



Resilience and Growth During the **COVID-19** Pandemic:

A Study of Digital Small Businesses



TABLE OF CONTENTS

Executive Summary	03
Introduction	05
I. The Impact of the COVID-19 Pandemic on U.S. Small Businesses ...	06
a) Devastation	06
b) Inequality	08
c) Acceleration of Digital Commerce	09
II. A Snapshot of Digital Small Businesses	10
a) E-commerce – Ability to Sell Online	11
b) Public Lending – Paycheck Protection Program (PPP)	17
III. Policy Implications	26
Conclusion	28
Endnotes	29

Executive Summary

The Coronavirus has led to an unprecedented public health crisis that has also devastated the U.S. economy. One of the hardest hit segments of the economy has been small- and medium-sized businesses (SMBs). The quarantine and shutdown orders led to a suspension of local economic activities and loss of jobs and income, which further depressed consumer spending, particularly for local in-person services. The lack of revenue led to a cash flow crunch for many SMBs and has already resulted in permanent closures of many SMBs, and we may see more in the months ahead.

However, the data in this research study shows two sources of resilience and growth for SMBs amidst the global pandemic. The analysis shows that SMBs that adopted or incorporated digital tools have been better able to navigate and weather the pandemic. The data also shows a public-private partnership between Small Business Administration and PayPal in the form of the Paycheck Protection Program (PPP)¹ successfully provided funding access to SMBs that have traditionally been underserved by the financial system, and enabled businesses that received the financing to help reverse a downward revenue trend.

This study is based on analyses of transaction datasets of SMBs in the U.S. using PayPal, which we refer to as “digital SMBs”. The research study found two promising trends:

1. Digital commerce platforms and financial tools are offering SMBs the ability to transact and conduct business online, which is enhancing growth, productivity, and resiliency.

- Digital small businesses saw 25% year-over-year (YoY) growth in Q2 of 2020, compared to a publicly reported 9% drop in revenue for overall SMBs and a -3.6% growth in overall U.S. retail in the same quarter.
- Both newcomers and existing SMBs saw growth on PayPal. SMBs that joined PayPal between March and May of 2020 experienced double their expected sales revenue, while digital SMBs that had created a PayPal account between 2001 and 2011 represented 50% of TPV of overall PayPal SMBs in Q2 2020, demonstrating that there is still ample room for growth for SMBs newly joining the digital economy.
- Although the pandemic affected different states to different degrees and at different times, digital small businesses in most states recorded growth in online sales, including states that were hardest hit early on during the pandemic. For instance, digital SMBs in New York and California saw 28% and 23% YoY growth respectively in Q2 2020.

- The ability for digital SMBs to reach customers outside of their own state borders has long been a source of growth and resilience associated with e-commerce, but the diversity of digital SMBs' customer base has become particularly important during the pandemic. 75% of digital small business sales were outside their home state in Q2 of 2020.
- E-commerce as a sector experienced 44% growth in Q2 2020, which suggests ample room for further growth for digital small businesses to compete with other larger players.

2. SMB recipients of PayPal-facilitated PPP loans, in partnership with the U.S. Small Business Administration, saw growth after capital injection.

An analysis of lending data and transaction data shows that PayPal's facilitation of loans under the PPP helped provide much needed capital for business continuity for small businesses, and was over-indexed to underserved communities. Small business recipients of PPP loans through PayPal saw a reversal in downward revenue trends and saw growth after capital injection.

- Digital SMBs that received PPP loans in April recorded -15% YoY revenue growth in the month before the loan and recorded an average of 14% YoY growth in the three months after the loan.
- A comparison of transaction data of overall PayPal SMBs and PayPal SMBs that received a PPP loan shows that the group that received a PPP loan recorded 177% as much total payment volume as did those without a PPP loan, on average, in April to August of 2020.
- PPP loans provided through PayPal were over-indexed in the majority of the top 30 counties that have the highest density of Black business activity, contrary to overall PPP lending.
- Also, for PPP loans that were below \$150,000, 54% of PPP loans facilitated through PayPal were disbursed to areas where minorities made up more than 25% of the population, while only 39% of overall PPP loans were disbursed to the same zip codes.
- PPP loans facilitated through PayPal went towards the smallest of businesses. The average loan size was \$28,000, and 75% of the loan portfolio were loans under \$25,000.

The findings above point to the importance of digitization and access to capital, and provide strong evidence for why greater digitalization of the SMB sector is a major opportunity going forward. Private sector innovation combined with public sector policy will be key to enabling small business survival and recovery. Policies that can help small businesses adopt digital tools and strategies will yield benefit not only during a time of limitation in the physical world, but also will position small businesses to navigate a dynamic and permanently changing economic landscape. By leveraging smart policy and public/private partnerships, Main Street can be afforded a fighting chance to maintain its paramount role in the national economy and broader society.



Introduction

The COVID-19 pandemic has affected every aspect of our lives, including our economy. At the time of writing, more than 8.8 million people in U.S. have been infected with the coronavirus. The “lockdowns” that state governments imposed to stem the tide of public health concerns and the suspension of in-person commerce have resulted in a severe economic contraction, resulting in the unprecedented scale and speed of business closures and increase in unemployment. The Coronavirus Aid, Relief, and Economic Security Act (CARES Act), a bipartisan \$2.2 trillion economic relief plan, was signed into law on March 27, 2020. It included one-time stimulus payments (\$1200 for most adults) and extra unemployment benefits (\$600 per week), which expired on July 31. It also resulted in the creation of the Paycheck Protection Program (PPP) that provided forgivable loans to small businesses, totaling \$669 billion, with August 8, 2020 as the deadline for application.

Massive uncertainties around a potential “second wave,” vaccine development and effectiveness, and the timeline and path to return to “normal,” have persisted throughout 2020. This research study is conducted in the midst of the pandemic, with an analysis focused primarily on the second quarter of 2020, and an eye towards the future months ahead. The goal is to understand how digital small businesses leveraged online platforms and public-private lending to weather the COVID-19 pandemic, and the implications on how small businesses might be supported for recovery and longer-term resilience.

The Impact of the COVID-19

● Pandemic on U.S. Small Businesses

On March 19, 2020, California Governor Gavin Newsom issued a statewide “shelter-in-place” order in an effort to stem the tide of COVID-19.² A day later, New York Governor Andrew Cuomo declared that all “non-essential” businesses must close statewide.³ Several other states instituted some form of “lockdown” starting in March, allowing only essential businesses to remain open and ordering that residents stay in their homes. All 50 states have begun to reopen in some way, but many have paused or reversed those plans, with substantial variations in what type of commercial engagements are allowed. The lock-down caused many SMBs to see their revenues dry up almost entirely, particularly in March and April.⁴ The shutdown orders, however, were just the start of the challenges that SMBs have faced over the course of 2020.



A. Devastation

Most small businesses that had to shut down saw their revenues drop entirely for the duration of the lockdown orders and have struggled to recover from that one-time event. But, even 47% of small business owners who did not have to close for any time during the pandemic still reported that they expected their revenue to decrease in 2020, according to a survey of 750 small business owners published in July.⁵

Concerns about catching the virus and about an economic recession caused consumption in the U.S. to drop precipitously throughout the second quarter of 2020, and despite an initial

jump upon partial reopening, the sluggishness has continued into the back half of the year.⁶ The impact of COVID-19 on consumption has been longer-lasting than initially anticipated, as millions of Americans were furloughed or laid off. A survey in August revealed that the vast majority of Americans were still holding back on pre-COVID out-of-home activities.⁷ Retail and small businesses rely on consumer confidence, and as long as consumer confidence is in question, small businesses will continue to face challenges.

The lack of income coupled with ongoing expenses (rent, payroll, inventory, etc.) has caused a cash crunch. A July survey of small businesses found that about three-in-four small businesses had suffered from cash flow challenges during the first three months of the outbreak.⁸ An August survey found that about one-in-two small businesses were one

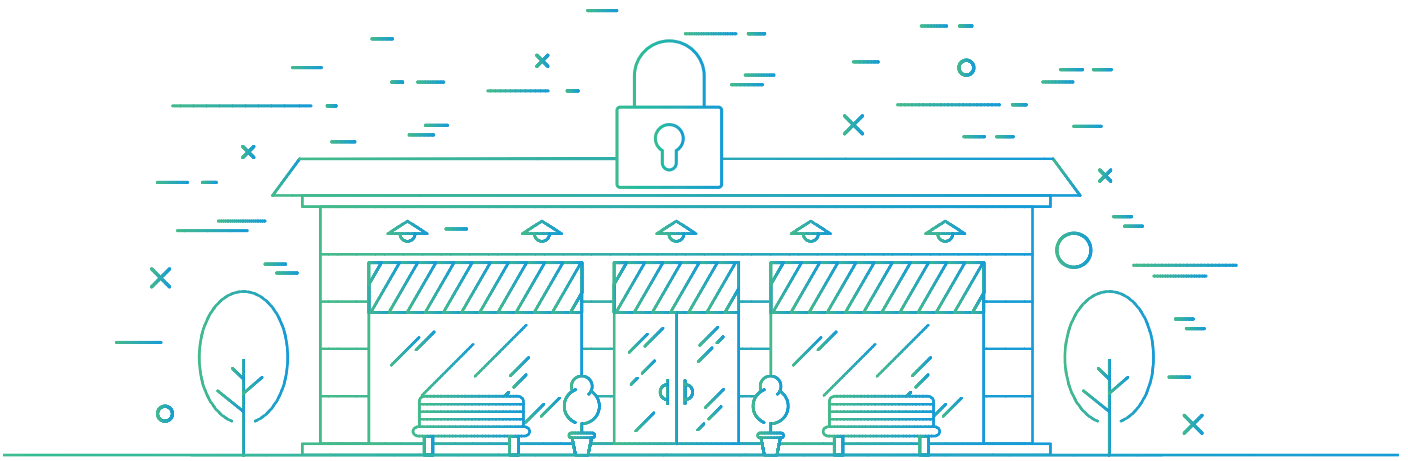
An August survey found that about one-in-two small businesses were one payment or so away from going out of business.⁹

payment or so away from going out of business.⁹ Small business confidence dropped from a reading of 64 in Q1 to just 48 in Q2.¹⁰ When small firms were surveyed early in 2020 and asked how they might handle a six-month crisis, less than 40% responded that they expected they would be able to survive.¹¹

The lengthy and unpredictable nature of this crisis has only served to exacerbate long-standing issues that have been plaguing the small business ecosystem. According to a Federal Reserve study, only 35% of small businesses were financially healthy at the end of 2019.¹² Even prior to the pandemic and since the 2008 financial crisis, small businesses have struggled to get the financing they need to sustain and grow, and now that issue has been exponentially magnified.

The devastation suffered by small businesses in the wake of COVID-19 has serious knock-on effects for the broader economy. Twenty percent of small businesses have reported delaying payments to their employees and a similar proportion have reported delaying supplier payments.¹³ Small businesses in large cities have also been disproportionately hit, with large numbers of more affluent city-dwellers moving out; it is estimated that nearly one-third of New York City's small businesses may never reopen.¹⁴

Overall, the COVID-19 pandemic has been a singularly shocking event for small businesses. There were more businesses lost from just February to April of 2020 than there were throughout the Great Recession.¹⁵ One survey estimates that nearly 7.5 million of the 30 or so million small businesses in the U.S. are at risk of permanently closing due to the crisis.¹⁶ According to Yelp's Local Economic Impact Report, about 98,000 businesses have closed as of August 31.¹⁷ But, not all SMBs have been equally impacted by the pandemic.



B. Inequality

Minority entrepreneurs have faced longstanding challenges with systemic racism in the U.S., hampering their ability to start, grow, and sustain small businesses. Black-owned businesses represent just 7% of all U.S. businesses, Asian- 4.3%, and LatinX- just 10.6%; well below their representation in the overall population.¹⁸ Businesses owned by minorities also tend to be smaller than White-owned businesses.¹⁹ Only 11% of minority owned businesses have employees, whereas the number is 22% for White-owned businesses. More than 95% of Black-owned businesses are sole proprietorships.²⁰ Minority owned businesses also have traditionally struggled to access capital that is essential for sustainability and growth. A 2018 Brookings Institution's survey found that large banks approved 60% of loans sought by white small business owners, but only 50% by Latinx owners, and 29% by Black owners.²¹

The mandate to close down businesses in the early phases of COVID had a disproportionate impact on minority businesses. Between February and April, 41% of Black-owned businesses were forced to close, compared to 32% of LatinX-, 32% of Asian-, and 17% of white-owned businesses.²² These businesses tend to be in sectors like services, maintenance, laundry, retail, food, and repair that are traditionally lower-margin and lack long-term financial resilience, and were hardest hit by the mandated closures. A Goldman Sachs survey showed that Black-owned businesses were 43% more likely to have their cash reserves dry up by the end of the year.²³

Moreover, a paper by the Federal Reserve Bank of New York has shown a correlation between Black business density and COVID-19 incidence. In other words, areas with higher concentration of Black businesses are more likely to be hit with greater "direct (longer forced closures, COVID-19 symptoms) and indirect (social distancing, fewer customers) effects of the pandemic."²⁴ Some small businesses were also impacted by the disruptions from the series of protests that ensued in the aftermath of the killing of George Floyd in more than 2000 towns and cities across the U.S., throughout June, July and August.²⁵

C. Acceleration of Digital Commerce

While the devastating and unequal impacts of the pandemic marked the state of small businesses in 2020, the acceleration of e-commerce has also been a major and rapidly growing development in the U.S. economy. E-commerce reached 16.1% of all retail sales in the second quarter of 2020, up from 11.8% in the previous quarter. E-commerce, as a share of retail in the U.S., grew as much in 3 months as it had over the previous 5 years combined. Large retailers that had made significant investments in e-commerce capabilities have reported astounding growth figures – e.g. Target reported 195% year-on-year growth in its e-commerce sales in the same quarter.²⁶

The COVID-19 pandemic provided a forcing function for small businesses to digitize more fully. Although only 46% of small businesses in the U.S. have an online presence,²⁷ more than 71% of small businesses have been boosting their digital capabilities since the start of the pandemic.²⁸ A May 2020 survey also found that 51% of businesses reported increasing online interactions with their clients.²⁹ 70% of small business respondents in an August survey said they are ready to invest in new technology to expand digital payments, while 73% said digital payments are the “new normal.”³⁰

Many experts see the shift to digital commerce as an acceleration of a trend that was already beginning to shape the landscape of commerce, which will only continue and provide opportunities for small businesses to generate revenue, survive and recover from the COVID-19 pandemic.



● A Snapshot of Digital Small Businesses

How digitization benefits small businesses has been the subject of several research studies, with more than 70% of all small businesses attributing some revenue growth to the use of digital tools, and more than 40% attributing some customer growth to the use of digital tools.³¹ But, there has been no research done to this point on the impact of digitization on the revenue of small businesses during the COVID-19 crisis.

Through analyzing proprietary data at PayPal, the research team has been able to examine in detail the performance of digital small businesses in the U.S. The first section of the study examines PayPal's transaction data, and uses total payment volume (TPV) on PayPal as an approximate measure and a proxy of overall revenue, to understand the relationship between digitization and business performance. The second section of the study analyzes TPV data of businesses that received a PPP loan via PayPal, to understand the relationship between public-private partnership in lending and business performance. The two sections combine to shed light on the impact of COVID-19 on the revenue of Digital SMBs.

With respect to the first analysis, we utilized a multiyear dataset, looking at all small business sales in the U.S. on PayPal. For the second section, we analyzed lending data

More than 70% of all small businesses attributing some revenue growth to the use of digital tools, and more than 40% attributing some customer growth to the use of digital tools.

from PayPal's participation in the Paycheck Protection Program to understand the impact that public-private lending had on small businesses during this crisis.

The Small Business Administration defines small businesses in the services sector as those selling less than \$7.5 million annually. We adopted that upper bound as well as a lower bound threshold of \$20,000 in TPV and a minimum of 12 transactions, in order to exclude casual sellers from the dataset. TPV does not take into account the firms' offline sales or online sales through other financial intermediaries, but it provides a unique and useful proxy for overall revenue and provides a view of the digital economy on a widely adopted two-sided platform.

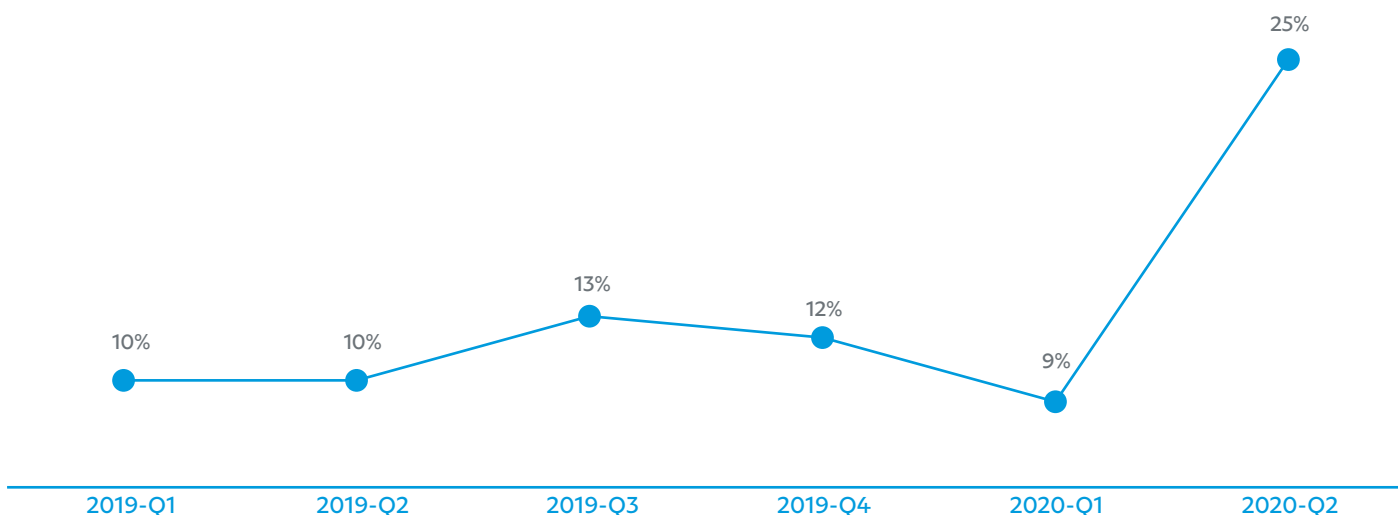
A. E-commerce – Ability to Sell Online

The transition “from bricks to clicks” has enabled SMBs to move their operations online and continue to generate revenue, despite the pandemic-induced impact on commerce, directly and indirectly. The benefits of e-commerce extend beyond the ability to transact, to include access to new customers and business relationships, accounting services, marketing platforms, cybersecurity support and more, such that transactions can be trusted by both sellers and buyers.

A Silver Lining: Growth

Based on an analysis of transaction data of 630,000 digital SMBs, the total payment volume received by U.S. small businesses saw a 25% year-over-year growth in Q2 of 2020. The 25% growth rate of these digital small businesses using PayPal is particularly remarkable at a time when the overall small business sector saw a 9% revenue drop,³² and 50% of small businesses were one payment or so away from going out of business.³³ Moreover, 75% of small businesses reported a 50% revenue reduction since March, and 57% of small businesses reported a 75% revenue reduction.³⁴ Figure 1 shows the YoY growth rate of total payment volume of U.S. small businesses on PayPal.

FIGURE 1 YOY GROWTH RATE OF U.S. SMBS ON PAYPAL



Moreover, in order to understand the relationship between online TPV, offline TPV, and overall revenue, this study includes an analysis of a subset of SMBs that have used both PayPal for online sales and the PayPal Here card reader for in-person sales in 2019 and 2020. Figure 2 shows that online sales as a share of TPV has increased to 65% in April and 59% in May, compared with offline sales as a share of TPV that decreased to 36% in April and 41% in May, showing the

increasing importance of online sales during the earliest months of the pandemic. Additionally, figure 3 and 4 compare the transaction history of these SMBs from 2019 and 2020, showing 2020 online TPV as a percentage of 2019 online TPV, and 2020 offline TPV as a percentage of 2019 offline TPV, respectively. The average YoY growth rate of online TPV in Q2 of 2020 is 11.0%, whereas the average YoY growth rate of offline TPV in the same quarter is -11.7%, suggesting the YoY reduction of offline TPV might be offset by YoY growth of online TPV in Q2 of 2020.

Taken together, the TPV of SMBs – inclusive of both online and offline TPV – decreased by 16% in April and 11% in May, but increased by 12% in June, averaging 2% YoY growth in Q2 of 2020 (Figure 5). While this analysis suggests selling online offered SMBs an opportunity of business continuity that might balance the sudden halt of offline in-person commerce at the beginning of the pandemic, the question of whether this applies to all SMBs remains. It is worth noting that in addition to selling offline using the PayPal Here card reader, this sample of SMBs had also been conducting a substantial amount of their overall business online even before the start of the crisis – a monthly average of 56% in 2019, and 58% in Q1 of 2020, which increased to 61% in Q2 of 2020. The comparison of new adopters and existing participants of online commerce is the subject of the next section.

FIGURE 2 OFFLINE AND ONLINE TPV OF SMB USERS OF PAYPAL HERE IN 2020

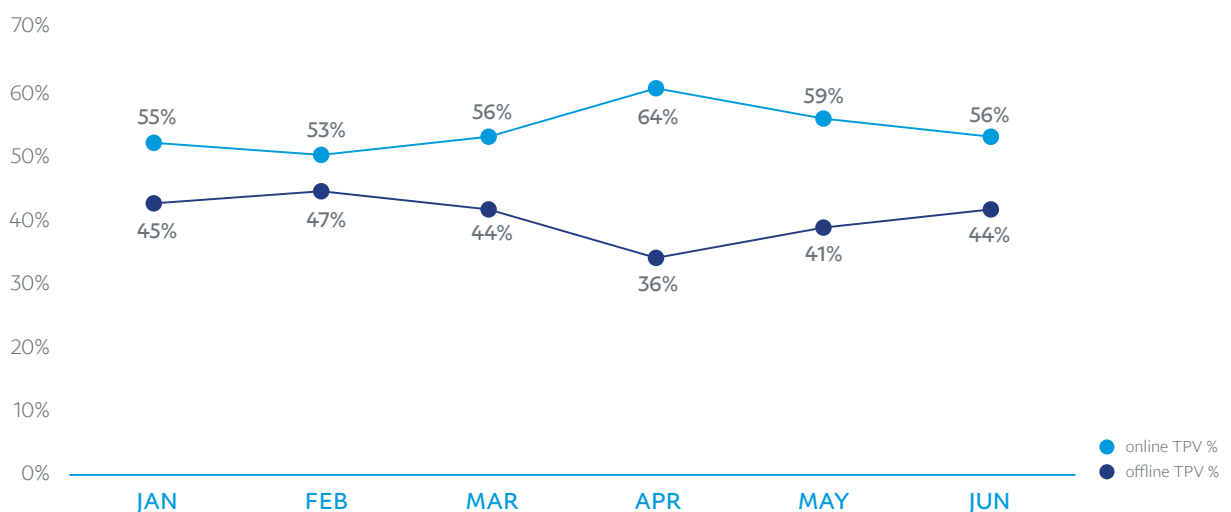


FIGURE 3 2020 ONLINE TPV AS A PERCENTAGE OF 2019 ONLINE TPV

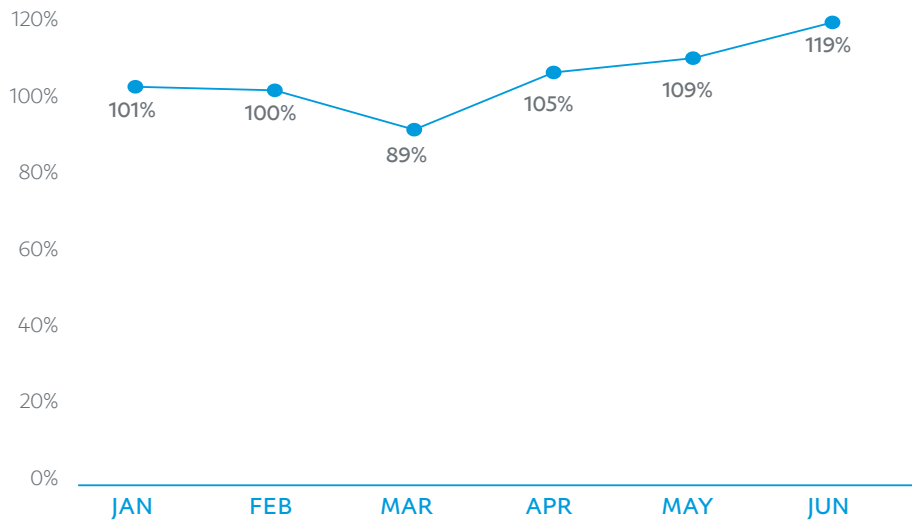


FIGURE 4 2020 OFFLINE TPV AS A PERCENTAGE OF 2019 OFFLINE TPV OF SMB USERS OF PAYPAL HERE

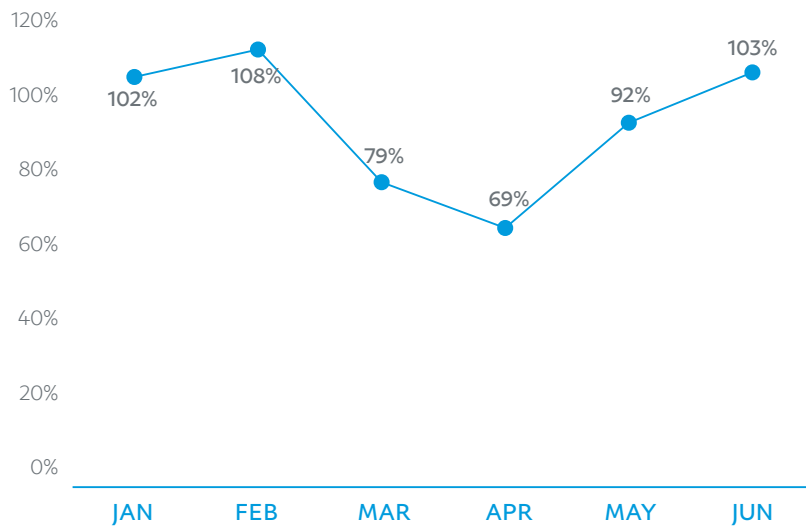
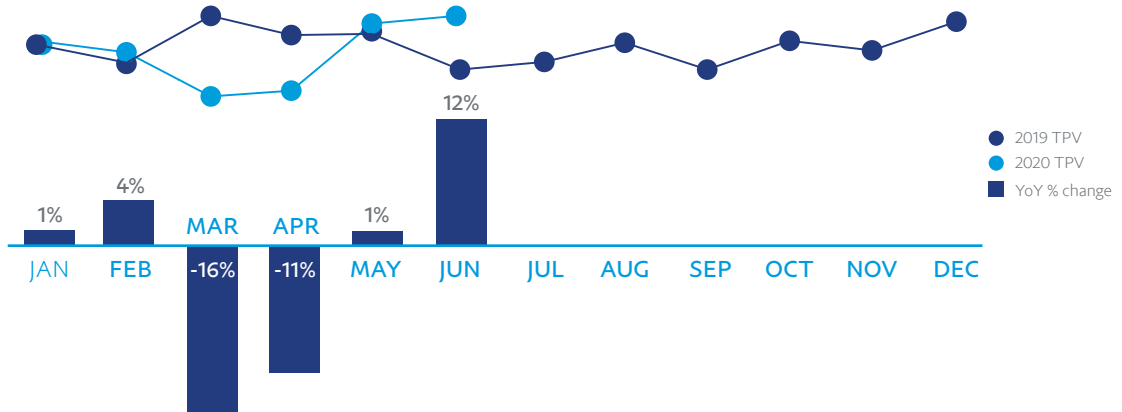


FIGURE 5 OVERALL TPV OF SMB USERS OF PAYPAL HERE



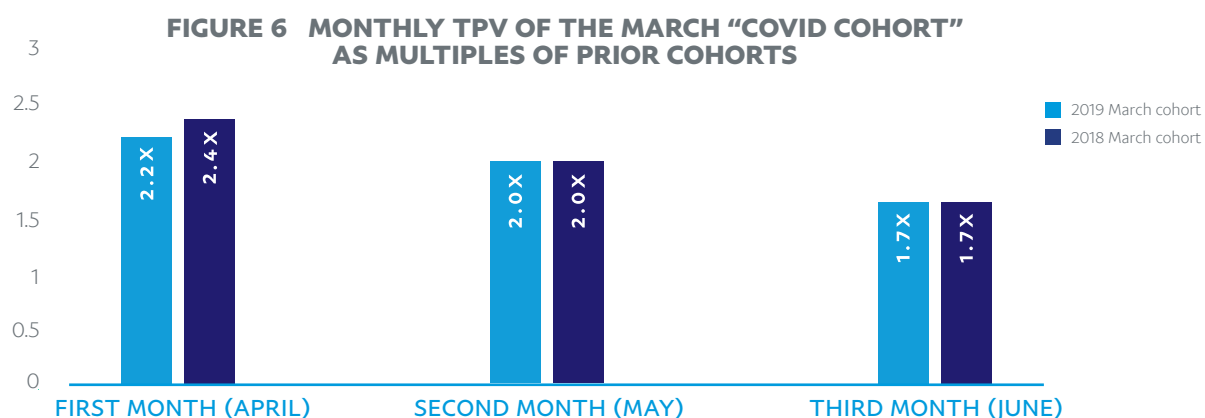
Growth Opportunity for Both New Entrants and Existing SMBs

Both newcomers and existing SMBs saw growth on PayPal. SMBs that joined PayPal between March and May of 2020 experienced double their expected sales revenue, while digital SMBs that had created a PayPal account between 2001 and 2011 represented 50% of TPV of overall PayPal SMBs in Q2 2020, demonstrating that there is still ample room for growth for SMBs newly joining the digital economy.

It is reasonable to assume SMBs that were pre-COVID adopters of e-commerce likely had an easier time adapting to the new reality of conducting all of their business online, relative to small businesses that only turned towards e-commerce as a result of the pandemic. Interestingly, using the PayPal account creation date as a proxy for the timing of e-commerce adoption, and the total payments volume of 2019 as an expected baseline for comparison, an assessment of the cohorts of SMBs that created PayPal accounts in the wake of the pandemic showed that newly digitized small businesses during the COVID-19 crisis ramped up very quickly and even exceeded the expected baseline.

Small businesses that joined PayPal between March and May of 2020 recorded average monthly revenues that were more than twice of revenues recorded by small businesses that joined PayPal in the same timeframe in 2019 (Figure 6 and 7). In April 2020, the TPV of the March “COVID cohort” was 2.2 times the TPV of small businesses that created a PayPal account in March 2019, and 2.4 times the TPV of small businesses that joined PayPal in March 2018. Similarly, in May 2020, the TPV of the April 2020 “COVID cohort” had 2.2 times the TPV of small businesses that created a PayPal account in April 2019, and 1.7 times the TPV of small businesses that joined PayPal in April 2018. Assuming the PayPal account creation date is a good proxy for the merchant’s first step towards digitization, it can be concluded that it took much less time, i.e. less than a month, for the “COVID cohorts” to catch up to and exceed the monthly revenue levels of small businesses that were pre-COVID adopters of e-commerce.

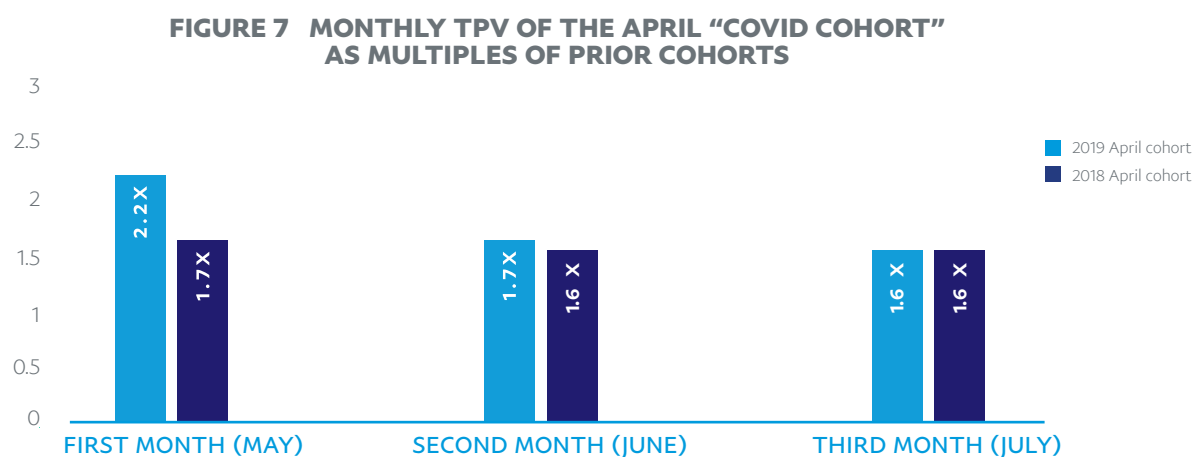
It should also be noted that existing digital small businesses have also been experiencing growth in e-commerce sales. Digital SMBs that had created a PayPal account between 2001 and 2011 represented 50% of TPV of overall digital SMBs in Q2 2020. Despite having a higher revenue baseline that is typical of firms that are more tenured and established, they still grew 16% in Q2 2020.



The trend holds for the second and third months after the SMBs created a PayPal account and started selling online. For the second month of transacting on PayPal (i.e. May 2020), the March “COVID cohort” recorded 2 times as much TPV as both the 2018 and 2019 cohorts. Similarly, in the month of June 2020, the April “COVID cohort” recorded 1.7 times as much TPV as the 2019 cohort and 1.6 times as much TPV as the 2018 cohort.

As for the third month of transacting on PayPal (i.e., June 2020), the March “COVID cohort” recorded 1.7 times as much TPV as both the 2018 and 2019 cohorts. Similarly, in July 2020, the April “COVID cohort” recorded 1.6 times as much TPV as both the 2018 and 2019 cohorts. In other words, “COVID cohorts” ramped up more quickly and recorded higher average monthly TPV than earlier adopters.

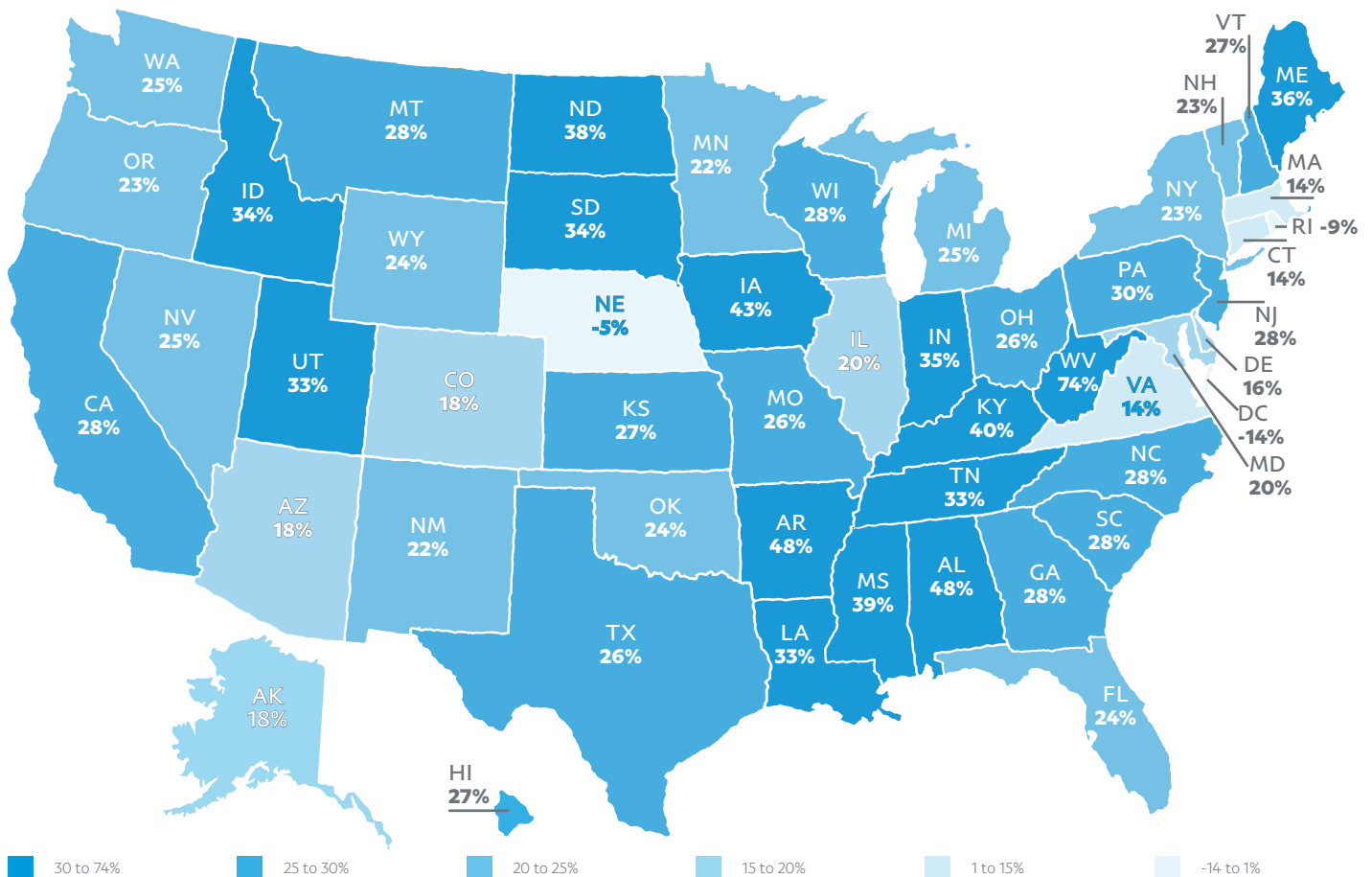
Regardless of tenure as online sellers, digitization was a powerful lifeline that small businesses were able to leverage meaningfully right away during the COVID-19 pandemic.



Resilience of Digital SMBs Across the Nation

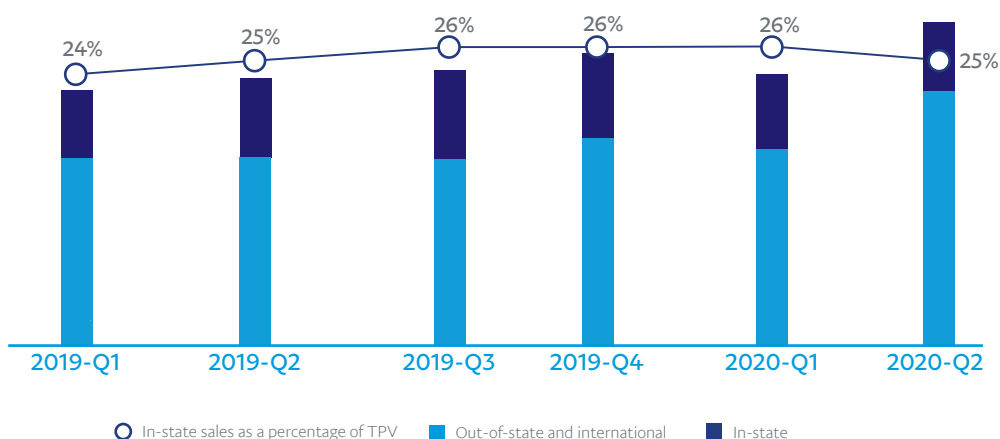
An analysis of transaction data by state reveals the resilience of digital SMBs across the nation. Although the pandemic affected different states to different degrees and at different times, digital small businesses in most states recorded growth in online sales in Q2 of 2020, with the exception of only 3 states. Strong growth was recorded even in states that were hardest hit early on during the pandemic. For instance, digital SMBs in New York and California – some of the hardest hit states due to the lockdowns – saw 28% and 23% YoY growth respectively in Q2 2020. Figure 8 shows the YoY growth rate of total payments volume of SMBs that use PayPal in Q2 of 2020.

FIGURE 8 TPV YOY GROWTH OF PAYPAL SME BY STATE FOR Q2-2020



The ability for digital SMBs to reach customers outside of one's own state has long been a source of growth and resilience, but it has become particularly important during the pandemic. Seventy-five percent of digital SMB sales were outside their home state in Q2 of 2020, consistent with previous quarters (Figure 9), suggesting evidence for the resilience of digital small businesses, despite lockdowns, as they continue to sell to a geographically diversified customer base.

FIGURE 9 IN-STATE VS OUT-OF-STATE TPV FOR U.S. DIGITAL SMBS ON PAYPAL



More Level Playing Field for More SMB Growth

Data released by the U.S. Census Bureau indicated that U.S. e-commerce retail sales for the second quarter of 2020 rose to \$211.5 billion, up 44.5% from the same period last year.³⁵ The discrepancy between the growth rate of e-commerce and that of digital small businesses in this robust sample – 44.5% vs 25% – suggests that there is much more room for digital small businesses to grow vis-à-vis larger businesses.

B. Public-Private Partnership in Lending – Paycheck Protection Program (PPP)

The unprecedented challenge of COVID-19 pandemic led governments around the world to create public financing programs that were designed to provide immediate relief for SMBs to weather the storm.

Between April and August of 2020, a total of 5,460 lenders participated in the U.S. Paycheck Protection Program (PPP). The number of approved loans stood at 5,212,128, totaling \$525,012,201,124.³⁶ According to SBA's estimates, these loans went to SMBs that supported over 51 million jobs nationwide.³⁷

The PPP loans were intended for SMBs to cover costs related to payroll, salaries, and benefits, as well as utilities, and mortgage and rent payments. The PPP loans would be forgivable if their usage met certain conditions.³⁸ The program's initial funding (\$349 billion) was exhausted by April 16, and eleven days later, an additional allocation of \$310 billion was authorized to meet the significant demand. The PPP was viewed as a lifeline credit opportunity for small businesses due to the challenges in availability of private capital.

A survey of SMB owners in Philadelphia found that 95% of them had applied for PPP while only 5% had applied for conventional bank financing.³⁹ Applications were first open to employer firms on April 3 and to non-employer firms on April 10. Inclusion of non-employer firms was significant, since they represent 80% of all SMBs and 96% of Black-owned businesses.⁴⁰



Reversing a Downward Trend and Enabling Business Continuity

Access to capital has always been critical for the survival and growth of SMBs. Financing became even more salient during the COVID-19 pandemic, given the unprecedented need and mandate to socially distance, effectively drying up revenue from in-person commerce, not to mention the weakened demand from the overall economic contraction. PayPal and Intuit were the first fintech companies to participate in the U.S. Paycheck Protection Program.⁴¹ PayPal began facilitating the provision of PPP loans the week of April 10 and continued to do so through August.⁴² The average loan size of PPP loans facilitated through PayPal was only \$28,000, far below the overall PPP average of \$100,729.⁴³ More than 97% were loans of less than \$150,000 in size (Figure 10),⁴⁴ and 75% were loans of under \$25,000. Also, 50% of PPP loans received via PayPal went to businesses of only one employee.⁴⁵

FIGURE 10 SIZE OF PAYCHECK PROTECTION PROGRAM LOANS

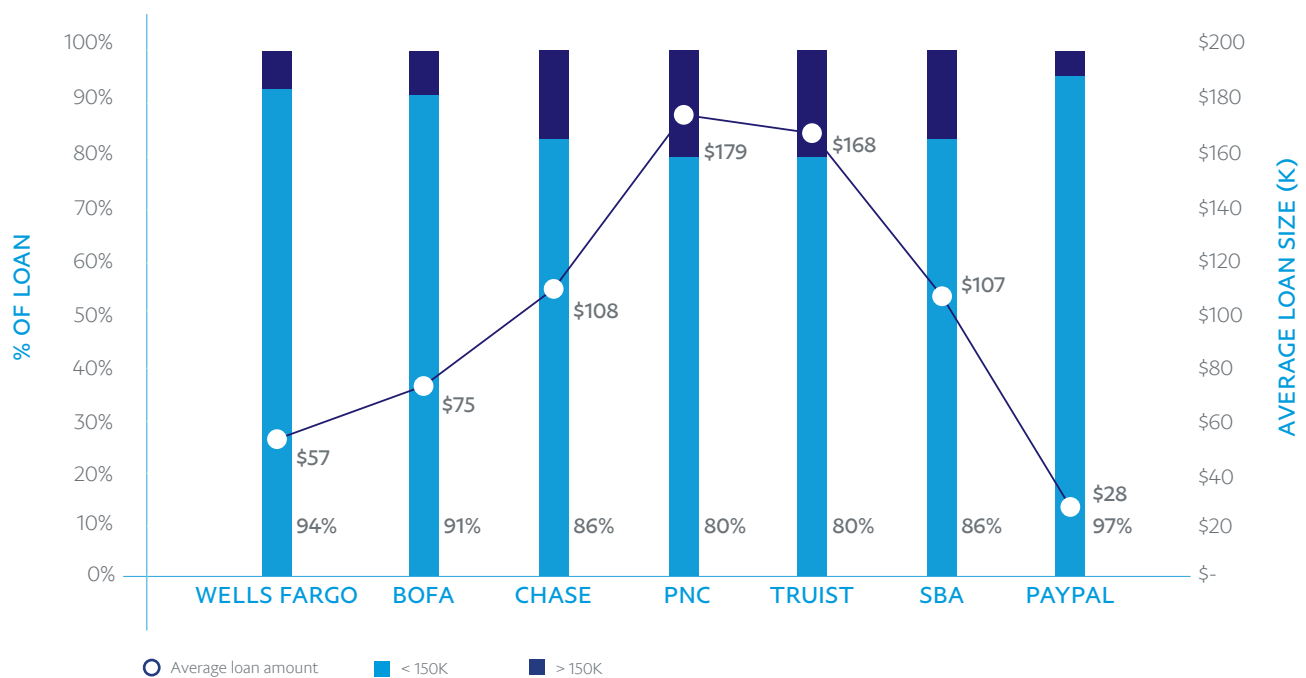


Figure 11 focuses on a cohort of 1,261 small businesses that have received a PPP loan via PayPal in April 2020 and have been using PayPal since 2018 or prior, and compares their average monthly YoY total payment volume growth between 2019 and 2020. Not only did the downward trend in January – March 2020 reverse after the capital injection in April, these digital SMBs have been on a higher growth trajectory from April to August 2020 relative to the same timeframe in 2019. A closer inquiry reveals that the year-over-year difference in average monthly revenue at the start of the COVID-19 pandemic, i.e. March 2020, relative to March 2019, is -15%. However, in the same month of receiving the PPP loans via PayPal, the year-over-year change in average monthly total payment volume in April 2020 relative to April 2019 was quickly neutralized to 0%, followed by an increase of 7% in May, 20% in June, 15% in July, and 11% in August.

FIGURE 11 YOY TPV GROWTH RATE OF SMBS THAT RECEIVED A PPP LOAN IN APRIL 2020

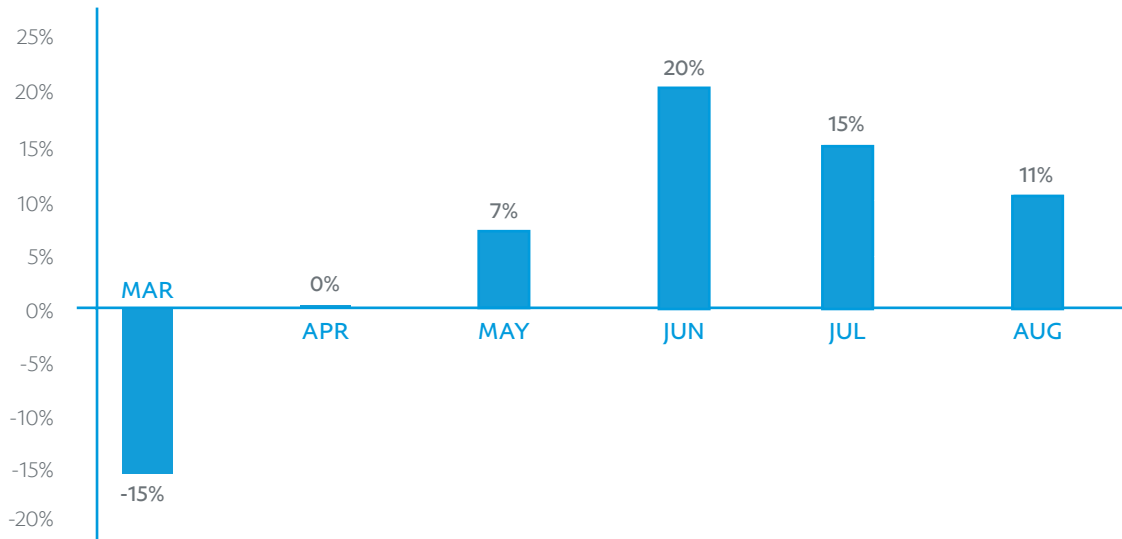


Figure 12 focuses on a cohort of 2,770 SMBs that have received a PPP loan via PayPal in May 2020 and have been using PayPal since 2018 or prior, and compares their average monthly total payment volume between 2019 and 2020. The year-over-year decrease in average monthly total payment volume slowed after these digital small businesses gained access to PPP via PayPal in May, from -17% in April to -7% in May, followed by an increase of 4% in June and 2% in July, before it dipped again in August.

FIGURE 12 YOY TPV GROWTH RATE OF SMBS THAT RECEIVED A PPP LOAN IN MAY 2020

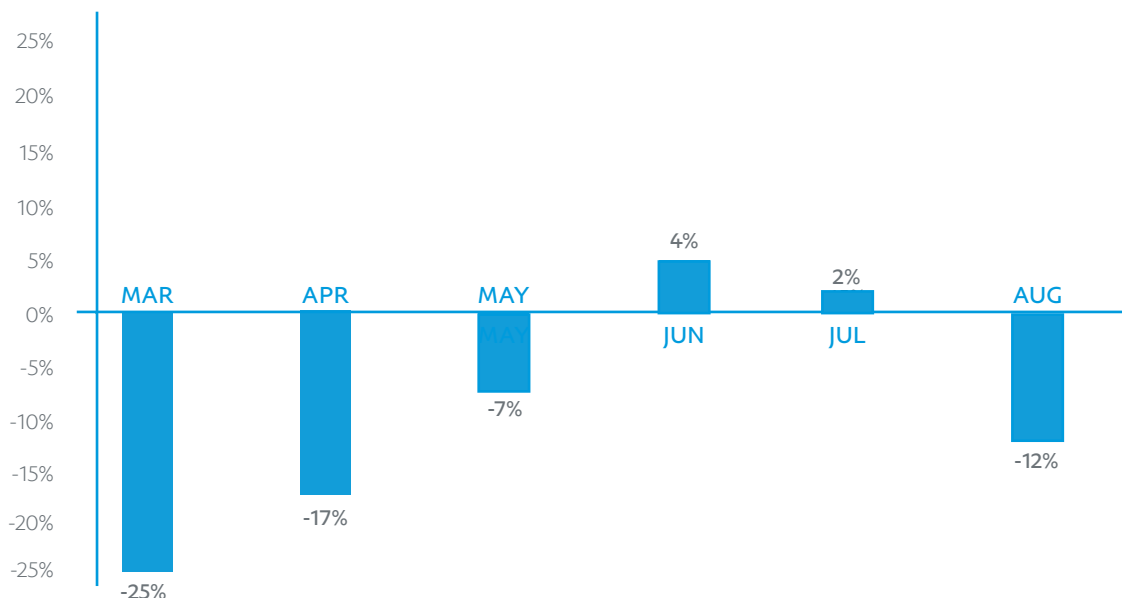
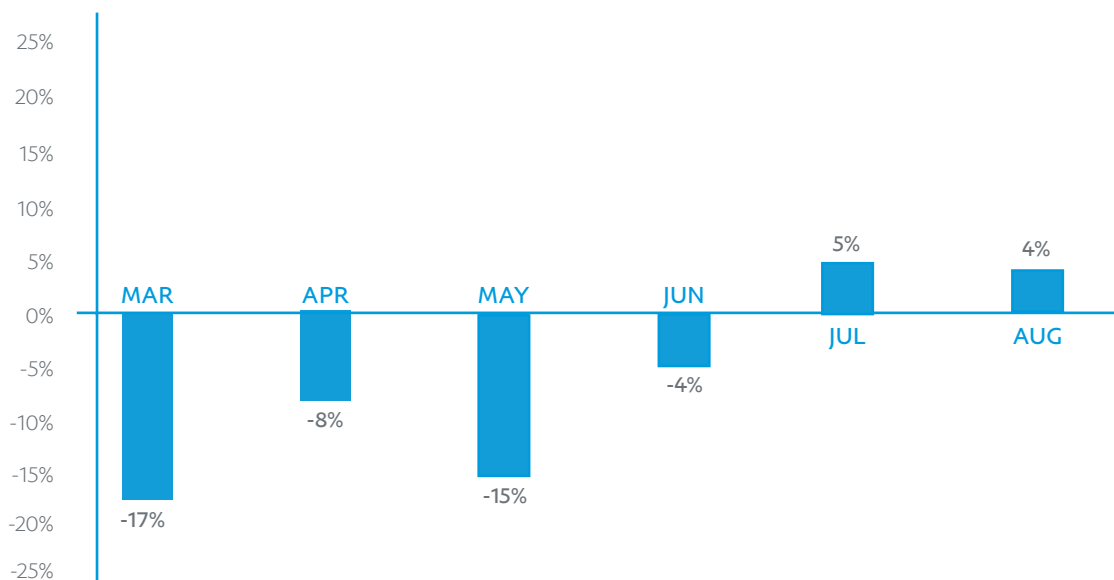


Figure 13 focuses on a cohort of 545 small businesses that have received a PPP loan via PayPal in June 2020 and have been using PayPal since 2018 or prior, and compares their average monthly total payment volume between 2019 and 2020. The year-over-year decrease in average monthly total payment volume slowed after digital small businesses gained access to PPP via PayPal in June, from -15% in May to -4% in June, followed by an increase of 5% in July and 4% in August.

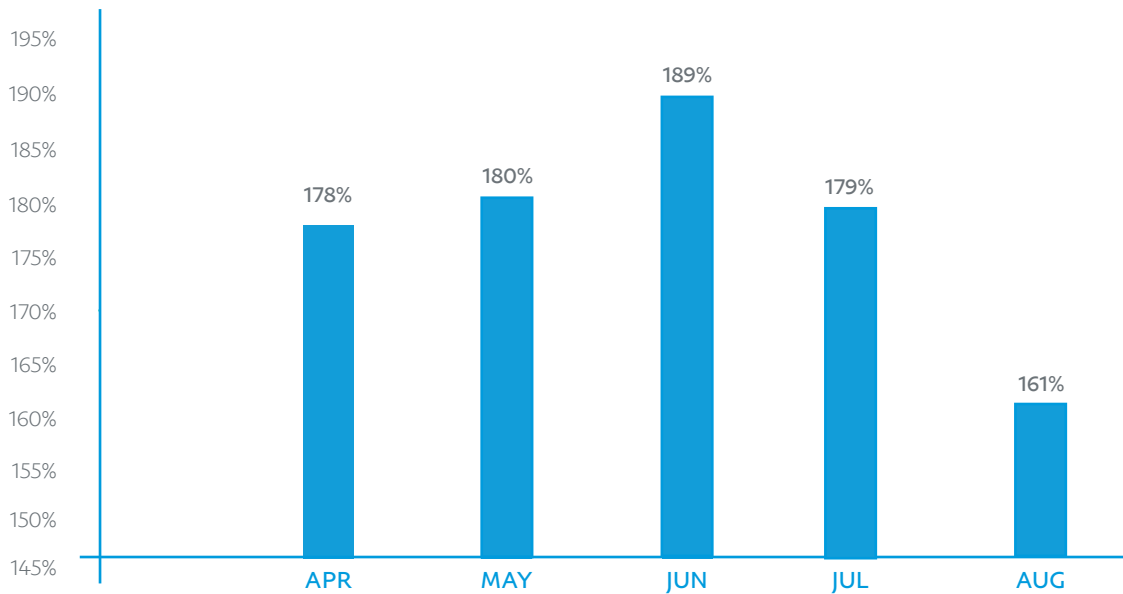
FIGURE 13 YOY TPV GROWTH RATE OF SMBS THAT RECEIVED PPP IN JUNE 2020



There were a number of confounding factors that might have impacted the revenue performance of these digital SMBs, including the disbursement and expiration of stimulus payments, timing and size of PPP loans, the broader shift to e-commerce, and overall easing of lockdown measures. Nevertheless, it is notable that these three cohorts of SMBs had very different TPVs in the months of May, June, and July; when these other confounding factors were consistent in application.

Moreover, a comparison of transaction data of overall PayPal SMBs and PayPal SMBs that received a PPP loan shows that the latter, i.e. the group that received a PPP loan, recorded 177% as much total payment volume on average as the former in April to August of 2020, which suggests a positive relationship between access to finance and revenue growth. Figure 14 shows the average TPV of PayPal SMBs that received PPP via PayPal, as a percentage of average TPV of overall PayPal SMBs by month.

FIGURE 14: AVERAGE TPV OF PAYPAL SMBS THAT RECEIVED A PPP LOAN AS A PERCENTAGE OF AVERAGE TPV OF OVERALL PAYPAL SMBS



While the increase in TPV may be explained by stimulus payments and increase in online sales does not reflect net increase in overall business, there is a clear shift in TPV before and after access to PPP loans. Much more research is needed regarding how PPP loans are used and how they may have helped SMBs.

Serving the Underserved

Long before the COVID-19 crisis, Black-owned firms have seen lower revenues and less access to financing than White owned-firms.⁴⁶ The same trends that have been present in the Black entrepreneurial community seem to have held during the pandemic. Several papers have highlighted that the pandemic seems to have had the greatest negative impact on Black-owned SMBs and the PPP failed to reach the areas with the highest concentration of Black-owned businesses. According to a report by the Federal Reserve Bank of New York, the Paycheck Protection Program has left significant coverage gaps. An average of 17.7% of all U.S. firms received a PPP loan (i.e., the national average coverage rate of PPP is 17.7%). However, in the top 30 counties with the highest density of Black business activity (by receipts), which also recorded heightened incidence of COVID-19 according to the same report, less than 17.7% of firms in 22 out of these 30 counties received a PPP loan (Table 1⁴⁷). In other words, the PPP loan coverage rate for the majority of these 30 counties was below average. PPP loans were under-indexed in these 30 counties that have the highest density of Black business activity and heightened incidence of COVID-19.

A different pattern emerged from a similar analysis of PayPal's PPP activity in the same timeframe (between April and June). About 0.27% of all firms in the U.S. received a PPP loan via PayPal (i.e., the national average coverage rate of PPP loans received via PayPal is 0.27%). In contrast to the overall PPP, the coverage rate for PayPal facilitated PPP loans is below average in only 7 out of

the 30 counties that have the highest density of Black business activity. In other words, the coverage rate for PayPal facilitated PPP loans is above average in 23 out of these 30 counties. Contrary to the overall PPP loans, PayPal's PPP loan program is over-indexed in the majority of the top 30 counties that have the highest density of Black business activity and heightened incidence of COVID-19.

TABLE 1. A COMPARISON OF COVERAGE RATE IN THE TOP 30 U.S. COUNTIES BY BLACK BUSINESS RECEIPTS

COUNTY	OVERALL PPP		PPP LOANS FACILITATED BY PAYPAL	
	Firm coverage rate (= PPP loans/ Total firms)	Firm coverage rate as a percentage of the national average coverage rate of 17.7% (= PPP firm coverage rate/17.7%) <i>A value of below 100% indicates below average</i>	Firm coverage rate (= PayPal PPP loans/ Total firms)	Firm coverage rate as a percentage of national average coverage rate of 0.27%. (= PayPal facilitated PPP firm coverage rate/ 0.27%) <i>A value of below 100% indicates below average</i>
LOS ANGELES COUNTY, CA	15.4%	87%	0.50%	181%
COOK COUNTY, IL	15.3%	87%	0.47%	173%
HARRIS COUNTY, TX	16.0%	90%	0.35%	127%
PRINCE GEORGE'S COUNTY, MD	12.2%	69%	0.41%	148%
WAYNE COUNTY, MI	11.6%	66%	0.27%	98%
DISTRICT OF COLUMBIA, DC	19.7%	111%	0.47%	170%
FAIRFAX COUNTY, VA	15.5%	88%	0.43%	157%
NEW YORK COUNTY, NY	19.6%	111%	0.44%	161%
FULTON COUNTY, GA	20.8%	118%	0.57%	206%
MIAMI-DADE COUNTY, FL	15.0%	85%	0.38%	138%
DALLAS COUNTY, TX	16.7%	94%	0.30%	108%
KINGS COUNTY, NY	13.2%	74%	0.50%	183%
MONTGOMERY COUNTY, MD	14.6%	82%	0.42%	151%

BROWARD COUNTY, FL	18.5%	105%	0.51%	187%
ORANGE COUNTY, FL	20.1%	113%	0.55%	202%
MECKLENBURG COUNTY, NC	17.9%	101%	0.47%	171%
DEKALB COUNTY, GA	15.1%	85%	0.48%	175%
SHELBY COUNTY, TN	15.0%	85%	0.22%	80%
MARION COUNTY, IN	16.3%	92%	0.29%	105%
CUYAHOGA COUNTY, OH	16.9%	96%	0.23%	83%
BRONX COUNTY, NY	7.1%	40%	0.22%	80%
OAKLAND COUNTY, MI	17.5%	99%	0.33%	118%
PHILADELPHIA COUNTY, PA	15.7%	89%	0.29%	104%
FRANKLIN COUNTY, OH	16.0%	91%	0.27%	98%
QUEENS COUNTY, NY	11.3%	64%	0.42%	155%
ALAMEDA COUNTY, CA	17.0%	96%	0.50%	181%
ST. LOUIS COUNTY, MO	19.6%	111%	0.12%	44%
BALTIMORE CITY, MD	13.5%	76%	0.35%	129%
HENNEPIN COUNTY, MN	19.0%	108%	0.14%	51%
TARRANT COUNTY, TX	15.5%	88%	0.28%	102%

FIGURE 15 COVERAGE RATE IN COMPARISON WITH NATIONAL AVERAGE OF OVERALL PAYCHECK PROTECTION PROGRAM

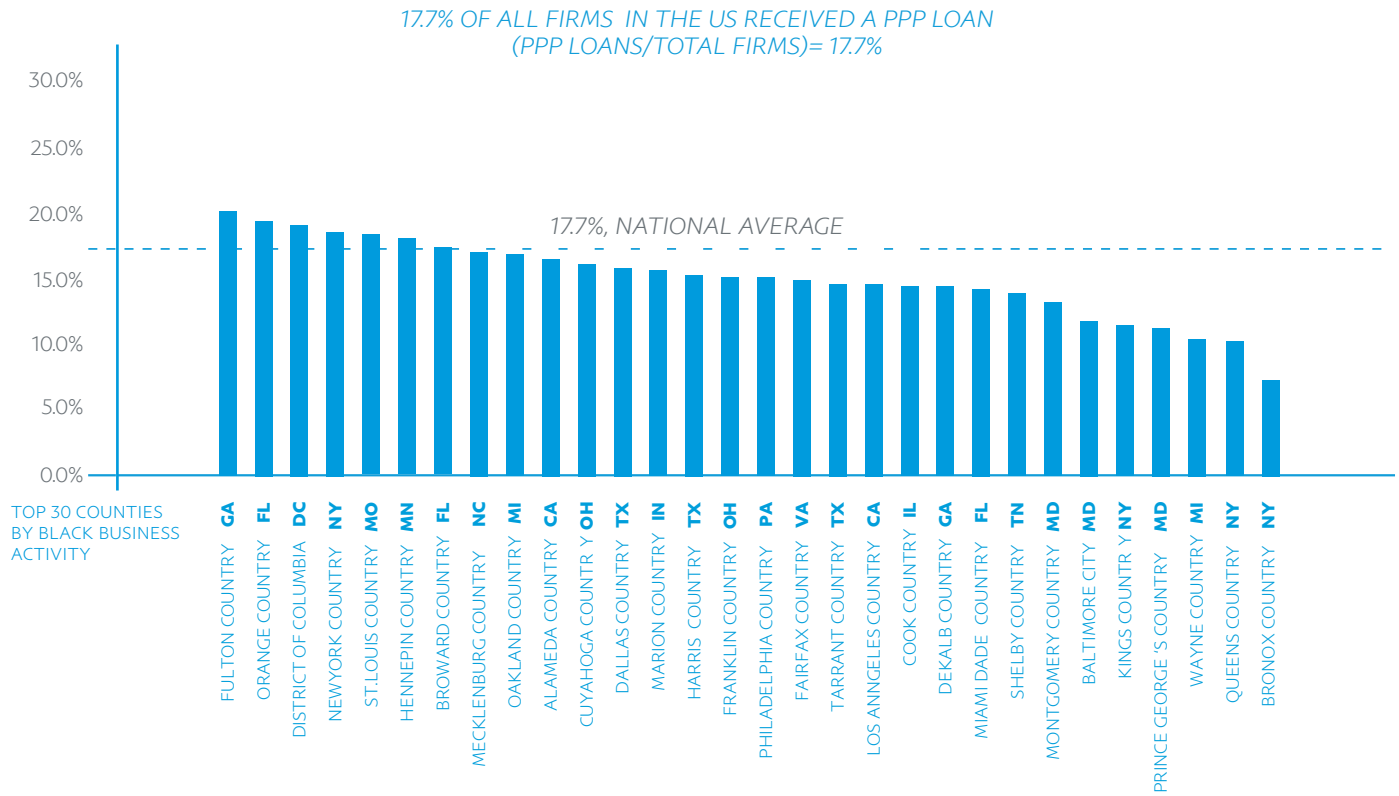
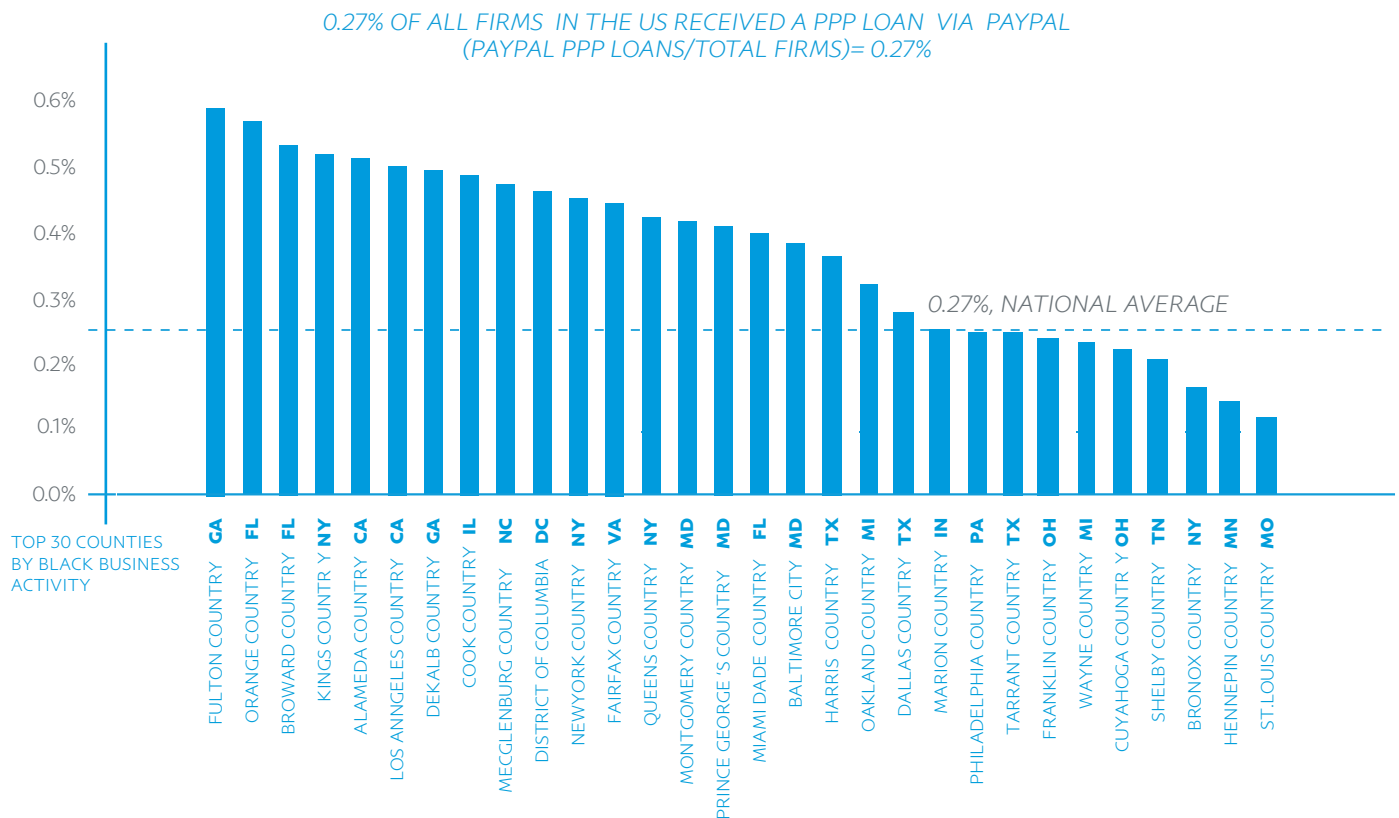


FIGURE 16 COVERAGE RATE IN COMPARISON WITH NATIONAL AVERAGE OF PAYPAL-FACILITATED PPP LOANS



Moreover, for loans that were below \$150,000, 54% of PPP loans obtained via PayPal were disbursed to the zip codes where the share of minority (i.e. non-White) population is above 25%, while only 39% of overall PPP loans were disbursed to the same zip codes (Figure 17). More specifically, for these PPP loans under \$150,000, 27% were disbursed to zip codes where the share of Black population is above 15%, whereas only 24% of overall PPP loans were disbursed to the same zip codes. And, for the same loan size range, 45% of PPP loans obtained via PayPal were disbursed to zip codes where the share of LatinX population is above 15%, whereas only 33% of overall PPP loans were disbursed to the same zip codes (Figure 18).

FIGURE 17 PERCENTAGE OF LOANS (BELOW \$150K) THAT WERE DISBURSED TO ZIP CODES WHERE SHARE OF MINORITY POPULATION IS ABOVE 25%

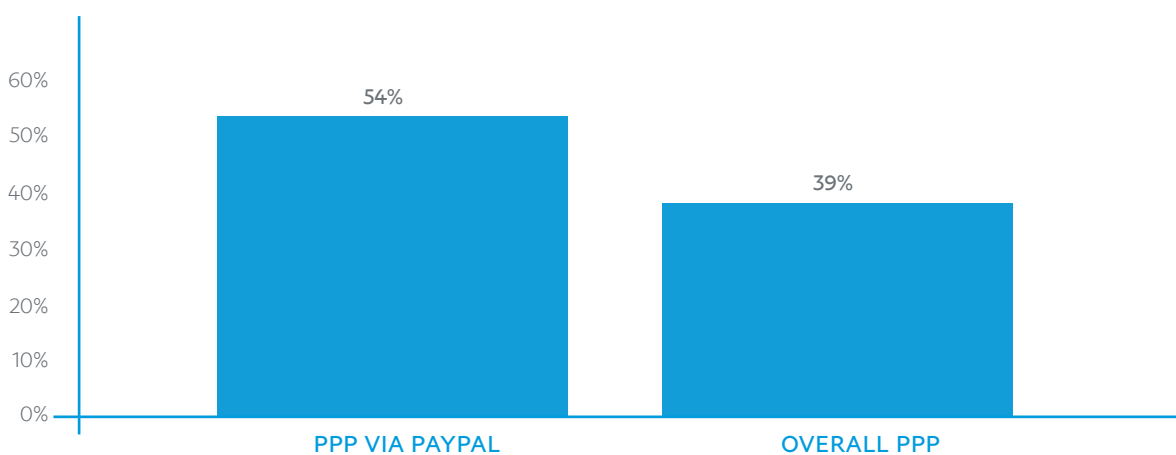
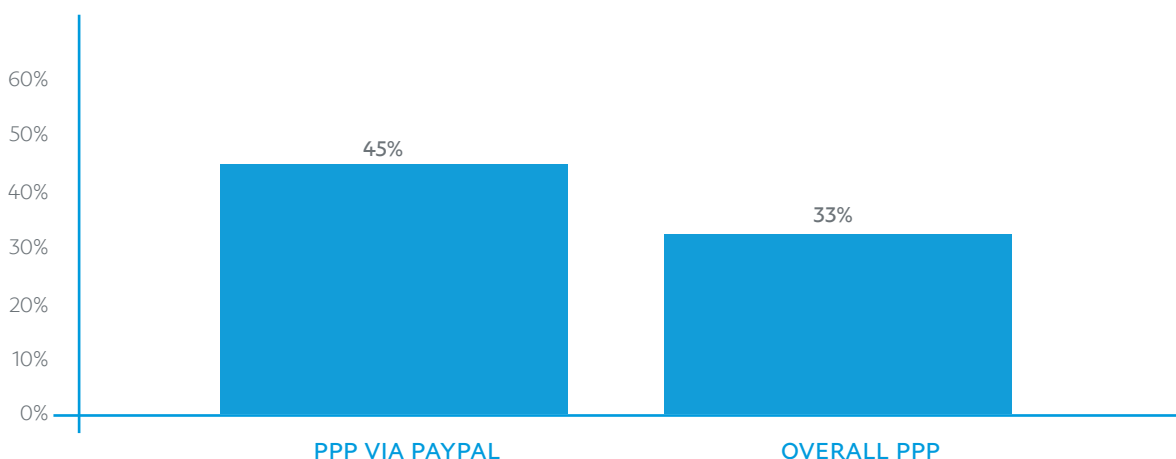


FIGURE 18 PERCENTAGE OF LOANS (BELOW \$150K) THAT WERE DISBURSED TO ZIP CODES WHERE SHARE OF LATINX POPULATION IS ABOVE 15%





Policy Implications

Small businesses are commonly referred to as the “backbone” of the economy and provide numerous cultural and societal positive externalities. Small businesses comprise roughly 99.7% of U.S. firms with paid employees,⁴⁸ and employ nearly half of the private sector workforce. Approximately 29% of SMB business owners are minorities,⁴⁹ and there are many community, innovation, and competition benefits that society derives from small businesses. These data points underscore why we should be highly concerned that the current pandemic threatens the existence of large segments of the SMB ecosystem.

Digital tools are proving to be essential to the ongoing competitiveness, resiliency, and indeed survival of many businesses, large or small. Digitization is a secular trend impacting all sectors of the economy, and now this impact is unambiguously being expedited by the pandemic. Digital infrastructure in the 21st century is fast becoming the modern-day equivalent to what roads, highways, and electricity meant for our economy and SMB landscape in the 20th century. Indeed, digitization holds promise in putting SMBs on an even competitive plane in order to better match the scale advantages and capabilities of larger companies.

Digitization is a secular trend impacting all sectors of the economy, and now this impact is unambiguously being expedited by the pandemic.

So, what does this mean for policymakers? Smart policy would help SMBs enhance their digital strategies and adoption of digital tools, including through access to capital needed for related investment. Not only will this be essential from an existential perspective during the COVID-19 pandemic, but investing in digital infrastructure can be the springboard that enhances inclusive and sustainable economic growth and productivity once we emerge from this difficult time. The following are policy solutions that can be bundled within a “SMB Digital Resiliency” package in order to support SMBs, and ensure there is a more level playing field for the survival and competitiveness of a sector that is so important to the national economic and social fabric.

The first recommendation is the SMB Digitization deduction. Enhancements to the Tax Cuts and Jobs Act, which expanded deductions for technology, software, and IT purchases, could further help SMBs make necessary digital infrastructure investments. One possibility would be doubling

the effective expense deduction for every dollar spent on digital tools, including payment platforms, cloud services, online marketplaces, Internet or mobile delivery partnerships, Internet advertising, and website upgrades. These cuts would target stimulus to productive investment that would help SMBs during and emerging from the current pandemic.

Second, rebuild the Main Street by digitizing it. As part of a broader national digital connectivity and 5G implementation strategy, the federal government and local officials should carefully consider the impact and benefits to small businesses. Main Street should be prioritized from a connectivity standpoint, as should providing digital access to lower-income individuals. Roughly 3 in 10 adults with annual household income below \$30,000 do not own a smart phone, 44% do not have home broadband services, and 46% do not have a traditional computer.⁵⁰ E-commerce can be a more efficient and lower cost means to procure goods and service, and the current pandemic

has only magnified the importance of digital sales channels.

Access to capital with flexible repayment terms during the next 6-12 months will be critical in helping SMBs navigate this period and implement digital strategies;

Third, as cities, counties, and states across the U.S. gradually emerge from COVID-19 related business closures and restrictions, millions of SMBs will look to reopen their doors in the face of an uncertain economic future. Efforts to normalize will come in fits

and starts, and it will take most SMBs time to return to pre-COVID activity levels. Access to capital with flexible repayment terms during the next 6-12 months will be critical in helping SMBs navigate this period and implement digital strategies; unfortunately, given the degree of uncertainty and risk it is unlikely that traditional private sector lenders will be in position to provide the requisite capital and support.

By leveraging the existing PPP infrastructure and targeted loan products, policymakers should create an extended 12-month loan guarantee program with a time-based phase-out mechanism in order to support small businesses. The program should leverage the existing PPP framework since bank and non-bank lenders have built systems that can integrate with existing government/SBA processes and the SBA should “approve” a broader range of eligible SMB loan products that can serve different business types, needs, and use cases. For example, shorter-duration term loans (2-3 years) and revenue-based repayment loan products are ideally situated to a SMB borrower navigating a gradual (and lumpy) business restart.

Fourth, the Small Business Administration (SBA) should in partnership with the private sector organize educational seminars across the country on digital strategies, tools, and implementation. Online resources that help SMB owners consider how best to establish digital operations and sales channels would help those less knowledgeable of potential solutions. Educational content and programming could leverage the expertise and networks of leading SMB trade and advocacy organizations, including the SBA Office of Advocacy.

Finally, digital sales channels are only effective when consumers can readily access and pay for

goods and services in a digital environment. This will typically mean that the consumer must have a bank account or access to a digital payment service. Policies that can increase access to online payment and banking services will help upgrade American economic infrastructure, including for SMBs. Amongst policies that can help is the development of digital identity solutions that can be used for KYC and anti-fraud purposes. These digital identity solutions would benefit from API access to government-held data that can speed and increase the accuracy of identity confirmation. The government could also foster the creation of digital identity solutions by convening cross-sector stakeholders, helping develop standards, and ensuring that existing regulation is not chilling further innovation.



Conclusion

While it is unclear when the COVID-19 pandemic will come to an end, it is very clear that digitization and online commerce offer a path to survival and potential growth for SMBs in the months ahead. Small businesses are vital to the health of the American economy and society, investing in their recovery and resilience will hold the key to rebuilding the country after the pandemic. Those investments should be supported by continued public-private partnership initiatives that ensure that small businesses have access to the capital and tools needed to weather the current pandemic, and come out of the other side stronger and more resilient.

Endnotes

This research paper is authored by Ivy K. Lau, Paul Disselkoen, Usman Ahmed, and Wen Wang, members of the Global Public Policy and Research team at PayPal Inc. Economic research support was provided by Olim Latipov and Simon Schropp of Sidley Austin.

- 1 PayPal acts as a service provider in connection with PPP loans originated by WebBank. The lender for the Pay-check Protection Program Loan through PayPal is WebBank, Member FDIC
- 2 <https://www.kqed.org/science/1959566/california-gov-gavin-newsom-orders-state-to-shelter-in-place>
- 3 <https://abcnews.go.com/US/News/timeline-100-days-york-gov-andrew-cuomos-covid/story?id=71292880>
- 4 https://higherlogicdownload.s3.amazonaws.com/NMSC/390e0055-2395-4d3b-af60-81b53974430d/UploadedImages/Resource_Center/COVID_19/NMSC57_MSA_COVID19IMAPCTSURVEY_F.pdf
- 5 <http://albanyceo.com/news/2020/07/most-small-businesses-project-revenue-decreases-due-covid-19-despite-nearly-half-avoiding-forced-closures-td-bank-survey-shows/>
- 6 <https://www.reuters.com/article/us-usa-economy/coronavirus-sinks-u-s-consumer-spending-savings-hit-record-high-idUSKBN2352CI?feedType=RSS&> & <https://www2.deloitte.com/us/en/insights/economy/spotlight/economics-insights-analysis.html>
- 7 <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/survey-us-consumer-sentiment-during-the-coronavirus-crisis>
- 8 <https://www.pymnts.com/smb/2020/visa-poll-smb-instant-access-payments/>
- 9 <https://www.pymnts.com/news/b2b-payments/2020/mastercard-73-percent-smb-say-digital-payments-are-new-normal/>
- 10 <https://www.cnbc.com/2020/05/04/small-business-confidence-crashes-main-street-fears-more-carnage.html>
- 11 <https://blackdemographics.com/economics/black-owned-businesses/> https://www.nber.org/papers/w26989.pdf?utm_source=Triggermail&utm_medium=email&utm_campaign=Post%20Blast%20bii-payments-and-commerce:%20Most%20Main%20Street%20SMBs%20have%20a%20cash%20flow%20problem%20%E2%80%94%20especially%20during%20the%20pandemic%20%E2%80%94%20and%20acquirers%20and%20processors%20can%20win%20their%20business%20by%20enabling%20real-time%20settlements&utm_term=BII%20List%20PayCom%20Content%20ONLY
- 12 <https://www.fedsmallbusiness.org/medialibrary/FedSmallBusiness/files/2020/covid-brief>
- 13 <https://www.pymnts.com/smb/2020/visa-poll-smb-instant-access-payments/>
- 14 <https://www.nytimes.com/2020/08/03/nyregion/nyc-small-businesses-closing-coronavirus.html>
- 15 <https://www.axios.com/small-businesses-lost-coronavirus-recession-minorities-22a03253-156f-4397-829d-067940d00300.html>
- 16 https://higherlogicdownload.s3.amazonaws.com/NMSC/390e0055-2395-4d3b-af60-81b53974430d/UploadedImages/Resource_Center/COVID_19/NMSC57_MSA_COVID19IMAPCTSURVEY_F.pdf
- 17 <https://www.yelpconomiccoverage.com/business-closures-update-sep-2020.html>
- 18 https://www.kauffman.org/wp-content/uploads/2019/12/kauffman_compilation_race_entrepreneurship.pdf
- 19 https://www.mbda.gov/sites/default/files/migrated/files-attachments/2012SBO_MBEFactSheet020216.pdf
- 20 <https://blackdemographics.com/economics/black-owned-businesses/>
- 21 <https://www.brookings.edu/research/businesses-owned-by-women-and-minorities-have-grown-will-covid-19-undo-that/>
- 22 https://www.fedsmallbusiness.org/medialibrary/FedSmallBusiness/files/2020/DoubleJeopardy_COVID19andBlackOwnedBusinesses
- 23 <https://www.goldmansachs.com/citizenship/10000-small-businesses/US/infographic-round-two/>
- 24 https://www.newyorkfed.org/medialibrary/media/smallbusiness/DoubleJeopardy_COVID19andBlackOwnedBusinesses
- 25 <https://www.nytimes.com/interactive/2020/06/13/us/george-floyd-protests-cities-photos.html>
- 26 https://www.wsj.com/articles/target-sales-jump-as-pandemic-speeds-e-commerce-shift-1159783331?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosfutureofwork&stream=future
- 27 <https://www.paymentsjournal.com/46-smb-sell-products-services-online/>

28 <https://www.pymnts.com/smb/2020/six-months-into-pandemic-taking-the-pulse-of-main-street-smb/>

29 <https://about.fb.com/wp-content/uploads/2020/05/SMBReport.pdf>

30 <https://www.pymnts.com/news/b2b-payments/2020/mastercard-73-percent-smb-say-digital-payments-are-new-normal/>

31 <https://www2.deloitte.com/content/dam/Deloitte/es/Documents/Consultoria/The-performance-of-SMBs-in-digital-world.pdf>

32 <https://www.barrons.com/articles/u-s-small-business-revenue-drops-9-51598432402>

33 <https://www.pymnts.com/news/b2b-payments/2020/mastercard-73-percent-smb-say-digital-payments-are-new-normal/>

34 https://higherlogicdownload.s3.amazonaws.com/NMSC/390e0055-2395-4d3b-af60-81b53974430d/UploadedImages/Resource_Center/COVID_19/NMSC57_MSA_COVID19IMAPCTSURVEY_F.pdf

35 https://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosfutureofwork&stream=future

36 <https://www.sba.gov/funding-programs/loans/coronavirus-relief-options/paycheck-protection-program>

37 <https://www.sba.gov/about-sba/sba-newsroom/press-releases-media-advisories/ppp-save-over-51-million-jobs#:~:text=Our%20nation's%20businesses%20have%20received,despite%20the%20COVID%2D19%20pandemic.>

38 <https://www.sba.gov/sites/default/files/2020-08/PPP%20--%20Loan%20Forgiveness%20FAQs%20%28August%2011%2C%202020%29-508.pdf>

39 <https://thefinancialbrand.com/96991/pandemic-coronavirus-covid-19-business-banking-lending-recession-downturn/>

40 https://www.newyorkfed.org/medialibrary/media/smallbusiness/DoubleJeopardy_COVID19andBlackOwnedBusinesses

41 <https://www.bizjournals.com/sanjose/news/2020/04/13/paypal-intuit-paycheck-protection-program.html>

42 PayPal acts as a service provider in connection with PPP loans originated by WebBank. The lender for the Paycheck Protection Program Loan through PayPal is WebBank, Member FDIC.

43 <https://www.sba.gov/funding-programs/loans/coronavirus-relief-options/paycheck-protection-program>

44 <https://sba.app.box.com/s/tvb0v5i57oa8gc6b5dcm9cyw7y2ms6pp>

45 Based on internal analysis of PayPal-facilitated PPP loans

46 https://www.newyorkfed.org/medialibrary/media/smallbusiness/DoubleJeopardy_COVID19andBlackOwnedBusinesses

47 County-level PPP loan counts are calculated based on aggregated zip code data. Sources: U.S. Census Bureau, 2012 Survey of Business Owners; U.S. Department of the Treasury, SBA Paycheck Protection Program Loan Level Data (through June 2020)

48 <https://www.sba.gov/sites/default/files/advocacy/Frequently-Asked-Questions-Small-Business-2018.pdf>

49 <https://www.sba.gov/sites/default/files/advocacy/Frequently-Asked-Questions-Small-Business-2018.pdf>

50 <https://www.pewresearch.org/fact-tank/2019/05/07/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/>