



JOINT CENTER
FOR POLITICAL AND ECONOMIC STUDIES



**POLICIES TO HELP BLACK & LATINO BUSINESSES
USE MOBILE APPS TO GROW**

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Executive Summary

This report explains how policymakers, chambers of commerce, and other local institutions involved in supporting small businesses can help Black and Latino entrepreneurs decide whether to develop apps to expand existing businesses and start new businesses. Key findings include:

- **Black and Latino businesses are critical to economic growth.** If Black and Latino businesses were to reach employment parity with all privately held U.S. firms, 2 million new jobs would be created and \$2.65 trillion would be added to the economy.
- **Apps can help businesses engage and retain customers** by giving customers access to make appointments, order goods and services, and engage 24-hours-a-day from any location. Apps also exist to help entrepreneurs manage employees, finances, and other business functions.
- **While 42 percent of all small business owners have customer-facing apps, only 25 percent of Latino businesses and 16 percent of Black businesses have customer-facing apps.** Black and Latino businesses are much more likely to have websites than customer-facing apps, even though Americans spend the majority of their online time on smartphones. The leading reasons Black and Latino entrepreneurs give for not having apps include the belief that apps lack relevancy for their businesses and they are unfamiliar with the app development process.
- **Policymakers, chambers of commerce, libraries, incubators, and other institutions involved in supporting small businesses can take several steps** so that Black and Latino entrepreneurs can make informed decisions about the relevancy of apps to their businesses and the app development process, including:
 - Increasing resources to help entrepreneurs understand the costs and benefits of apps, the app development process, and cybersecurity issues (e.g., technical support, workshops, newsletter content, toolkits, connections to developers);
 - Expanding small business infrastructure grant and loan programs to include digital infrastructure upgrades like apps;
 - Strengthening computer science and digital skills training in workforce development programs, higher education, and K-12 education;
 - Designing programs to teach digital natives about entrepreneurship;
 - Quickly expanding high-speed internet access (including 5G) and ensuring that it is more widely deployed and affordable;
 - Supporting additional research on app use by Black and Latino businesses to most effectively invest resources in practices that increase economic growth.

Introduction

This report provides an introduction to policymakers, chambers of commerce, libraries, incubators and other local institutions on how Black and Latino entrepreneurs can use apps to grow.

Businesses of color play a key role in the U.S. economy. Approximately 2.58 million Black-owned businesses generate over \$150 billion in annual revenue,¹ and 3.3 million Latino-owned businesses generate over \$436 billion in annual revenue.²

Businesses of color also play a key role in addressing economic disparities. For example, while Black households have wealth that is about one tenth that of White households, the net worth of Black business owners is 12 times higher than Black nonbusiness owners.³ Black unemployment is often twice as high as White unemployment, and Black businesses—which are more likely to hire Black employees⁴—support 3.56 million U.S. jobs.⁵

Despite the significance of Black and Latino businesses, they trail other businesses in many ways. Black-owned businesses make up 9.5 percent of all businesses in the U.S., but account for only 1.3 percent of sales and 1.7 percent of employment.⁶ Latino-owned businesses make up 12 percent of all businesses, but account for only 4 percent of sales and 4 percent of employment.⁷ While 81 percent of businesses in the United States are sole proprietorships, 91 percent of Latino firms and 96 percent of Black firms are one-person operations.⁸

Strengthening Black and Latino businesses would benefit all Americans. For example, if Black-owned businesses were “to reach employment parity with all privately held U.S. firms, close to 600,000 new jobs would be created and \$55 billion would be added to the economy.”⁹ Using the same methodology, Latino-owned businesses reaching employment parity would add more than 1.4 million new jobs and \$2.1 trillion to the economy.¹⁰

Apps are one part of the solution. Apps built specifically for a particular business and designed for customer use give customers access to enhanced services 24 hours a day from any location (e.g., making appointments and ordering goods). The ability for customers to pay on the app can increase sales and enhance security by reducing the cash local business owners need on hand.

Apps can let customers make appointments, order goods, and pay 24 hours a day, which can increase sales and enhance security by reducing the cash businesses need on hand.

Further, apps exist that address elements of running the business. Some of these apps can help entrepreneurs engage customers using email and social media, for example, and survey customers for feedback. They may also facilitate more efficient management of a business by enabling employees to use their phone to input the time they start and stop working, submit expense reports and receipts, and video conference with co-workers.

Granted, apps are not a silver bullet that will resolve all inequities. Many other challenges confront Black and Latino

entrepreneurs, including less access to credit and capital, less wealth, implicit bias, and a concentration in industries that yield lower-revenues.¹¹ Furthermore, certain types of apps may be simply too ambitious to adopt for some microbusinesses.

Apps, however, represent one tool some Black and Latino entrepreneurs can use to leapfrog forward. Apps can help existing Black and Latino businesses like janitorial services and landscaping services be more efficient, engage more deeply with customers, and increase revenues. Apps can also help Black and Latino entrepreneurs lower costs and move from relatively unskilled enterprises into sectors such as plumbing and heating/air conditioning contracting, electrical and other wiring installation contracting, and lessors of residential and nonresidential buildings, (i.e., more lucrative industries in which entrepreneurs of color are disproportionately underrepresented).

In writing this report, the Joint Center reviewed the current literature on Black and Latino businesses, as well as literature on how small businesses generally use apps. The Joint Center also partnered with the U.S. Black Chambers and the U.S. Hispanic Chamber of Commerce to survey their members and obtain original data on how Black and Latino business use apps.

This survey reflects a national sample of 150 registered business owners from both chambers' databases. Under ideal circumstances with abundant resources, businesses would be individually identified beyond the representational population of business owners who are affiliated with chambers and registered with the respective email listservs. The Joint Center acknowledges that data collection from this sample population results in an under-representation of businesses that operate without email or internet access, especially as having an app requires both. As a result,

the data acquired through the survey are suggestive rather than definitive—they express general perspectives on the use of apps by Black and Latino businesses. Nevertheless, this report provides the most significant data on the use of apps by Black and Latino businesses to date, and we hope the data will advance both further research projects and the use of technology by Black and Latino businesses.

How Apps Can Be Used by Businesses of Color

Apps for small businesses can be divided into three categories:

- *Single-function apps* used by entrepreneurs to manage a function of the business, like QuickBooks to manage accounting or Google Analytics to manage business intelligence;
- *Multifunctional apps* used by entrepreneurs to manage employees, finances, customer relations, and other aspects of a business. Multifunctional apps are often targeted at specific industries (e.g., beauty salons). In some cases, they offer businesses an option to have a customer-facing page, which overlaps with the third category of apps. In this case, the app is still branded to the multifunctional app provider, not the business using the app;
- *Customer-facing apps* designed by the entrepreneur to be used by customers. Unlike a multifunctional app, customer-facing apps are branded to the entrepreneur's business (the business's logo is on the app downloaded by customers). An entrepreneur can design her own customer-facing app working with a "do-it-yourself" app company (which uses standard templates that limit customization), or hire a software developer and build a fully customized customer-facing app.

Single-function apps

Some apps advance a single function. Payment apps such as Google Pay, Square, and Stripe enable small businesses to process credit card payments and do business with those who have their smartphone on hand but not cash. QuickBooks, as another example, is a finance and accounting application that manages and pays bills, and manages payroll. Single-function apps are detailed in the Joint Center report *An Introduction to Mobile Apps for Black & Latino Businesses*.

Multifunctional apps

Multifunctional apps pull together several functions into one app, such as customer payment, finance and accounting, and business intelligence and analytics. Some of the apps allow businesses to add customer-facing pages with the business's own logo and pictures.

For example, a beauty salon and barber shop app will have multiple functions that help salon and barbershop owners manage customer relationships, schedule appointments, and accept

payments. The multifunctional app helps entrepreneurs manage their businesses from their smartphones or tablets (which enables business on the go), eliminates the need to navigate different apps, and facilitates data sharing with employees, outside accountants, customers, and others.

Seven sectors account for over half of Black businesses and a third of Latino businesses in the United States, and multifunctional apps exist for all seven sectors. The examples below are some of the leading apps in these seven sectors based on user ratings from Capterra, GetApp, Google Play, and the App Store. These are not recommendations or endorsements.

Sector	% of all U.S. Black Businesses	% of all U.S. Latina/o Businesses	Examples of Multifunctional Apps by Sector
Beauty Salons	16%	4%	TapStyle, Insight, StyleSeat, Booksy
Child Day Care	13%	8%	Brightwheel, HiMama, LifeCubby, SmartCare
Janitorial Services	7%	12%	Clean Guru, CleanTelligent, Swept
Home Health Care	7%	2%	AlayaCare, AxisCare, Boomr, TSheets
Barber Shops	4%	1%	The Cut, StyleSeat, Booksy
Independent Artists, Writers & Performers	4%	3%	Fade In, GigTown, iA writer, KineMaster, NanoStudio, OffTop, Trello, Remember the Milk, Ulysses, YouTube Studio
Landscaping Services	3%	4%	HouseCall Pro, Landscaper's Companion, Leafsnap, Mobile Crew, Workwave Service
TOTAL	54%	33%	

Several detailed examples of multifunctional apps are covered in depth in the Joint Center report *An Introduction to Mobile Apps for Black & Latino Businesses*.

Customer-facing apps

A third category of apps is designed to reach customers directly rather than simplify backend business management. While some multifunctional apps allow businesses to create customer-facing pages, this is not the same as a business having its own app icon upon which customers can click. A customer-facing app is designed for and is exclusive to that business. Currently, most customer-facing apps increase business not through bringing in new customers, but by increasing repeat business through simplifying payments, engaging existing customers, and building

customer loyalty. Customer-facing apps are detailed in the Joint Center report *App Development for Black & Latino Businesses*.

The costs of a customer-facing app can vary based on customization and functionality. A business page within a multifunctional app can cost as little as \$30 per month, and no tech support is needed. This option does not allow for significant branding – customers must download a different company’s app and search for the entrepreneur’s page. Do-it-yourself apps generally require a monthly fee between \$50 and \$500, which generally includes maintenance and tech support. A fully customized customer-facing app can cost from \$10,000 to over \$100,000 in initial developer fees, and requires ongoing maintenance and tech support. Entrepreneurs must also pay an app marketplace publishing fee (\$99 per year for Apple’s App Store, \$25 one-time for Google Play) for both do-it-yourself and fully customized customer-facing apps.

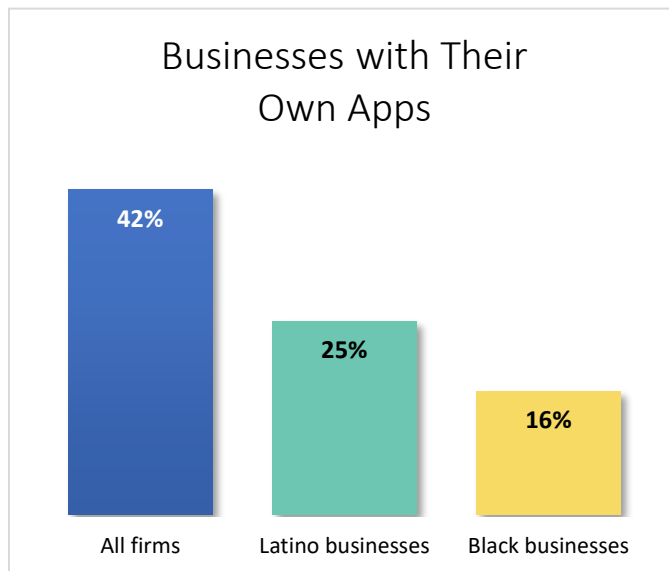
Apps as the Business

Apps do not need to support an already existing business, but can sometimes be the business itself. For example, PartPic, a startup founded by two Black entrepreneurs, enables consumers to take a picture of an industrial part, identify it, and find out where to buy it. The underlying technology for this app was acquired by Amazon in 2016, and resulted in significant profits for the founders. Details about apps as a business can be found in the Joint Center report *App Development for Black & Latino Businesses*.

The App Development Opportunity for Businesses of Color

The majority of small business owners – especially Black and Latino business owners – have not yet developed a customer-facing app for their businesses. For many Black and Latino entrepreneurs, the adoption of a customer-facing app presents a growth opportunity because so many customers and employees of all racial backgrounds own smartphones and spend so much time using apps.

In 2017, a business-to-business ratings and reviews firm, Clutch, conducted a survey of 351 small business owners and managers. The survey was intended to determine how small businesses used apps to engage with customers. The Clutch survey found that 42 percent of the businesses surveyed had apps for their business.¹²

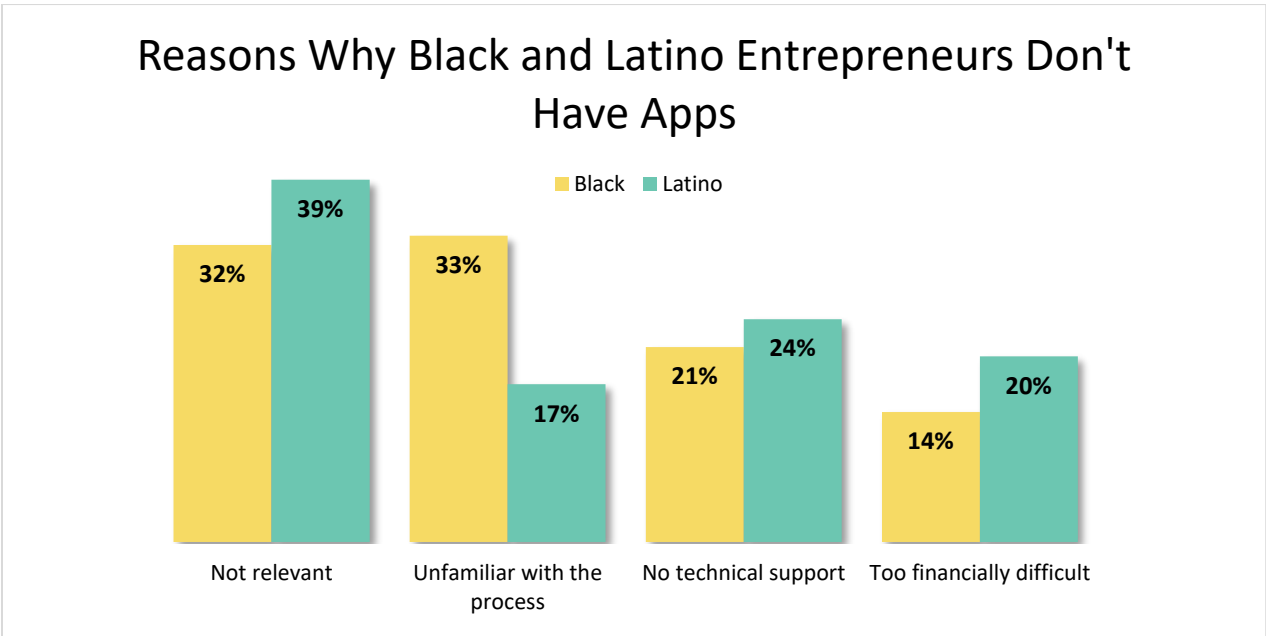


The Joint Center conducted a similar survey of 150 Black and Latino business owners in 2017, and found that only 25 percent of Latino businesses and 16 percent of Black businesses had apps for their companies.¹³

Part of the disparity may arise from the differences in size of the firms surveyed. The 351 companies surveyed by Clutch ranged in size from 1 to 500 employees, with 55 percent having 10 or fewer employees. The 150 businesses surveyed by the Joint Center were smaller, with 81.5 percent having 10 or fewer employees.

Source: Clutch, Joint Center (see endnote)

The Joint Center data show that the leading reason Black and Latino businesses lack apps is because respondents believe apps lack relevancy for their business, followed by a lack of familiarity with the process, and then a lack of tech support and financial resources. Black business owners were more likely to say they were unfamiliar with the app development process, and less likely to cite finances as the limiting development factor. Latino business owners were comparatively more concerned with having the tech support to develop and keep the app.

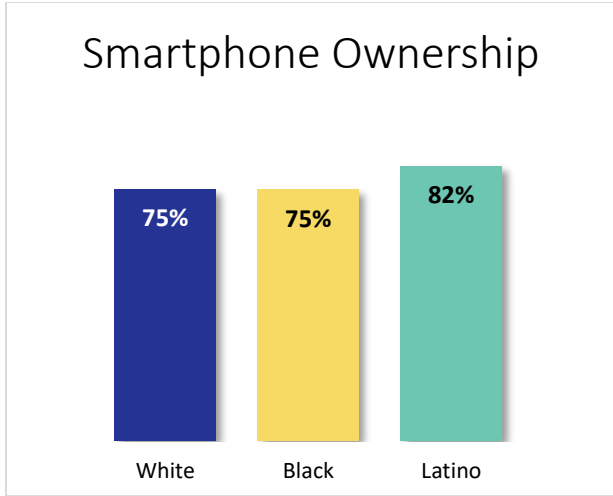


Source: Joint Center

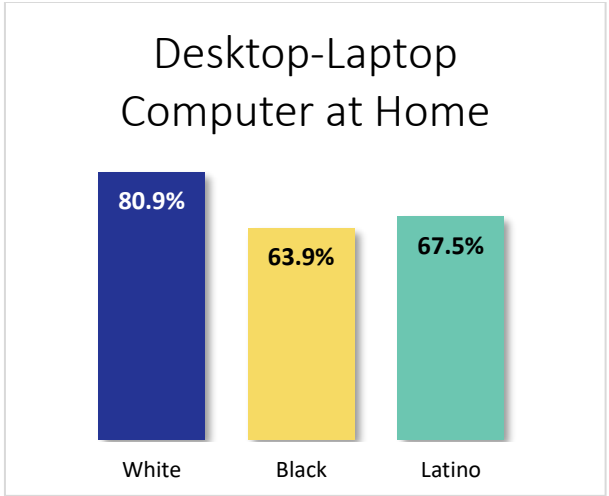
Customers and Employees of All Racial Backgrounds Use Smartphones

App adoption could represent a significant opportunity for Black and Latino businesses due to the widespread use of smartphone apps. Americans spend the bulk of their time on the internet on smartphones, whether that is via a cellular data plan or a broadband connection.

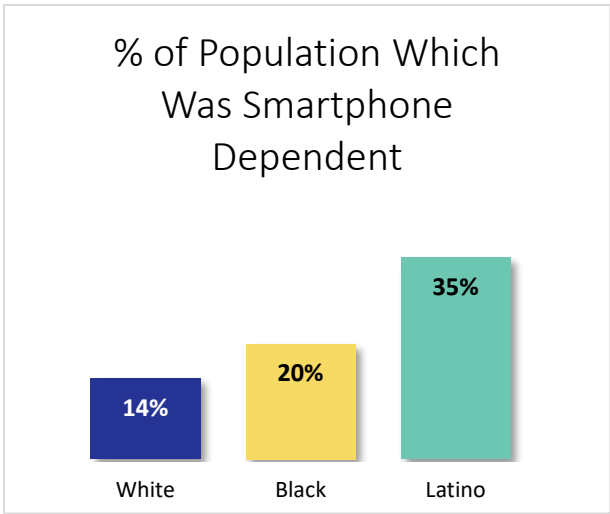
African Americans and Latinos are more likely than Whites to rely on smartphones as their primary access to the internet,¹⁴ in part due to racial disparities among computer ownership. Almost 81 percent of White households have a computer, compared to 64 percent Black households and almost 68 percent of Latino households.¹⁵ By comparison, 75 percent of Whites, 75 percent of African Americans, and 82 percent of Latinos own a smartphone.¹⁶



Source: [American Community Survey](#), US Census (2017)



Source: [American Community Survey](#), US Census (2016)

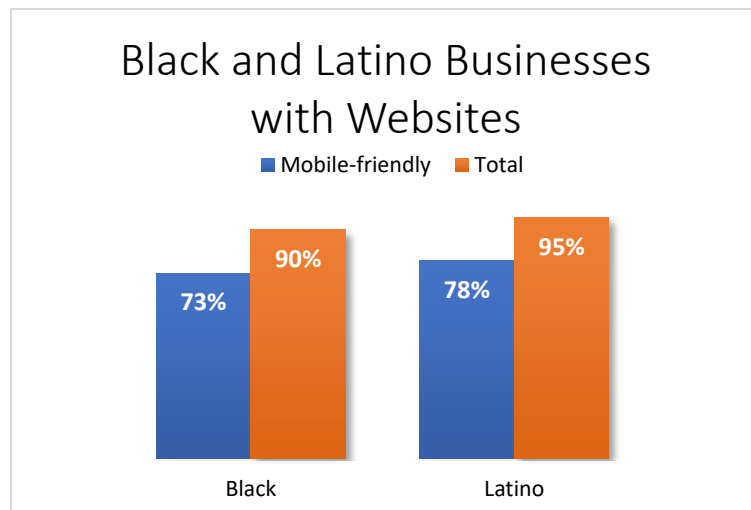


Source: [Pew Mobile Fact Sheet](#) (2018)

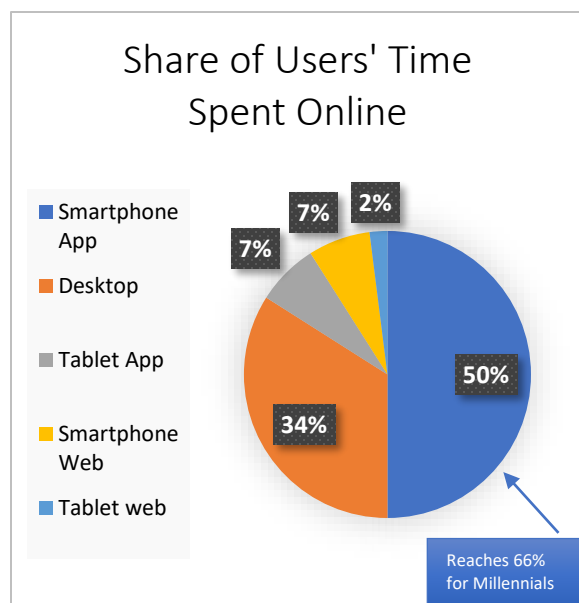
Data suggest that the number of Americans who are smartphone dependent for internet access is growing.¹⁷ Because of the significant proportion of Black and Latino communities relying only on their smartphones, apps become more important for targeting this group.

However, while the great majority of Black and Latino businesses have websites (90 percent and 95 percent, respectively),¹⁸ relatively few have apps (16 percent and 25 percent, respectively), even though more people access the internet via smartphone than via a home computer.

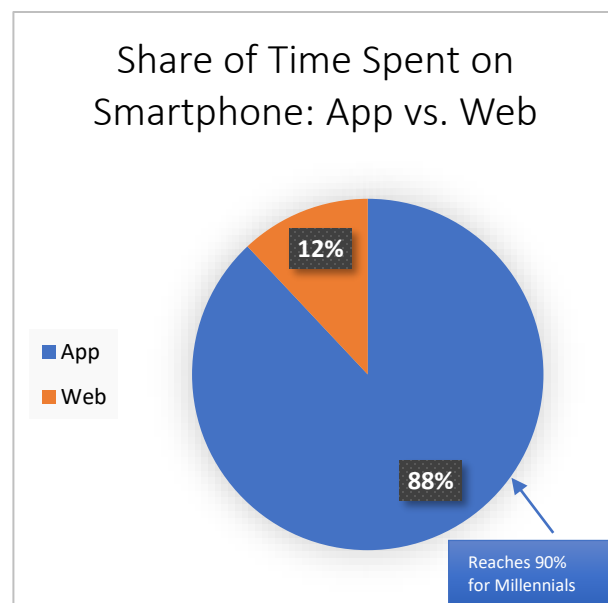
Over 70 percent Black and Latino businesses have a mobile-friendly website,¹⁹ and one might assert that mobile apps are unnecessary because smartphone users can simply access a mobile-friendly website.



The mobile-friendly website, however, is no substitute for the mobile app. Smartphone apps dominate web usage statistics, consuming more than half of users' time spent online. Further, smartphone apps account for 88 percent of users' time online on smartphones.²⁰ These numbers are even higher for younger users.²¹



Source: 2017 U.S. Mobile App Report



Source: 2017 U.S. Mobile App Report

Mobile-optimized websites also lack several features of apps. Repeat customers often prefer to quickly click on an app rather use a search engine to find desired information. Apps allow businesses to engage local customers with reward programs. Apps also enable employees to use their smartphone to track their work time and submit expense reports and receipts. This is not to say, however, that businesses should forego a website for an app – having both provides valuable opportunities for cross-marketing and customer retention.

Actions for Policymakers, Chambers, Libraries, Incubators, and Other Institutions

Smartphone use among African Americans and Latinos is roughly the same as the overall population, but Black and Latino businesses are less likely to have an app than other businesses. Policymakers, chambers of commerce, and other local organizations such as libraries and business incubators can take several steps to help Black and Latino entrepreneurs decide whether and how to build a customer-facing app for their businesses.

For Policymakers

Expand Minority Small Business Grants and Loans to Cover App Development: Many small business grant and loan programs are geared specifically toward physical infrastructure upgrades or specific types of businesses. Digital infrastructure (like websites and apps) has become an essential part of running a business and should qualify for small business grant and loan programs. Similarly, businesses should include developing and using an app in their marketing and operations plans.

Deepen Digital Skills Training for Workforce Development Programs, Higher Education, and K-12 Education: Governments set education standards, and information and communication technology skills should be a significant part of these standards. Currently, 75 percent of students do not have the opportunity to study computer science in primary or secondary education.²² Familiarity with technical subjects is an essential building block toward more widespread use of technical tools by small business owners. Policymakers should include stronger digital skills and computer science standards in primary and secondary education requirements, as well as in higher education and workforce development programs. Adding these components increases the likelihood that small business owners will not be intimidated by the technical aspects of app adoption and will more quickly see new opportunities for app-based businesses.

Facilitate Better Broadband Access and Adoption: Research shows that cheaper and faster internet access increases the likelihood that residents will adopt technology.²³ Fifty-five percent of small business owners report that the cost of internet and connectivity is a challenge.²⁴ Policymakers should support policies that quickly expand high-speed internet access (including 5G), ensuring it is more widely deployed and more accessible. Multiple strategies can facilitate 5G access expansion, which the Joint Center covered in its report [5G, Smart Cities and Communities of Color](#) (including deployment of 5G cell towers, small cell antennas, and other infrastructure). More expansive broadband adoption would enable entrepreneurs of color to expand the number of

people they can interact with online, and would increase the number of people who can access entrepreneurs' apps.

Recognize Accessibility As a Critical Value: As policymakers consider critical technology debates, accessibility should be a key value. For example, business models based on advertising revenue allow Twitter and Facebook to offer their platforms for free, and allow Android smartphone manufacturers to offer relatively low-cost devices (this is one reason 66 percent of African American smartphone users and 62 percent of Latino smartphone users have Android smartphones). In devising laws regulating data privacy and other tech policies, policymakers should ensure effective protections for all while also grappling with implications of proposals for accessibility.

For Policymakers, Chambers of Commerce, and Other Local Institutions Supporting Small Businesses

Provide Technology Support Services and Know-How: The Small Business Administration (SBA) (a federal agency), state and local governments, local chambers of commerce, and local institutions like libraries and business incubators should expand counseling and technical support to help entrepreneurs understand the costs and benefits of apps and the process of developing apps.²⁵ Such efforts would reduce the costs of research and analysis to all businesses, including those of color.

Since 57 percent of entrepreneurs say that a lack of familiarity with digital tools stops them from using them,²⁶ the SBA, state and local policymakers, and local chambers should support workshops for entrepreneurs about mobile app features and their effect on business. Many business owners are skeptical of moving from their business management systems to a new app. Walking through the nuts and bolts and uses of the app may help entrepreneurs make more informed decisions.

Government, chambers, and other institutions should also add a regular feature that highlights new apps to existing small business advice newsletters targeted at businesses of color. (In addition to a newsletter feature, an app could be developed that disseminates this information). The technology committee of a local chamber should also organize an online forum for local entrepreneurs to share their recommendations and tips for using apps. Many entrepreneurs may have advice about their experiences or how they have optimized their current app, but may have minimal options for sharing their knowledge.

Provide Cybersecurity Technology Support Services: Entrepreneurs' confidence in the security of apps is a critical component of adoption, especially since a primary function of many business apps is to accept mobile payments. The FCC [has released accessible guidance](#) on managing

cybersecurity as a small business, which includes keeping mobile devices secure, electronic payment security, other best practices, and links to other small business cybersecurity resources.²⁷ Local economic development offices, chambers of commerce, and libraries should be familiar with these and other cybersecurity resources for small businesses. They should be equipped to direct entrepreneurs to relevant resources to both adopt best practices to prevent security breaches ([see this State of Michigan small business cybersecurity training program](#)), and to most effectively respond to cybersecurity breaches that occur.

Support Additional Research on App Adoption by Black and Latino Businesses: Although some research has been conducted in the last few years about small businesses' use of social media and digital tools, more is needed. Detailed data should be gathered about businesses' use of single-function apps, multifunctional apps, and customer-facing apps. Including large samples of Black and Latino entrepreneurs would shed light on their priorities, needs, and successes, and allow policymakers, chambers, and others to design better support structures and increase investments in evidence-based strategies.²⁸

For Chambers of Commerce and Other Local Institutions Supporting Small Businesses

Provide Technical Assistance, Toolkits, and Connections to Developers: A busy entrepreneur may not have the time to analyze the pros and cons of developing a customer-facing app. Chambers of commerce and local small business-supporting institutions such as libraries or business incubators should develop resources that help entrepreneurs easily analyze the pros and cons of app development and put them in touch with reliable software developers.²⁹ This could include creating toolkits with clear decision points and providing concrete advice about functionalities. Black and Latino Chambers of Commerce should connect members who are looking to develop an app for their business with other members who are developers, whether through an online platform or through a local business network.

Expose Digital Natives to Entrepreneurship: Along with teaching entrepreneurs about apps, Black and Latino Chambers of Commerce should design programs to recruit and teach digital natives (i.e., those who have grown up using digital tools) about running a business. The data show that millennials are more likely to create customer-facing apps for their businesses than older entrepreneurs.³⁰ Increasing the number of digital native entrepreneurs of color will likely increase the percentage of Black and Latino businesses that employ technology to advance their business goals.

About the Authors

Amanda Anthony is the policy expert for the Centre for Systems Solutions (CRS), a non-profit organization that designs games for teaching about sustainable development. Currently, she is working on the RURITAGE Horizon 2020 project, which aims to develop a new rural regeneration paradigm drawing on a region's cultural and natural heritage. Amanda is also a small-business owner. Prior to starting MaluMika and joining CRS, she worked in education administration at the Chicago Public Schools and as a journalist. She graduated from the University of Chicago with a Master's of public policy and from Purdue University with bachelor's degrees in chemistry and political science.

Spencer Overton is the President of the Joint Center. He is also a tenured Professor of Law at George Washington University, where he teaches and writes on race and the law and election law. Spencer is the co-author of 5G, Smart Cities & Communities of Color and several articles related to the future of work, and he has also presented on innovation and communities of color at various venues, including the African American Mayors Association Annual Conference, Google, LinkedIn, the Multicultural Media Telecom and Internet Council's (MMTC) Annual Broadband and Social Justice Summit, the National Black Caucus of State Legislators Annual Legislative Conference, and the U.S. House of Representatives. During the 2007-2008 presidential campaign, Spencer chaired Government Reform Policy for then-U.S. Senator Barack Obama, and during the 2008 Obama--Biden Transition he served as a member of the Technology, Innovation, and Government Reform (TIGER) policy team. In the first term of the Obama Administration, Spencer served as Principal Deputy Assistant Attorney General of the Office of Legal Policy, the "think tank" of the Department of Justice that coordinates policy and regulations within DOJ and with the White House and other agencies. Spencer is an honors graduate of both Hampton University and Harvard Law School, he clerked for U.S. Court of Appeals Judge Damon J. Keith, and he practiced law at Debevoise & Plimpton.

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¹ [The Tapestry of Black Business Ownership in America: Untapped Opportunities For Success](#) (Washington: Association for Enterprise Opportunity, 2017), 4.

² Robert Bernstein, [Hispanic-Owned Businesses on the Upswing](#) (United States Census Bureau, December 1, 2016).

³ [Tapestry of Black Business Ownership](#), 4.

⁴ *Ibid.* (“At the same time, small businesses tend to hire from the community, creating jobs for neighborhood residents.”)

⁵ *Ibid.* (“There were 2.58 million Black-owned businesses in the United States, generating \$150 billion in annual revenue and supporting 3.56 million U.S. jobs.”)

⁶ Michael McManus, [Minority Business Ownership: Data from the 2012 Survey of Business Owners](#) (Washington: U.S. Small Business Administration, Office of Advocacy, Office of Economic Research of the Office of Advocacy, 2016), 3.

⁷ *Ibid.*

⁸ *Ibid.*, 4.

⁹ [Tapestry of Black Business Ownership](#), 4.

¹⁰ Additional analysis by the Joint Center based on U.S. Census, Survey of Business Owners 2012, 6-Digit NAICS Code (Calculated as: If 15 percent of Latino sole proprietors were to hire 1 employee and all Latino employer firms were to reach employment parity (i.e. hire 3 people to get to 11 employees)) times the average revenue generated by 1 employee (\$150K).

¹¹ [Tapestry of Black Business Ownership](#), 4; Arnobio Morelix et al., [2018 Latino Entrepreneurship Gap Report](#) (Stanford: Stanford Latino Entrepreneurship Initiative, 2018), 12.

¹² Riley Panko, [“Should Your Small Business Invest in a Mobile App?”](#) Clutch, February 21, 2018.

¹³ Ron Busby, Jr., Morgan Butler, and Mia Woodard, [The Use of Digital Tools By Black and Latino Businesses](#) (Washington, Joint Center for Political and Economic Studies, 2017), 6.

¹⁴ Camille Ryan, [Computer and Internet Use in the United States: 2016](#) (Washington: United States Census Bureau, 2018).

¹⁵ [Internet/Broadband Fact Sheet](#) (Washington: Pew Research Center, February 5, 2018).

¹⁶ Ryan, [Computer and Internet Use in the United States: 2016](#).

¹⁷ *Ibid.*

¹⁸ Busby, Butler, and Woodard, [The Use of Digital Tools By Black and Latino Businesses](#), 2.

¹⁹ *Ibid.*

²⁰ [The 2017 U.S. Mobile App Report](#) (Reston: Comscore, 2017), 8.

²¹ [The 2017 U.S. Mobile App Report](#), 6.

²² Brian Scarpelli, Nick Miller, and Roya Stephens, [State of the App Economy](#) (Washington: The App Association, 2017).

²³ [ICT, E-Business and Small and Medium Enterprises](#) (Paris: OECD Publishing, 2004).

²⁴ [Examining The Impact of Technology on Small Business](#) (Washington: U.S. Chamber of Commerce Technology Engagement Center, 2018), 6.

²⁵ John B. Horrigan, [Digital Skills and Job Training: Community-Driven Initiatives Are Leading the Way in Preparing Americans for Today's Jobs](#) (Bowling Green: Connected Nation, 2018).

²⁶ [Examining The Impact of Technology on Small Business](#), 6.

²⁷ [Cybersecurity for Small Business](#) (Washington: Federal Communications Commission, November 14, 2018).

²⁸ [Examining The Impact of Technology on Small Business](#), 6.

²⁹ John B. Horrigan, [Libraries and Economic Opportunity](#) (Washington: Urban Libraries Council, n.d.).

³⁰ Panko, ["Should Your Small Business Invest in a Mobile App?"](#)

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