large Negative Impact Due to COVID-19 by Race and Ethnicity of the Owner

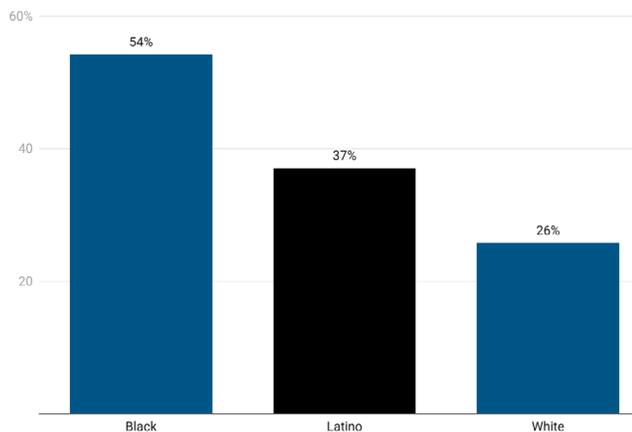


Source: LPPi analysis of original survey data collected by WestGroup Research from November 2022 to September 2023.

Key Finding 2b: A greater share of Black- and Latino-owned businesses, compared with white-owned businesses, anticipated a need for financial assistance or additional capital in the next six months.

Figure 4 presents data for actions that surveyed businesses anticipate needing to take in the next six months as part of their recovery from COVID-19.²⁶ Over one-third (38%) anticipated they would need financial assistance or additional capital. Response rates for this question varied across racial and ethnic groups, and the observed differences were statistically significant. Twice as many Black-owned businesses were likely to report a need for financial assistance than white-owned businesses (54% and 26%, respectively). Latino-owned businesses reported the need for financial assistance at a lower rate than Black-owned businesses but were nearly one-and-a-half times more likely to do so than white-owned businesses.

Figure 4. Need for Financial Assistance as Part of COVID-19 Recovery by Race and Ethnicity of Business Owner



Source: LPII analysis of original survey data collected by WestGroup Research from November 2022 to September 2023.

Additional actions respondents anticipated taking included identifying a new supply chain and hiring new employees. Approximately one-third (34%) of respondents reported the need to address the former while three-quarters (76%) of all respondents anticipated needing to identify and hire new employees in the next six months. However, there were no statistically significant differences in these anticipated actions by race and ethnicity.

Although interviewees did not explicitly speak to their recovery efforts, they described how integral COVID-19 financial assistance was for their business during this time. Priyanka Miller, owner of Mil Geospatial, a GIS Company, said:

“We didn’t really get any new work during that time. We just had projects that sustained us. COVID financial assistance was a huge help because the months that we were stalled on our invoices being processed, the very small assistance we got really helped me make payroll during those months, because obviously, as a small business, you know, cash flow, or having enough cash on hand is always an issue.”

John Samora, owner of The Greenhouse on Woodland, a full-service wedding venue, said:

“We didn’t lose any business. And [the PPP application process] was actually very simple. There were some steps that were some hoops that you had to jump through and a little bit of this and a little bit of that, but for the most part, it wasn’t very egregious at all. [The PPP money] went primarily for insurance payments, mortgage payments, utilities and things like that. It really helped a lot.”

PROFILE:

Priyanka Miller



Founder and owner of Mil Geospatial, Priyanka Miller.
Photo Credits: Priyanka Miller

Born and raised in India, Priyanka Miller is a mother of two. She holds a master's degree in management and information systems. In 2011, Priyanka started her company, Mil Geospatial. She recalls, "It wasn't a big business plan or a business idea. I just needed the flexibility. I became a mom." Mil Geospatial is a Geographic Information Systems (GIS) consulting firm in the Phoenix metro area that is recognized as a small, minority-owned enterprise. For more than 10 years, they have worked closely with both private and public sector clients, offering a full spectrum of GIS services.

Priyanka defines herself as "mostly self-taught over the years" and has acquired hands-on experience from navigating the industry. Before Mil Geospatial had an attorney and human resources support, Priyanka learned to do all of their functions herself and wore many hats as a business owner.

Priyanka identifies as a woman of color and understands how society would deem that "two demerits." Often, she and her employees are the "only women in the room," and "having to deal with that has been challenging." These race and gender dynamics took time for her to fully understand and navigate.

Mil Geospatial has always been remote. As a team, they allowed for flexible working hours to help cater to a busy family life. The major difficulties that Mil Geospatial faced during the pandemic were delays in invoices being processed and an inability to acquire new work. These challenges were slightly alleviated when the business received COVID-19 government assistance, which was used to help maintain payroll.

GIS is very important in mapping climate change, areas of high heat indexes, and glaciers shrinking over time. Priyanka prioritizes climate change and believes that environmental sustainability goes "beyond the business. It's just how we live as a family." She thinks climate change will eventually impact the ability to obtain field data, making their jobs very difficult.

Priyanka and the Mil Geospatial team do what they can to practice environmental sustainability and are interested in learning more about the efficient use of energy and having access to a consultant to guide the team in implementing more strategies of sustainability during day-to-day operations. Being remote, the team does not have to drive to work, which positively impacts the environment. Priyanka's remote office is completely powered by solar energy from the solar farms in Arizona. The team also reduces its carbon footprint by recycling old hardware.

Priyanka said that success for Mil Geospatial looks like a "safe and inclusive space where our team is thriving, our clients are happy with us. It's not just merely surviving but thriving, expanding, and growing. I have a team who loves to work here, and I think that's what I strive for." Priyanka sees herself as being there to serve the needs of her team and clientele in the best way possible.

PROFILE:

Jesse Villegas



Photo Credits: chevanon, Freeprik



Photo Credits: svetlanasokolova, Freeprik

Originally from the Phoenix suburbs, Jesse Villegas is a young entrepreneur living in Prescott, Arizona, where he moved three years ago. Prescott is a small town about two hours northwest of Phoenix. In 2020, Jesse purchased his business, The Porch, when a friend's parents sold it to him. The Porch offers quality coffee, pastries, food, and a community space to form and nourish

relationships. The Porch brings in a diverse crowd. About half of his customers are locals and half are tourists, considering Prescott is a major tourist destination (especially for Phoenix residents).

Before purchasing the shop, Jesse worked in a ministry in Phoenix. He had no prior experience operating and managing a business but saw it as an opportunity to challenge himself and create meaningful change in Prescott. When reflecting on why he pursued entrepreneurship, Jesse stated, "I want to help people. I want to empower people and be a place where I can help bring the community together. You can do that at coffee shops—you're immersed in a community. You can get the pulse of a community by opening your doors."

Jesse bought The Porch only two weeks before the announcement of the COVID-19 pandemic. The pandemic was challenging while navigating the developmental stages of The Porch and the expenses that came with the purchase. During the pandemic, many businesses received support either as grants or PPP loans. Unfortunately, Jesse was not eligible to apply for this financial assistance as the short length of time he had owned the business disqualified him. Because Jesse could not rely on the federal government for support in navigating COVID-19, he depended on family and friends. As the pandemic persisted, Jesse received a small amount of local government funds, which covered utilities and rent for the space.

Climate change has recently become urgent to address at The Porch. Jesse sees the impact that extreme heat is having in Prescott. Growing up, he recalls the town being about 13 to 20 degrees cooler on average than Phoenix during the summertime. This is not the case anymore. Summers in Prescott are getting warmer and warmer. Jesse has a mixture of swamp coolers and fans in the coffee shop to ensure his customers and staff stay cool. Despite their best efforts to provide a cooler environment, the fans need to be more powerful to keep temperatures lower inside. Since Jesse does not own the space, investing in a central AC unit is not currently attainable.

The rising temperatures in Prescott have forced Jesse to close

a section of the coffee shop - the sunroom - due to heat safety concerns. There are no cooling devices in the sunroom, making it too hot to for customers to occupy. In prior years, customers used the sunroom throughout the summer as a seating area while enjoying coffee or chatting. This past summer, the temperatures in the sunroom were too high, risking an unsafe environment for The Porch's customers. Shutting down the sunroom has

“I want to help people. I want to empower people and be a place where I can help bring the community together. You can do that at coffee shops—you’re immersed in a community. You can get the pulse of a community by opening your doors.”

led to more crowded conditions within the central space of the shop, potentially impacting temperatures in that space due to increased body heat. The warmer weather brings a new challenge that Jesse faces in keeping his business open and providing a welcoming and safe environment for all who utilize the space.

The challenges Jesse faces due to climate change have led him to initiate conversations about environmental sustainability initiatives at The Porch. Jesse hopes to swap their packaging to be compostable or recyclable. However, the expensive nature of these packaging options can create a financial strain on The Porch. Jesse says that adding environmentally friendly packaging has the potential to make a difference in providing a livable wage for his employees. He states, “To make the shift, something has got to go, and right now, I am not even paying myself.” Financial stability must come before sustainability practices. In the future, Jesse envisions The Porch becoming an example and role model in sustainability for the community of Prescott. To reach this goal,

Jesse emphasizes the importance of having access to the proper resources and connections to make it possible.

Jesse views inclusion and community as the core tenets of The Porch's success and longevity. At The Porch, “you’re immersed in a community. You get your professionals, students, civic leaders, and everything.” Nourishing this community is crucial to Jesse, as it allows for transformation and empowerment. To ensure success, Jesse will continue to uphold the three pillars of The Porch: coffee, conversation, and community.



Photo Credits: Marcos Elihu Castillo Ramireze, Stock Images

Our analysis shows that one in five (20%) respondents indicated climate change has had a current observable impact on their firm's revenue, costs, or investments. However, the impacts of climate change will continue to grow over time. When asked about the future, two-fifths (40%) of respondents reported they anticipate climate change will impact their firm's revenue, costs, or investments, as well as their workers' safety and health. Reporting of current and anticipated impacts of climate change did not vary significantly by race or ethnicity of the business owner.

Key Finding 3a: Black- and Latino-owned businesses are more likely to rank risks resulting from climate change as a high or medium priority than white-owned businesses.

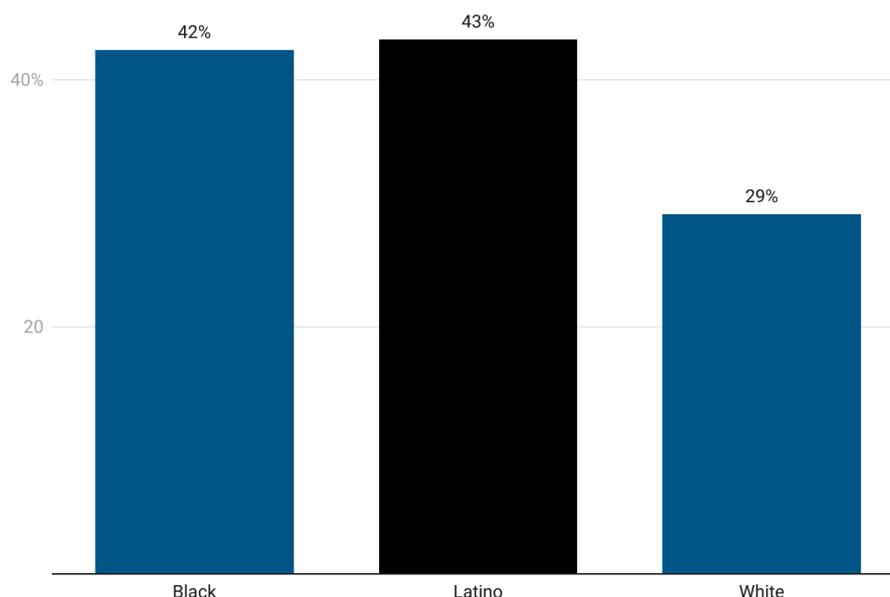
We further examined how small businesses prioritize risks resulting from climate change relative to other business risks. More than half (61%) of the businesses surveyed ranked the risks resulting from climate change as a low priority. However, we did observe differences in ranking by race and ethnicity of the business owner to be statistically significant. Figure

5 presents the share of businesses that rank the risks resulting from climate change as a high or medium priority. Latino- and Black-owned businesses were about one-and-a-half times more likely to rank climate change as a high or medium priority than white-owned businesses.

Kimberly Trevino, owner of the construction and contracting business It Starts Here, reflected on how recent severe summers in Arizona have affected business operations. She expressed:

“I think some more safety regulations will [be] put in place in regards to the heat. I’m sitting outside right now. I can handle it. I have my headband. But a person who’s not accustomed to the heat would not be able to just hang outside in this weather or be in the sun. I’ve had employees that have had to go into urgent care and get medical attention, because they thought, ‘Oh, I have a stomach bug.’ I’m like, ‘no, you’re puking, and you’re having stomach issues because you were dehydrated. You were drinking water, but you weren’t replenishing your electrolytes.’”

Figure 5. Share of Businesses Ranking Risks Resulting from Climate Change as a High or Medium Priority by Race and Ethnicity of Business Owner



Source: LPPI analysis of original survey data collected by WestGroup Research from November 2022 to September 2023.

PROFILE:

John Samora



Photo Credits: John Samora

Originally from Colorado, John Samora has been a resident of Arizona for nearly 30 years. His wife Alison lived in the mountains of Northeastern Arizona in Pinetop-Lakeside when they first met. In 2016, John moved to Pinetop-Lakeside, where he and Alison were married and started their business, The Greenhouse on Woodland.

Before starting the business with his wife, John was a newspaper photographer recruited from The Cincinnati Enquirer to The Arizona Republic. When he transitioned out of that role, the couple bought an old nursery called Pico's Nursery and transformed it into The Greenhouse on Woodland. The business has brought in several million dollars to the local economy and supports different types of businesses, including hotels, photographers, and caterers.

While the pandemic was not detrimental to the business, revenue did decrease due to the limited size of wedding parties. John saw approximately \$3,000 in losses per wedding (the average wedding cost for 60 people was about \$6,500). With the reduction in revenue, John applied for financial COVID-19 assistance. He applied for a PPP loan and requested about \$15,000 to support general operations impacted by the wedding party reductions.

He recalled, "[The PPP money] went primarily for insurance payments, mortgage payments, utilities and things like that. It really helped a lot."

John and Alison know climate change will impact their business and their livelihood in years to come. For instance, John iterated, "I don't think there's any question that [climate change] is going to impact [my business]. July is always our hottest month, and for us, hot means 90 degrees. Well, this July [in 2023], we had several days where we almost hit 100. I can't imagine people having an outdoor wedding in [the hot temperatures]. Even though we have a big canopy of trees that keeps things cool. We don't have air conditioning in our building. We're in Pinetop. You don't need air conditioning here." The rising temperatures will undoubtedly impact business operations in years to come.

The Greenhouse on Woodland incorporates environmental sustainability practices. John uses confetti made from tree leaves rather than plastic, paper, or glitter. Additionally, although he offers a smoking area for his clients, John is aware of the region's safety precautions against wildfires or man-made fires. Throughout the wedding venue, he has steel pots to contain cinders from cigars and wood cinders burned for nighttime wedding events. He has invested in heavy-duty ampere (AMP) plugs for the wedding venue to avoid the usage of diesel generators on food trucks and to avoid burning fossil fuels. John hopes that all the steps taken can help minimize environmental impacts and keep his business safe.

One very popular wedding tradition, which John and Alison borrowed from the Pont de Arch bridge in Paris, is offering newlyweds a "Lock of Love." This is a padlock engraved with the couple's first names and the date of their wedding, which they attach to a decorative steel arbor in the garden as part of the wedding ceremony. Small details like this exemplify how much thought is put into making couples' experiences at The Greenhouse on Woodland special. John hopes that more LGBTQIA+ weddings will occur on their property in years to come. Regardless of orientation, The Greenhouse's goal is for all couples to "have a really good, loving ceremony and a great party afterward."

Following the survey module on climate change, we asked participants to identify their level of understanding about the impact of environmental sustainability practices on their business, as understanding sustainability will be critical to adjusting to climate change. Approximately one third (32%) reported a “very good” understanding of environmental sustainability; there were no statistically significant differences by race or ethnicity of the business owner.

Key Finding 4a: Black-owned businesses were twice as likely to report a greater intent to develop a sustainability plan in the future than white-owned businesses.

Key Finding 4b: White and Latino-owned businesses were nearly one-and-a-half times more likely than Black-owned businesses to report they do not anticipate the need to develop a sustainability plan in the future.

We also examined whether respondents had developed a formal sustainability plan and the status of that plan (Figure 6). Among all businesses surveyed, a quarter reported that they either already have a plan or were currently developing one, with little variation by race and ethnicity of the business owner. Black-owned businesses, however, were twice as likely as white-owned businesses to report that although they have not had the opportunity to design a formal plan, they intend to in the future. White- and Latino-owned businesses were nearly one-and-a-half times more likely than Black-owned businesses to report they do not anticipate the need for a sustainability plan. Response differences by race and ethnicity are statistically significant.

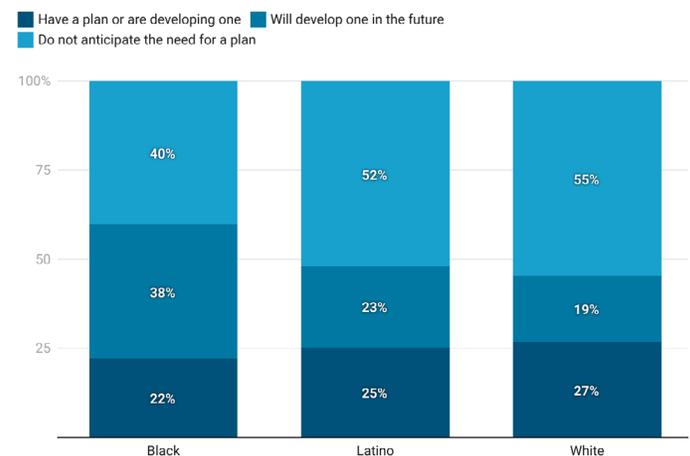
All interviewed business owners reported thinking about environmental sustainability to some extent. Priyanka Miller expressed her desire to learn more about sustainability efforts that she can implement in her business:

“I don’t see many articles that specifically target small businesses in the realm of sustainability. So I would be very curious and open to learning more about [sustainability], hearing more about resources, or even work with a consultant who can guide us, how we can implement some [sustainability tools] within our day-to-day operations.”

Jesse Villegas expressed how difficult it is for small businesses to be sustainable because of the associated costs. He stated:

“So when we talk about [sustainability]. . . It really comes down to like systems and costs. . . I know that that [change from unsustainable to sustainable products] could be the difference between livable wages. . . And right now I’m not even paying myself. So it’s not like I can’t cut from my budget. So I’d be actually cutting from my employees budget to make that happen.”

Figure 6. Reported Development of a Formal Environmental Sustainability Plan by Race and Ethnicity of Business Owner



Source: LPPI analysis of original survey data collected by WestGroup Research from November 2022 to September 2023.

PROFILE: Kimberly Trevino



Photo Credits: Kimberly Trevino



Photo Credits: Kimberly Trevino

Kimberly Trevino is a first-generation Latina who comes from a self-described “all women” family with five sisters. She is the owner of It Starts Here, a construction and contracting business in Arizona. Originally from California, Kimberly and her family moved to Gilbert, Arizona when she was in the third grade, where she has lived ever since.

Prior to entering the construction industry, Kimberly studied biomedical science and chemistry. At the start of the pandemic, her mental health was not where “it should have been,” and Kimberly started to find “a lot of joy in building stuff, putting stuff together, learning how something is, you know, constructed;

block walls, wood, metal framing...all of that.” She began taking courses and completing do-it-yourself (DIY) projects. Kimberly’s entire family, especially her wife and sisters, encouraged her to open the business.

When asked why her business is called It Starts Here, she moved her hand over her heart and said, “Because it comes from here.” She explained that being a first-generation Latina from a family full of women, it has been challenging to work in a male-dominated field. She went all-in on the business, pushing through any challenges she had to overcome and constantly reminding herself that it started with her heart. She has to keep pushing through because “that is a part of success, to keep on pushing through your failures and keep on learning.”

As a woman in an industry dominated by men, Kimberly is passionate about breaking down stereotypes. Some people hire her because she is a woman, but others are surprised when she’s the person to show up at their door or meeting. Once, a woman answered her door and said, “Oh, I thought I hired a handyman,” in that specific tone.” For Kimberly, it was extremely satisfying when she completed the job and was tipped \$500. She recalled that “it made me feel a lot of pride in my work because not only did I prove someone wrong, I proved another woman wrong. That women can do things, and so if I can do that, you know, I have no limit.”

It Starts Here officially opened in June 2020, at the start of the COVID-19 pandemic. During the pandemic, Kimberly attempted to access financial assistance. Unfortunately, because she began her business during the pandemic rather than prior to it, she was told that her business was ineligible. Kimberly shared, “...I used my 401K funds to be able to buy things.”

Kimberly is no stranger to environmental sustainability. She wishes there were construction-specific dump sites where people could find materials to reuse. She composts sawdust in her wife’s garden, reuses materials on other projects when possible, and builds upcycled creations. In addition, Kimberly has considered switching to a more energy-efficient vehicle. She is also interested in investing in a solar-powered generator that can

harvest enough energy to power a job site for a full day, but those are not currently available.

For Kimberly, comments about climate change centered on extreme heat and water access. Living in the hottest metropolitan city in the U.S.²⁷ and working outside often, she thinks about climate change daily. She recalled, “I’ve had employees that have had to go into urgent care and get, you know, medical attention because they thought, ‘Oh, I have a stomach bug.’ I’m like, ‘No, you’re puking and you’re having stomach issues because you were dehydrated. You were drinking water, but you weren’t replenishing your electrolytes.’”

“I want to be able to take care of my family and have people not stressing about bills and money, but I want to be able to provide more for other people, not just my family, you know, provide someone with a job that they actually like doing or learning how to do. So that’s why I just want to be big. I want people to know who we are.”

In our interview, Kimberly recalled, “Yesterday we got hit with a storm like it started raining really, really hard, and no one was really prepared for it.” She does not currently have an official emergency preparedness plan in place. She cites not having enough time and a lack of knowledge of what to plan for as her biggest barriers in creating an emergency preparedness plan for her business. More recently, Gilbert, Arizona has experienced extreme heat that can quickly dehydrate her team members, rainstorms that flood the streets (making it impossible to travel to or work on job sites), and wind that causes canopies on job sites to fly out. Kimberly reflected, “I will put more thought into it to try

to create something [like an emergency preparedness plan]. But a lot of the emergencies that we’ve had that are unexpected, you know, natural disaster scenarios. We’ve had to come up with right then and there and think on our feet.”

Kimberly already believes that she’s achieved success with her business. She explained, “I have success already because I’m happy with where I’m at in my business, but success is continuously having success...just being filled with gratitude and being proud of my work.”

“I want to be able to take care of my family and have people not stressing about bills and money, but I want to be able to provide more for other people, not just my family, you know, provide someone with a job that they actually like doing or learning how to do. So that’s why I just want to be big. I want people to know who we are.”



Photo Credits: Kimberly Trevino

Conclusion

Throughout this report, we presented the results of a baseline study aimed at illuminating the experiences of small business owners in accessing capital while recovering from COVID-19 and having to adapt to climate change and environmental sustainability demands. Our survey findings on Black- and Latino-owned businesses are consistent with previous studies highlighting the systemic barriers ethnic-owned businesses face to obtaining capital. Findings from our interviews also reflect the challenges ethnic-owned businesses face in acquiring capital.²⁸ One interviewee shared that in order to self-fund her business, she needed to dip into her 401k. A lack of access to funds and capital leaves businesses in precarious financial footing and makes it more challenging for them to keep their doors open during times of economic uncertainty, such as the COVID-19 pandemic.

Our findings on the impact of the pandemic indicate that small ethnic-owned businesses continue to be disproportionately impacted by COVID-19. Black-owned businesses, especially, were more likely to report that COVID-19 had a “large negative effect” on their business than Latino- and white-owned businesses. Similarly, twice as many Black-owned businesses than white-owned businesses surveyed reported a need for financial support in the near future.

Qualitative findings provide further insights to the severity of COVID-19 pandemic impacts as well as the benefits that resulted from government intervention. One interviewee shared that he had only recently opened his business before the pandemic. While he waited to receive government aid, he was forced to rely on friends and family for financial support. Conversely, other interviewees highlighted how integral COVID-19 assistance was to their businesses, citing how PPP loans allowed them to cover their insurance, mortgage, and utilities. Ultimately, entrepreneurs of color, but particularly Black business owners, are caught in a vicious cycle of systemic barriers to accessing capital and being

financially unprepared for emergencies that leave them in greater need of capital to thrive.

Both interview and survey findings revealed that business owners and executive management have varying levels of understanding about climate change and how it may impact their business. One in five businesses surveyed reported observing climate change impacts to their business. This rate doubled for anticipated impacts. Two in five businesses surveyed reported that they anticipate climate change will impact their business's finances and their workers' safety in the future. One interviewee reflected on how the intensity of Arizona summers has already directly harmed her employees, with some having sought urgent care because of dehydration. A second interviewee contemplated how climate change will affect his ability to plan for outdoor weddings during the hotter months. Additionally, survey results demonstrated a greater share of Black- and Latino-owned businesses ranked risks resulting from climate change as medium to high priority than white-owned businesses. Despite the constraints of everyday survival for small businesses, our findings show that entrepreneurs of color are prioritizing the challenges posed by climate change and environmental sustainability.

Given the likely impacts of climate change on many businesses, sustainability planning is essential to adjusting to new and emerging environmental realities. Only one-third of businesses surveyed reported having a “very good” understanding of how environmental sustainability practices impact their business. Although we did not observe statistically significant differences by race and ethnicity of the business owner related to level of understanding, our findings indicate racial and ethnic differences in environmental sustainability planning. Black-owned businesses were twice as likely as white-owned businesses to report an intention to develop a sustainability plan in the future. Both survey and interview data suggest that business owners of

historically marginalized backgrounds observe there to be a lack of readily available information that could better allow them to engage in environmental sustainability practices that would equip them to better address climate change. Business owners interviewed also cited concerns regarding associated costs. Despite an interest in sustainability, business owners must confront the financial barriers that are often tied to adopting new business practices geared towards sustainability.

As ethnic enterprises continue to grow in number, it is imperative that they be incorporated equitably in economic development and environmental sustainability planning processes. They play a vital role

in their communities through job creation, generation of revenue, and promotion of social and cultural diversity.²⁹ As highlighted in our findings, small business owners are facing increasing environmental sustainability demands, which are becoming more urgent as climate change continues to produce average global warming and contribute to more extreme weather and natural disasters. Climate change, on top of navigating the aftermath of a pandemic, has small business owners stretched thin, vulnerable, and in need of capital, information, and resources to remain thriving and active participants in their communities.



Photo Credits: kali9, Stock Images

Appendix A: Methodology

Phone and Web Survey Sampling

For this research product, we utilized data collected through a phone and web survey. The study population for the telephone survey (n=425) was drawn from proprietary businesses lists purchased by WestGroup Research from Marketing Systems Group. We supplemented the proprietary business data set from a combination of sources, including business directories available through Business to Business Yellow Pages, the AtoZdatabases, Yelp, and Chamber of Commerce websites. In an effort to increase our sample size, and with the support of the Advisory Committee, additional recruitment was conducted by reaching out directly to business-serving organizations to invite their members to sign up as study participants for a call-back from WestGroup Research. These efforts to increase sample size were augmented with a web survey. The study population for the web survey (n=20) utilized a convenience snowball sample and involved sharing a unique survey link to five business-serving organizations who indicated an interest in sharing the survey with their networks. In the process of adapting the phone survey to an online survey, some questions were combined or removed in order to reduce response burden on participants and maximize completion rates.

Race and Ethnicity

We created mutually exclusive race and ethnicity categories using responses from the following survey question:

What is the racial or ethnic background of the owner or owners of the business?

- a. Non-Latino White
- b. Latino
- c. Black or African American
- d. Asian
- e. Native Hawaiian or Other Pacific Islander
- f. American Indian or Alaskan Native Indigenous Community
- g. Other: (please specify)
- h. Not sure or don't know

Latino includes survey participants who selected Latino alone or in combination with any other option. The following rules were used to create the mutually exclusive categories. Non-Latino White, Black, and Asian include survey participants who only selected option Non-Latino White, Black or African American or Asian, respectively. "Other" includes survey respondents who selected Native Hawaiian or Other Pacific Islander, American Indian or Alaskan Native Indigenous Community, "Other," "Not sure or don't know," or if the participant selected two or more options that do not include Latino.

Assigning Businesses into Metropolitan Statistical Areas

Businesses were grouped into "core-based statistical area" (CBSA) based on their geographic location (Table 2). We used

Table 2. Metropolitan Areas

Core-based Statistical Area	Metropolitan Statistical Areas
Phoenix-Mesa-Chandler	Phoenix
Tucson	Tucson
Nogales	Nogales
Yuma	Yuma
Residual (all of the other establishments not located in above)	Rest of Arizona



a ZIP Code Tabulation Area (ZCTA)-to-CBSA crosswalk derived from Missouri Geocorr to assign businesses to their respective CBSAs and from here presented them as their more commonly known “metropolitan statistical areas” (MSA). CBSAs refer collectively to MSAs. Table 2 reports the CBSA and their assigned respective MSA.

Environmental Sustainability

We simplified data analysis related to the understanding of environmental sustainability impacts by collapsing responses from the following survey question:

How well do you feel you understand the impact of environmental sustainability practices on your business?

- a. We have a plan in place
- b. We are in the process of developing a plan
- c. We have not had the opportunity to design an environmental sustainability plan yet, but plan to in the future
- d. We do not anticipate the need for such a plan

Response options “We have a plan in place” and “We are in the process of developing a plan” are presented as a single category.

Distribution of Industries

Table 3 presents a comparison between the distribution of firms by industry sectors in Arizona based on the 2021 Annual Business Survey to our sample of small businesses. It also reports information on median earnings of workers by industry using microdata from the 2021 American Community Survey. Most notably, our sample overrepresents businesses in the “construction” (16% vs. 12%) and “manufacturing” industries (8% vs 4%). Our sample further undersampled businesses in “retail trade” (5% vs. 9%), “real estate and rental leasing” (3% vs 9%) and “health care and social assistance” (8% vs. 13%).

Table 3. Distribution of Industry Sectors for Arizona and Survey Sample

Industry	Arizona		Study Sample		Median Earnings	Industrial Cluster
Agriculture forestry fishing and hunting	-	-	1	0%	\$25,000	Low
Mining quarry and oil and gas extractions	132	0%	1	0%	\$69,000	High
Utilities	155	0%	3	1%	\$93,000	High
Construction	13,247	12%	71	16%	\$44,200	Medium
Manufacturing	4,006	4%	34	8%	\$55,000	Medium
Wholesale trade	5,085	5%	14	3%	\$45,000	Medium
Retail trade	9,500	9%	21	5%	\$27,300	Low
Transportation and warehousing	3,119	3%	23	5%	\$35,000	Medium
Information	1,465	1%	7	2%	\$80,000	High
Finance and insurance	5,239	5%	12	3%	\$71,000	High
Real estate and rental and leasing	9,514	9%	14	3%	\$45,800	Medium
Professional scientific and technical services	17,868	16%	72	16%	\$80,000	High
Management of companies and enterprises	534	0%	3	1%	\$70,000	High
Administrative and support and waste management and remediation services	7,615	7%	32	7%	\$30,000	Medium
Educational services	2,057	2%	10	2%	\$48,000	Medium
Health care and social assistance	14,896	13%	37	8%	\$45,000	Medium
Arts entertainment and recreation	1,746	2%	12	3%	\$25,800	Low
Accommodation and food services	9,229	8%	46	10%	\$16,900	Low
Other services (except public administration)	6,907	6%	31	7%	\$25,000	Low
Public administration (not covered in economic census)	-	-	1	0%	\$50,000	High
Total for all sectors	111,329		445			

Sources: 2021 Annual Business Survey, [available online](#), and 2021 U.S. Census Bureau's American Community Survey Public Use Microdata Sample, [available online](#); LPPI analysis of original survey data collected by WestGroup Research from November 2022 to January 2023.

Endnotes

- 1** In their state profiles, the U.S. Small Business Administration (SBA) defines small businesses as independent businesses having fewer than 500 employees. SBA Office of Advocacy, “2022 Small Business Profile: Arizona,” August 31, 2022, [available online](#).
- 2** SBA Office of Advocacy “2022 Small Business Profile: Arizona.” We estimated the share of racial and ethnic minorities by using reported non-Hispanic white business divided by the sum of respondents reporting their ethnicity and race. The complement of this is the estimated percentage owned by people of color.
- 3** Throughout this report, we use the terms “ethnic-owned businesses” and “minority-owned businesses” interchangeably. Minority group members in the U.S. include, but are not limited to, individuals of Asian, Black, Latino, and Native American backgrounds.
- 4** Timothy Bates and Alicia Robb, “Has the Community Reinvestment Act Increased Loan Availability among Small Businesses Operating in Minority Neighbourhoods?” *Urban Studies* 52, no. 9 (July 1, 2015): 1702-21, [available online](#).
- 5** Robert Fairlie and Frank M. Fossen, “Did the Paycheck Protection Program and Economic Injury Disaster Loan Program Get Disbursed to Minority Communities in the Early Stages of COVID-19?” *Small Business Economics* 58, no. 2 (February 1, 2022): 829-42, [available online](#).
- 6** Shinae L. Choi, Erin R. Harrell, and Kimberly Watkins, “The Impact of the COVID-19 Pandemic on Business Ownership Across Racial/Ethnic Groups and Gender.” *Journal of Economics, Race, and Policy* 5, no. 4 (December 1, 2022): 307-17, [available online](#).
- 7** Timothy Bates and Alicia Robb, “Greater Access to Capital Is Needed to Unleash the Local Economic Development Potential of Minority-Owned Businesses,” *Economic Development Quarterly* 27, no. 3 (August 1, 2013): 250-59, [available online](#).
- 8** Bates and Robb, “Has the Community Reinvestment Act Increased Loan Availability among Small Businesses Operating in Minority Neighbourhoods?”
- 9** Bates and Robb, “Greater Access to Capital Is Needed to Unleash the Local Economic Development Potential of Minority-Owned Businesses.”
- 10** Timothy Bates and Alicia Robb, “Impacts of Owner Race and Geographic Context on Access to Small-Business Financing,” *Economic Development Quarterly* 30, no. 2 (May 1, 2016): 159-70, [available online](#).
- 11** *Ibid.*
- 12** Bates and Robb, “Greater Access to Capital Is Needed to Unleash the Local Economic Development Potential of Minority-Owned Businesses.”
- 13** Nicholas Bloom, Robert S. Fletcher, and Ethan Yeh, “The Impact of COVID-19 on US Firms,” Working Paper, National Bureau of Economic Research, January 2021, [available online](#).
- 14** In his article, Fairlie defines an active business as one that is currently operating; an inactive business is defined as temporarily or permanently closed. Robert Fairlie, “The Impact of COVID-19 on Small Business Owners: Evidence from the First Three Months after Widespread Social-Distancing Restrictions,” *Journal of Economics & Management Strategy* 29, no. 4 (2020): 727-40, [available online](#).
- 15** *Ibid.*
- 16** Fairlie and Fossen, “Did the Paycheck Protection Program and Economic Injury Disaster Loan Program Get Disbursed to Minority Communities in the Early Stages of COVID-19?”
- 17** Andrea Revell, David Stokes, and Hsin Chen, “Small Businesses and the Environment: Turning over a New Leaf?” *Business Strategy and the Environment* 19, no. 5 (2010): 273-88, [available online](#).
- 18** Hishgee Jargalsaikhan, Leduc Sylvain, and Luiz E. Oliveira, “Business Survey on Climate-Related Risk,” San Francisco Federal Reserve, March 21, 2022, [available online](#).
- 19** Benjamin Collier and Marc Ragin, “As Climate Risk Grows, So Will Costs for Small Businesses.” *Harvard Business Review*, August 16, 2022, [available online](#).
- 20** Addisu Lasthitew, “Small Business Green Recovery Fund to Power US Climate Transition,” *Brookings Research* (blog), March 1, 2021, [available online](#).
- 21** SBA Office of Advocacy, “2022 Small Business Profile: Arizona.”
- 22** SBA Office of Advocacy, “Frequently Asked Questions,” March 2023, [available online](#).
- 23** Survey findings from the module on Adoption of Technology were excluded from this report because we found no statistically significant differences by race and ethnicity across business owners. Additional analysis from this module will be made available in future releases.

- 24** Survey findings from the module on Adoption of Technology, Emergency Preparedness, and Energy Burden were excluded from this report but will be made available in future releases.
- 25** The 2021 ABS has a reference year of 2020 and data reflect the pay period that includes March 12, 2020, during the onset of the COVID-19 pandemic. Although the ABS is not specific to small businesses, 97% of Arizona businesses represented in the 2021 data set have 500 or fewer employees.
- 26** The six month time frame depends on when respondents participated in the study.
- 27** Brian Lada, "10 of the Hottest Cities in the U.S.," AccuWeather, accessed November 20, 2023, [available online](#).
- 28** Bates and Robb, "Has the Community Reinvestment Act Increased Loan Availability among Small Businesses Operating in Minority Neighbourhoods?"; Bates and Robb, "Greater Access to Capital Is Needed to Unleash the Local Economic Development Potential of Minority-Owned Businesses."; Bates and Robb. "Impacts of Owner Race and Geographic Context on Access to Small-Business Financing."
- 29** Cathy Yang Liu, Jonathan Miller, and Qingfang Wang. "Ethnic Enterprises and Community Development." *GeoJournal* 79, no. 5 (October 1, 2014): 565-76, [available online](#).

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