INSIGHTS FROM EMERGING MARKETS

MSMEs and Digital Tool Use amidst the COVID-19 Pandemic

COLOMBIA COUNTRY BRIEF

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November 2021

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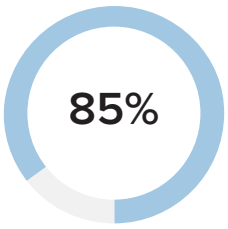
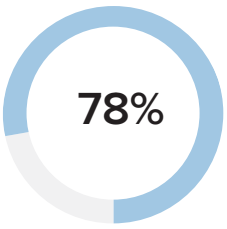
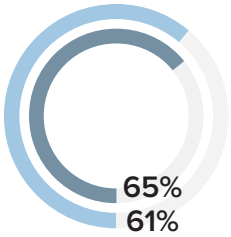


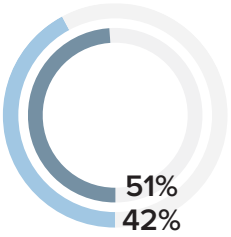
A large majority (85 percent) of surveyed micro, small, and medium enterprises (MSMEs) reported using digital tools for business purposes in the past year during COVID-19.



Online respondents looked favorably on digital tool use during the pandemic: a large majority (78 percent) of surveyed online MSMEs reported that digital tools were important or essential to keeping their business running during COVID-19.[i]



Enterprises recognized the importance of new digital tools during COVID-19: a majority of surveyed online MSMEs reported that Facebook apps[ii] (65 percent)-- and specifically WhatsApp (61 percent)-- helped them adapt to the COVID-19 environment.



Social media tools, like Facebook apps, played a role across the spectrum of business functions. More than half of online MSMEs reported recently using Facebook apps for communication-orientated business activities, specifically communicating with customers (51 percent) and suppliers (42 percent) in the past 30 days.

Colombia is a top performing economy in Latin America[1], with a large micro, small, and medium enterprise (MSME)[iii] sector underpinning its consistent growth[2] until the COVID-19-induced economic slowdown in 2020. By allowing some MSMEs to quickly pivot online and maintain their core business functions, digital tools (defined here as internet-based technologies) have become increasingly important to Colombia's MSME community during the pandemic.[3] A new survey conducted by DAI and Ipsos in June and July 2021 found that a large majority (85 percent) of surveyed MSMEs were online, meaning that they had reported using digital tools for business purposes over the past year during COVID-19.[iv] Additionally, a large majority (78 percent) of surveyed online MSMEs reported that digital tools were important or essential to keeping their business running during COVID-19.

MSMEs recognized the importance of embracing new digital tools during COVID-19. More than half (65 percent) of surveyed online MSMEs reported that Facebook apps-- and specifically WhatsApp (61 percent)-- helped them adapt to the COVID-19 environment. Online MSMEs reported using Facebook apps across the spectrum of business activities, especially to communicate with customers (51 percent) and suppliers (42 percent). WhatsApp was a particularly useful tool for MSMEs, with 48 percent of online MSMEs

i Not all MSMEs who reported ever using digital tools for business purposes were considered "online" for the purposes of this survey. Surveyed MSMEs that did not report using digital tools in the past year were considered "offline," regardless of their use of digital tools over a year ago and/or prior to the COVID-19 pandemic. Because this subset of MSMEs no longer actively uses digital tools, they are not considered online MSMEs.

ii The term "Facebook apps" refers to Facebook, WhatsApp, and Instagram.

iii This brief uses the term "micro, small, and medium enterprises" (MSMEs) to refer to the businesses surveyed for this research, in line with terminology used by multilateral institutions such as the International Finance Corporation and the United Nations. Though the Government of Colombia, officially classifies MSMEs by a business's level of income, DAI applied a standardized definition for consistency across all survey countries, based on the number of full-time, part-time, or seasonal employees or workers (including the respondent): micro (1 employee), small (2–9 employees), and medium (10–249 employees).

iv This survey collected evidence directly from 1,000 MSME owners and top-level managers in Colombia to understand how MSMEs have used digital tools to carry out business activities, how their digital tool use changed during the COVID-19 pandemic, and the challenges both offline and online MSMEs face in using digital tools.

reporting that they used WhatsApp to communicate with customers in the past 30 days.

Both online and offline MSMEs reported facing similar difficulties when using digital tools, though their most frequently cited difficulties varied. Online MSMEs most frequently reported that poor or no internet connectivity (13 percent) was a difficulty their business faced in using digital tools. In contrast, offline MSMEs most frequently reported a lack of knowledge as a difficulty their business faced (19 percent), followed by a (perceived) lack of relevance to their business (16 percent). This difference highlights the need for targeted interventions by stakeholders in the public, private and development sectors that address common roadblocks for both online and offline MSMEs, such as information sharing and capacity building activities to expand awareness and usage of digital tools, while also addressing key enabling environment barriers such as connectivity.

With concentrated efforts by policymakers and other stakeholders to address the key barriers faced by both online and offline MSME segments, Colombia's MSME sector will be well-positioned to increasingly integrate and harness the power of digital tools to improve business outcomes and build resilience to future economic shocks. These efforts have the potential to help entrepreneurs and business owners across the MSME sector to equitably access and use digital tools to support key business functions. This will, in turn, enable Colombia to accelerate its inclusive economic growth outcomes aligned to the United Nations Sustainable Development Goals (SDGs), a collection of 17 interlinked global development goals agreed to by United Nations Member States in 2015.

METHODOLOGY OVERVIEW

This research was conducted as part of a broader cross-national study of MSME digital tool usage across emerging markets in South America, South Asia, and Southeast Asia. This report provides an overview of findings from face-to-face and telephone surveys that Ipsos conducted with 1,000 micro, small, and medium enterprises (MSMEs) in Colombia via computer-assisted personal interviewing (CAPI) and computer-assisted telephone interviewing (CATI) from June 17-July 30, 2021. Eligibility for the survey was restricted to owners or top-level managers of businesses with 249 or fewer employees operating from a storefront, booth, or with signage. As such, home-based businesses and other businesses without obvious storefronts, booths, and/or signage were not captured in the sample. Official statistics from National Administrative Department of Statistics of Colombia (DANE) including the 2018 National Census, the 2018 National Household Survey and a 2016 Survey of Micro-businesses were used to allocate the sample across three categories: micro (one employee), small (2-9 employees), and medium (10-249 employees) businesses.[v] For CAPI interviewing, a random walk method was implemented to conduct interviews in urban areas in six of Colombia's greater metropolitan areas. For CATI interviewing, the telephone sample provided national coverage for formal medium-sized businesses and registered formal micro and small businesses. The final survey results presented in this report were weighted based geography, mode of interviewing and differential non-response rates by province, urbanity, and gender of respondent where available and recorded. Due to the limitations of the sampling and availability of official statistics, the sample should not be considered to be representative of formal and informal businesses in Colombia. A complete explanation of the sample design and research methodology is found in Appendix I.

v Across all business size groupings, employees include the respondent (an owner or top-level manager of the MSME), any full-time employees or workers, and any part-time or seasonal employees or workers.

INTRODUCTION AND BACKGROUND

Colombia is a top performing economy in Latin America[4], with a large micro, small, and medium enterprise (MSME)[vi] sector underpinning its consistent growth[5] until the COVID-19-induced economic slowdown in 2020. By allowing some MSMEs to quickly pivot online and maintain their core business functions[6], digital tools (defined here as internet-based technologies) have become increasingly important to Colombia's MSME community during the pandemic.

A new survey conducted by DAI and Ipsos in June and July 2021 collected evidence directly from 1,000 MSME owners and top-level managers in Colombia[vii] to understand how MSMEs have used digital tools to carry out business activities, how their digital tool use changed during the COVID-19 pandemic, and the challenges both offline and online MSMEs faced in using digital tools.[viii] Research findings also delve into differences in digital tool use across key business segments within Colombia, such as women-owned MSMEs, rural and urban MSMEs, and MSMEs in specific business sectors.

When entrepreneurs across the MSME sector can equitably access and use digital tools in support of key business functions, Colombia will accelerate its inclusive economic growth outcomes aligned to the United Nations Sustainable Development Goals (SDGs), a collection of 17 interlinked global development goals agreed to by United Nation Member States in 2015.

How This Research Aligns with the Sustainable Development Goals (SDGs)

In 2015, United Nations Member States adopted 17 Sustainable Development Goals (SDGs) as a cornerstone of their 2030 Agenda for Sustainable Development, articulating a shared vision of urgent global priorities for the planet and its people. Recognizing the importance of their urgent call to action, this survey framework and findings tie back to multiple SDGs to inform policy and programs targeting these global goals. After assessing how online and offline MSMEs conducted basic business functions, the survey identified challenges that such MSMEs faced in regard to their digital tool usage, or lack thereof. These insights tie to SDG 9: Industry, Innovation, and Infrastructure, which calls for a significant increase in access to information and communications technology and for universal and affordable internet access. The survey also looked at how online MSMEs used digital tools for business purposes; specifically, it explored how their digital tool usage changed during the COVID-19 pandemic. By examining how MSMEs developed their economic resilience through the use of digital tools during the pandemic, this line of inquiry links to SDG 1: No Poverty and SDG 8: Decent Work and Economic Growth. Reporting on the women-owned MSME segment also sheds light on SDG 5: Gender Equality, with women-led enterprises using digital tools to enter the marketplace and contribute to the global economy. Similarly, reporting on the manufacturing and industry sector provides insights on SDG 9: Industry, Innovation, and Infrastructure, and reporting on the agriculture and food production sector aligns to SDG 2: Zero Hunger and SDG 12: Sustainable Production and Consumption. By concluding with suggested interventions for public, private, and development sector actors to address MSME challenges in using digital tools, the spirit of the survey embodies SDG 17: Partnerships for the Goals.

vi This brief uses the term "micro, small, and medium enterprises" (MSMEs) to refer to the businesses surveyed for this research, in line with terminology used by multilateral institutions such as the International Finance Corporation and the United Nations. Though the Government of Colombia, officially classifies MSMEs by a business's level of income, DAI applied a standardized definition for consistency across all survey countries, based on the number of full-time, part-time, or seasonal employees or workers (including the respondent): micro (1 employee), small (2–9 employees), and medium (10–249 employees).

vii This survey collected evidence directly from 1,000 MSME owners and top-level managers in Colombia. See Appendix I for more details on survey methodology.

viii Not all MSMEs who reported ever using digital tools for business purposes were considered "online" for the purposes of this survey. Surveyed MSMEs that did not report using digital tools in the past year were considered "offline," regardless of their use of digital tools over a year ago and/or prior to the COVID-19 pandemic. Because this subset of MSMEs no longer actively uses digital tools, they are not considered online MSMEs.

COVID-19 AND MSMEs IN COLOMBIA

The COVID-19 pandemic has presented significant challenges for Colombia's economy: its GDP decreased by 6.8 percent[7] and a quarter of the nation's workforce had their jobs disrupted in 2020.[8] Employing 80 percent of the country's labor force and contributing 35 percent to GDP,[9] MSMEs play a critical role in Colombia's economy - and were especially affected by the pandemic. According to the 2020 COVID-19 International Small Business Study, 73 percent of surveyed firms in Colombia reported having to lay off a worker in the past months.[10] Similarly, a Center for Financial Inclusion (CFI) study published in 2021 found that MSME owners reduced their workforce by 66 percent.[11] The same survey found that - of the operating MSMEs in the sample - 77 percent in Colombia reported that their profits declined after COVID-19 hit,[12] and about two-third of respondents reported that their profits declined by 50 percent or more since the pandemic began.[13]

In response to the unprecedented economic changes brought on by the COVID-19 pandemic, some MSMEs began to adopt digital technologies into their businesses. According to the CFI survey, 24 percent of MSME respondents reported selling on digital platforms, with 10 percent reporting that they had started selling on digital platforms since COVID-19.[14] These survey findings indicated that MSMEs in Colombia were increasingly turning to digital tools to enhance their pandemic response.

SAMPLE OVERVIEW

This survey had 1,000 MSME respondents comprised of business owners and top-level managers; the below percentages provide detail on the sample..

Gender

63% of MSMEs reported that the business had **female owner/s**

50% of of MSME respondents were **female**

50% of MSME respondents were **male**

Urbanicity

81% of MSMEs were located in **urban areas**

13% of MSMEs were located in **rural areas**

6% of MSMEs were located in **suburban areas**

Sector

40% of MSMEs reported that their primary product or service was in the **manufacturing and industry** sector

29% of MSMEs reported that their primary product or service was in the **professional services** sector

20% of MSMEs reported that their primary product or service was in the **hospitality** sector

7% of MSMEs reported that their primary product or service was in the **agriculture and food production** sector

5% of MSMEs reported that their primary product or service was in the **retail and e-commerce** sector

Customer base

60% of MSMEs reported that their business primarily **served consumers**

36% of MSMEs reported that their business **served both businesses and consumers**

4% of MSMEs reported that their business **primarily served other businesses**

Business owner education

85% of MSMEs had business owners with **less than a secondary education**

11% of MSMEs had business owners with a **secondary education or higher**

Business owner age

57% of MSMEs had business owners **aged 18-44**

36% of MSMEs had business owners **aged 45+**

Bank account access

48% of MSMEs reported that they had access to a **bank account**

MSMEs AND DIGITAL TOOL USE: SNAPSHOTS IN TIME

MSMEs in Colombia already had high digital tool use prior to the COVID-19 pandemic, but have increased their usage of digital tools for business purposes in the past year. Both Facebook apps and email were frequently cited by surveyed MSMEs as commonly used digital tools, with more than half of online MSMEs taking a mobile-centric approach to connecting onto the internet.

Use of digital tools for business purposes rose substantially during the COVID-19 pandemic but has recently declined, however current digital tool usage remains much higher than pre-Covid-19 levels[ix]:

70% of MSMEs reported that they had **ever used digital tools** for business purposes prior to the COVID-19 pandemic

85% of MSMEs reported that they used digital tools for business purposes **in the past year** during COVID-19

81% of MSMEs reported that they had used digital tools for business purposes **in the past 30 days**

MSMEs cited email as the second most frequently used digital tool during all three time periods, with a substantial increase during the pandemic[x]:

54% of MSMEs reported that they had ever used email for business purposes **prior to the COVID-19 pandemic**

65% of MSMEs reported that they had used email for business purposes **in the past year** since COVID-19

59% of MSMEs reported that they had used email for business purposes **in the past 30 days**

ix Difference in use of digital tools for business purposes in the past year and use of digital tools for business purposes prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$. Difference in use of digital tools for business purposes in the past year and use of digital tools for business purposes in the past 30 days is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

x Difference in use of email for business purposes in the past year and use of email for business purposes prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$. Difference in use of email for business purposes in the past year and use of email for business purposes in the past 30 days is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

More than half of online MSMEs used mobile phones to connect to the internet, while a minority used laptops or a PC:[xi]

62% of online MSMEs reported that they primarily used a **mobile phone** to connect to the internet

36% of online MSMEs reported that they primarily used a **laptop or PC** to connect to the internet

1% of online MSMEs reported that they primarily used a **tablet** to connect to the internet

Digital tool use substantially increased across all surveyed business sectors[xii] during the pandemic

Across business sectors, surveyed MSMEs increased their usage of digital tools for business purposes during the pandemic, with substantial increases in the manufacturing and industry and hospitality sectors. More specifically, 63 percent of MSMEs in the manufacturing and industry sector reported that they had ever used digital tools for business purposes prior to the COVID-19 pandemic, which then increased 19 percentage points to 82 percent of MSMEs in this sector in the past year since COVID-19.[xiii] Additionally, 76 percent of MSMEs in the hospitality sector reported that they had ever used digital tools for business purposes prior to the COVID-19 pandemic, which then increased 15 percentage points to 91 percent of MSMEs in this sector in the past year since COVID-19.[xiv] While digital tool use in the professional services sector also increased during the pandemic, the increase was not as substantial.[xv]

Following similar trends found elsewhere in this brief, recent digital tool use in all three sectors has declined, but remains well above pre-pandemic levels. For example,79 percent of MSMEs in the manufacturing and industry sector, 81 percent of MSMEs in the professional services sector, and 88 percent of MSMEs in the hospitality sector reported that they used digital tools for business purposes in the past 30 days.[xvi] While newer digital tools such as social media and digital payment platforms were used by all three sectors in comparable percentages, MSMEs in the hospitality sector reported using higher percentages of older and customer-facing technologies. For example, 73 percent of MSMEs in hospitality reported using email and 39 percent reported using videoconferencing in the past 30 days, while only 53 percent and 25 percent of business in the professional services reported using each tool in the same time period.[xvii]

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xi Other answer options included don't know or refused.

xii Results from businesses in the agriculture and food and retail and e-commerce sectors are not discussed due to sampling size limitations.

xiii Among MSMEs in the Manufacturing & Industry sector, the difference in use of digital tools for business purposes in the past year and use of digital tools for business purposes prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

xiv Among MSMEs in the Hospitality sector, the difference in use of digital tools for business purposes in the past year and use of digital tools for business purposes prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

xv Among MSMEs in the Professional Services sector, the difference in use of digital tools for business purposes in the past year and use of digital tools for business purposes prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

xvi Among MSMEs in the Professional Services sector, the difference in use of digital tools for business purposes in the past year and use of digital tools for business purposes in the past 30 days is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

Among MSMEs in the Hospitality sector, the difference in use of digital tools for business purposes in the past year and use of digital tools for business purposes in the past 30 days is not statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

Among MSMEs in the Manufacturing & Industry sector, the difference in use of digital tools for business purposes in the past year and use of digital tools for business purposes in the past 30 days is not statistically significant per Chi-squared goodness of fit test, adjusted $p > 0.05$.

xvii For both tools (email & videoconferencing), statistically significant per Chi squared test of independence, adjusted $p < 0.05$.

KEY INSIGHTS FOR POLICYMAKERS

Survey findings demonstrated that more than half of surveyed MSMEs in Colombia used digital tools for business purposes before and during the COVID-19 pandemic. More specifically, 85 percent of MSMEs reported using digital tools for business purposes in the past year, and 70 percent reported that they had ever used digital tools prior to the COVID-19 pandemic, indicating that MSMEs dramatically increased their usage of digital tools during the pandemic. Although digital tool usage has dipped in the past 30 days to 81 percent of MSMEs, usage is still substantially higher than it was before COVID-19, indicating that the increase in digital tool use could be the sign of a long-term shift towards digitalization among MSMEs. Digital tools such as Facebook apps and email saw some of the largest increases over time among surveyed MSMEs. In terms of email, 54 percent of MSMEs reported that they had ever used email for business purposes prior to the pandemic, increasing to 65 percent in the past year, and slightly decreasing to 59 percent in the past 30 days. This evidence suggests that MSMEs have a base of digital skills that public, private, and development sector stakeholders can build upon, for example, introducing more complex digital tools that can be used for key business functions, such as accounting, enterprise resource planning, or human resource management.

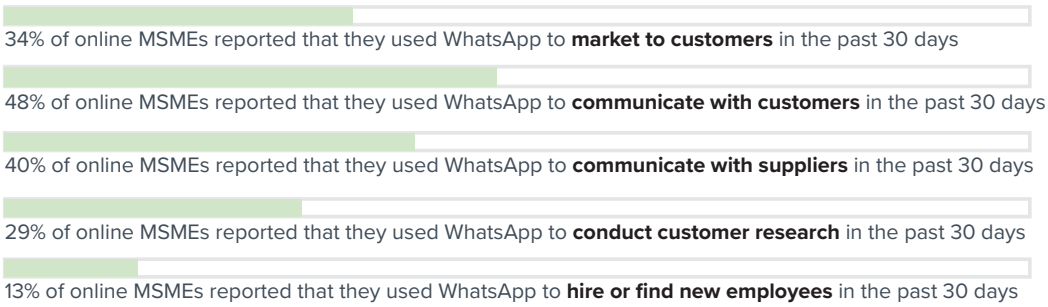
Throughout emerging markets, mobile phones are a key way for individuals to access the internet.[15] According to the survey results, online MSMEs in Colombia were no exception. More than half of online MSMEs (62 percent) reported that they primarily used mobile phones to connect to the internet. A minority of MSMEs (36 percent) used a laptop or PC to connect to the internet. This finding suggests that while more than half of online MSMEs did rely on mobile phones for internet access, there was a growing segment of online MSMEs who have the capabilities to use more advanced hardware, like PCs, which could indicate Colombia's online MSMEs were digitizing rapidly. However, given the penetration of mobile phones in Colombia, public, private, and development sector stakeholders could look for opportunities to enhance MSME use of mobile internet as an accessible 'on ramp' for expanding digital tool use amongst offline MSMEs or those who do not use a laptop or PC.

HOW MSMEs MANAGE KEY BUSINESS ACTIVITIES

Surveyed MSMEs used a variety of both online and offline tools to manage business activities. However, offline methods had a strong foothold in MSME's operations, suggesting that digital tools augmented and amplified, rather than replaced, more traditional offline methods.

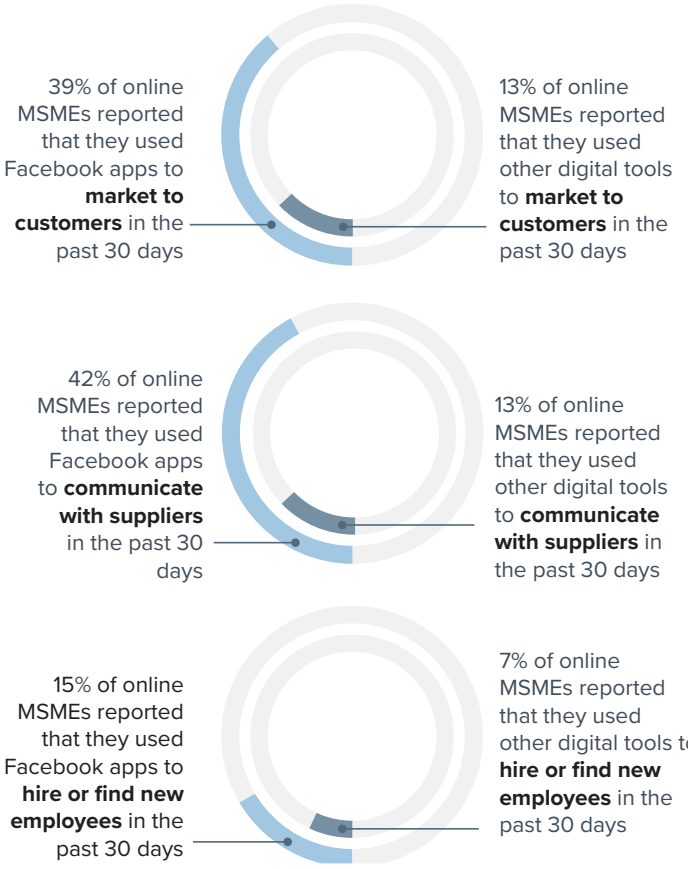
An interview with Claudia and her husband Andrés, the owners of Lifepack, showed that digital tools played a valuable role in helping their business develop a new marketing and communication strategy. By using WhatsApp, they have streamlined business functions by receiving and managing all their business transactions in one place. Additionally, they used Facebook and Instagram to engage with customers about Lifepack's eco-friendly packaging and the importance of environmental protection. See full case study page 19.

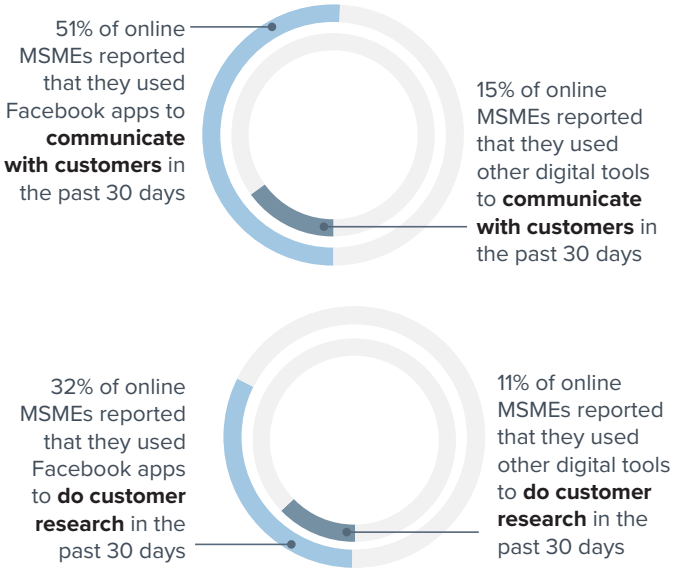
WhatsApp was cited as a useful tool across multiple business activities for online MSMEs, except for hiring or finding new employees[xviii]:



xviii Difference between use of WhatsApp to conduct customer research in the past 30 days and use of WhatApp for employing or finding new employees in the past 30 days is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

A higher percentage of online MSMEs reported using Facebook apps than other digital tools to conduct each business activity[xix]…

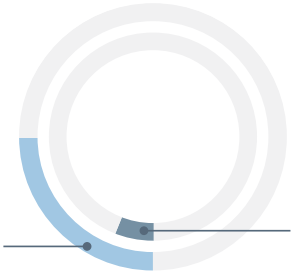




xix Difference between use of Facebook apps and use of other digital tools for each business activity in question is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

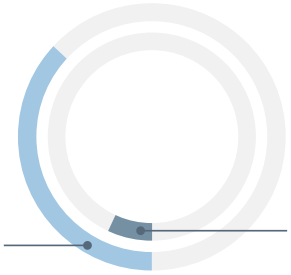
...And a higher percentage of online MSMEs stated that Facebook apps were very important for each business activity than other digital tools[xx]...

25% of online MSMEs reported that Facebook apps were very important for **marketing to customers.**



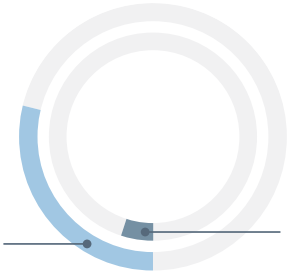
6% of online MSMEs reported that other digital tools were very important for **marketing to customers**

37% of online MSMEs reported that Facebook apps were very important for **communicating with customers**



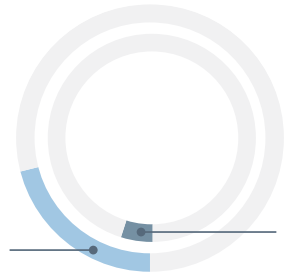
7% of online MSMEs reported that other digital tools were very important for **communicating with customers**

29% of online MSMEs reported that Facebook apps were very important for **communicating with suppliers**



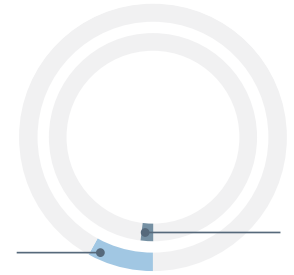
5% of online MSMEs reported that other digital tools were very important for **communicating with suppliers**

21% of online MSMEs reported that Facebook apps were very important for **doing customer research**



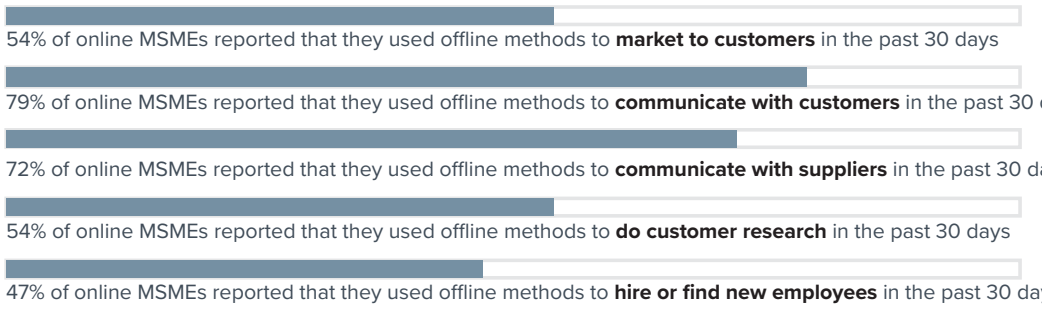
5% of online MSMEs reported that other digital tools were very important for **doing customer research**

8% of online MSMEs reported that Facebook apps were very important for hiring and **finding new employees**



2% of online MSMEs reported that other digital tools were very important for hiring and **finding new employees**

...but offline methods[xxi] were used by a large majority of online MSMEs for communication purposes, while roughly half of online MSMEs used offline methods for other business activities:



54% of online MSMEs reported that they used offline methods to **market to customers** in the past 30 days

79% of online MSMEs reported that they used offline methods to **communicate with customers** in the past 30 days

72% of online MSMEs reported that they used offline methods to **communicate with suppliers** in the past 30 days

54% of online MSMEs reported that they used offline methods to **do customer research** in the past 30 days

47% of online MSMEs reported that they used offline methods to **hire or find new employees** in the past 30 days

xx Difference between percent reporting Facebook apps as very important and percent reporting other digital tools as very important for each business activity in question is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

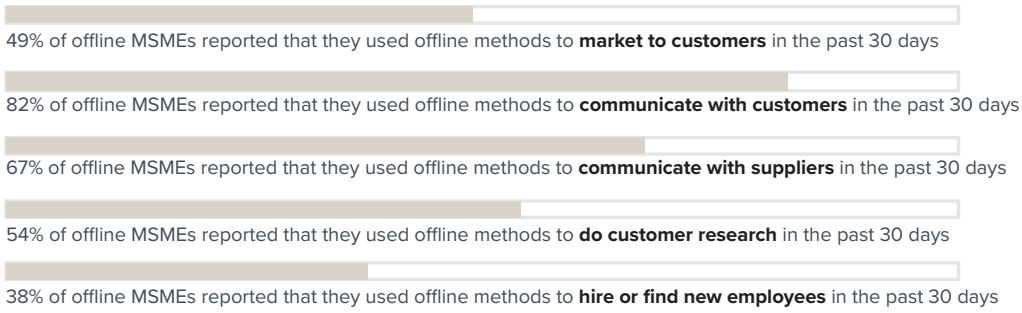
xxi The term "non-digital tools" includes face-to-face interaction; paper-based methods such as letters, fliers or billboards; and through a telephone call, SMS, or text message (does not include WhatsApp).

MSME digital tool use to sell goods and services increased substantially during COVID-19

Selling goods and services is a key business activity for all MSMEs. In the survey results, 53 percent of surveyed MSMEs reported that they had ever used digital tools to sell goods and services. However, survey results showed a substantial increase in the use of digital tools to sell goods and services during the COVID-19 pandemic. More specifically, 32 percent of MSMEs reported that they used digital tools to sell goods and services prior to COVID-19, which then increased to 46 percent during COVID-19.[xxii] Additionally, the survey results showed that social media was largely responsible for driving this increase during the pandemic. For example, 27 percent of MSMEs reported that they used social media to sell goods and services prior to COVID-19, which then increased four-teen percentage points to 41 percent during the pandemic.[xxiii] This finding illustrates that social media played a distinct role in selling goods and services in Colombia.

Survey results also showed a recent decrease in digital tool use for selling goods and services across all digital tools. For example, 41 percent of MSMEs reported that they used digital tools to sell goods and services in the past 30 days (including 36 percent who reported using social media for this purpose).[xxiv] This small decrease in digital tool use for selling goods and services may indicate that surveyed MSMEs only temporarily increased their digital tool usage for sales and that these are not long-term changes.

Offline MSMEs reported using offline methods to conduct customer-facing business activities more frequently than for non-customer-facing business activities:



xxii Difference between use of digital tools to sell goods and services in the past year and prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

xxiii Difference between use of social media to sell goods and services in the past year and prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

xxiv Difference between use of digital tools to sell goods and services in the past year and in the past 30 days is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

Offline MSMEs reported using face-to-face interactions to conduct key business activities at a higher rate than other offline interactions methods, like telephone calls/SMS[xxv]:

71% of offline MSMEs reported that they used face-to-face to **communicate with customers** in the past 30 days

26% of offline MSMEs reported that they used telephone calls, SMS or text message to **communicate with customers** in the past 30 days

49% of offline MSMEs reported that they used face-to-face to **hire or find new employees** in the past 30 days

11% of offline MSMEs reported that they used telephone calls, SMS or text message to **hire or find employees** in the past 30 days

Surveyed MSMEs reported ever having difficulty with customer and supplier-facing business activities and other external communications at a similar rate as for other back-end business functions[xxvi]:

13% of MSMEs reported ever having **difficulty marketing to customers**

14% of MSMEs reported ever having **difficulty communicating with customers**

18% of MSMEs reported ever having **difficulty communicating with suppliers**

14% of MSMEs reported ever having **difficulty doing customer research**

15% of MSMEs reported ever having **difficulty hiring or finding new employees**

xxv Difference between use of face-to-face interaction and use of telephone calls, SMS, or text message for each business activity in question among offline firms is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

xxvi Difference between difficulty in communicating with suppliers (highest percent) and difficulty in marketing to customers (lowest percent) is not statistically significant per Chi-squared goodness of fit test, adjusted $p > 0.05$.

Urban based MSMEs used more digital tools than rural based MSMEs, although rural MSMEs reported a larger increase in their digital tool use during the pandemic

According to survey results, a higher percentage of surveyed MSMEs in urban areas used digital tools for business purposes compared to surveyed MSMEs in rural locations. For example, 73 percent of MSMEs located in urban areas had ever used digital tools for business purposes prior to the COVID-19 pandemic compared to 57 percent of MSMEs in rural areas.[xxvii] This finding echoes the Ministry of Information Technology and Communication May 2021 bulletin, which stated that even though connectivity in Colombia has increased in the last year, rural areas or less densely populated areas remain offline in comparison to urban or densely populated areas.[16] Similarly, in 2019, the Colombian government reported that fixed Internet penetration in urban areas stood at 63 percent in comparison to 16 percent in rural areas.[17]

As was the case across Colombia, urban and rural MSMEs increased their use of digital tools for business purposes during the pandemic, albeit rural businesses' increase was larger. More specifically, 73 percent of urban MSMEs reported that they had ever used digital tools prior to the pandemic, increasing fourteen percentage points to 87 percent in the past year during COVID-19.[xxviii] In comparison, 57 percent of rural MSMEs reported that they had ever used digital tools prior to the pandemic, increasing sixteen percentage points to 73 percent in the past year during COVID-19.[xxix] This result indicates that while more urban based MSMEs used digital tools, rural MSMEs did accelerate their digital transformation when normal business operations were disrupted during the pandemic.

xxvii Statistically significant per Chi squared test of independence, adjusted $p < 0.05$

xxviii Among urban MSMEs, the difference in use of digital tools for business purposes in the past year and use of digital tools for business purposes prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

xxix Among rural MSMEs, the difference in use of digital tools for business purposes in the past year and use of digital tools for business purposes prior to OVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted $p < 0.05$.

KEY INSIGHTS FOR POLICYMAKERS

According to survey results, Facebook apps were the most frequently reported digital tool that surveyed online MSMEs reported using to conduct each business activity. For instance, 51 percent of online MSMEs reported that they used Facebook apps to communicate with customers in the past 30 days, compared to 15 percent who said the same for other digital tools. Accordingly, online MSMEs also reported that Facebook apps were important for each business activity at a much higher rate than for other digital tools. For example, 37 percent of online MSMEs reported that Facebook apps were very important for communicating with customers, compared to seven percent of online MSMEs who said the same about other digital tools. These findings indicated that Facebook apps were useful digital supports for surveyed MSMEs to run multiple aspects of their businesses. Therefore, it is important for public, private, and development sector stakeholders to continue promoting the use of simple and intuitive digital tools among Colombia's MSME community, promoting their ongoing resilience to future economic shocks and business disruptions.

Survey findings also indicated that online MSMEs in Colombia were supplementing, rather than wholly replacing, their use of offline techniques with digital tools. More specifically, a higher percentage of online MSMEs in Colombia reported using offline methods, especially face-to-face techniques, for communication purposes in their business. For example, 79 percent of online MSMEs reported that they used offline methods to communicate with customers in the past 30 days. However, survey results also showed that online MSMEs did not rely as heavily on offline methods to market to customers or conduct customer research. More specifically, 54 percent of online MSMEs reported that they used offline methods to market to customers in the past 30 days. This finding aligns with our survey results, which showed online MSMEs had relatively high usage of Facebook apps (39 percent) and other digital tools (13 percent) to market to customers in the past 30 days, indicating that digital tools added value to specific business activities in a way that offline methods did not. In this context, public, private, and development stakeholders have an opportunity to develop digital tools for specific business functions that can support-- rather than replace -- the ways that MSMEs currently operate. For example, stakeholders might consider training MSMEs on how to use digital tools to track and document their face-to-face meetings, to hire new employees, or to track digital and cash payments.

CASE STUDY

LIFEPACK

www.facebook.com/profile.php?id=100050476479952

www.instagram.com/lifepack_ecological_product

MANUFACTURING & INDUSTRY

MEDIUM-SIZED ENTERPRISE

URBAN

SDG5: GENDER EQUITY
SDG9: INDUSTRY, INNOVATION, & INFRASTRUCTURE
SDG13: CLIMATE ACTION

To tackle climate change and deforestation in Colombia, Claudia and her husband Andrés started a business that manufactures plantable packaging - biodegradable containers, boxes, and other small consumer products from recycled food waste. After their use, Lifepack's fully compostable products can be put in the ground and germinate plants within several days, further reducing their environmental impact. Since the founding of her business in 2009, Claudia has expanded Lifepack to sell its award-winning products across Colombia, Latin America, the United States, and Europe. Through its use of waste products to manufacture eco-friendly packaging, Claudia's business Lifepack embodies SDG 9: Industry, Innovation, and Infrastructure and SDG 13: Climate Action. By training and employing vulnerable groups of women like single mothers to produce its products, her business also advances progress on SDG 5: Gender Equality.

Digital tools form the basis of Claudia's communications and marketing strategies. Given her large volume of customer and supplier communications, marketplace integration is key to her business operations. With four separate WhatsApp accounts, she can receive and manage all her communications and business transactions in one place, which gives her more time to spend on other facets of her business. In addition, Claudia shares information about the importance of and benefits to using eco-friendly products in everyday life on Lifepack's online platforms, such as Facebook. This non-traditional marketing strategy allows her to build trust with consumers and suppliers, while increasing brand recognition for Lifepack. Similarly, she uses WhatsApp and Facebook to share information about Lifepack's manufacturing process with other MSMEs in Colombia, so that these MSMEs can more easily integrate sustainable packaging into their supply chains.

During the COVID-19 pandemic, Claudia adjusted her digital marketing and promotions strategy to enhance online customer engagement, which ultimately increased Lifepack's sales. Rather than focusing only on Lifepack's products, she started posting more about environmental protection and the importance of eco-friendly packaging on Lifepack's Facebook and Instagram Stories. This led her to start engaging with consumers interested in recyclable products and other like-minded content creators, which boosted her brand recognition, especially among international audiences in Europe. With a more active and engaged audience across multiple social media platforms, Claudia cites a 60% increase in sales from social media in the last 18 months.

"We have always used Facebook but during the pandemic, we saw our customers began to be a little more active in networks and this has greatly increased our brand recognition and interaction with our friends, our customers, and our users. Facebook has always made it easier for us to publicize the benefits that we have."

MSMEs DURING THE COVID-19 PANDEMIC

The COVID-19 pandemic was a challenge for MSMEs in Colombia. More than half of businesses closed at some point during the pandemic and experienced decreases in sales. To adapt to this new economic environment, a vast majority of online MSMEs embraced digital tools and found them to be crucial to keeping their business running during the pandemic.

An interview with Emma, the owner of Maquiempanadas, showed how her MSME used digital tools to connect with existing and new customers to promote the brand. Emma credits digital tools with helping her business survive and thrive during the COVID-19 pandemic, and has donated her time to various women's organizations to help other women-led MSMEs develop digital skills. See full case study on page 23.

MSMEs sales decreased during the COVID-19 pandemic:

61% of MSMEs reported that their **sales decreased** during COVID-19 compared to a typical year

30% of MSMEs reported that their **sales decreased by more than half** of a typical year

67% of MSMEs reported that their **business closed at some point** during COVID-19

Well-known digital tools - such as Facebook apps, email, and mobile banking[xxx] - helped online MSMEs adapt to the COVID-19 economic environment:

78% of online MSMEs reported that **digital tools were important or essential to keeping their business running** during COVID-19

65% of online MSMEs reported that **Facebook apps** helped them adapt to the COVID-19 environment

61% of online MSMEs reported that **WhatsApp** helped them adapt to the COVID-19 environment

48% of online MSMEs reported that **email** helped them adapt to the COVID-19 environment

39% of online MSMEs reported that **digital payment tools** helped them adapt to the COVID-19 environment

xxx Mobile banking as used in this brief refers to both mobile banking and digital payments.

More women-owned MSMEs reported that Facebook apps helped them adapt to the COVID-19 environment than men-owned MSMEs

According to survey results, the same percentage of men and women-owned MSMEs reported that they had ever used digital tools for business purposes prior to the COVID-19 pandemic (69 percent) and in the past year since the pandemic (85 percent).[xxxi] This finding aligns with GSMA's 2018 report that found there was no difference in mobile phone ownership between men and women in Colombia.[18]

However, more women-owned MSMEs reported that Facebook apps helped them adapt to the COVID-19 pandemic than men-owned MSMEs. For example, 68 percent of women-owned MSMEs reported that Facebook apps helped them adapt to the COVID-19 environment, while only 61 percent of online men-owned MSMEs reported the same.[xxxii] This finding could indicate that women-owned MSMEs digital transformation during COVID-19 was influenced by the importance Facebook apps had on how they conducted business during the pandemic.

xxxi Difference by gender of owner is not statistically significant for either time period per Chi squared test of independence, adjusted $p > 0.05$

xxxii Statistically significant per Chi squared test of independence, adjusted $p < 0.05$

KEY INSIGHTS FOR POLICYMAKERS

Survey results showed that the economic slowdown stemming from the COVID-19 pandemic negatively affected more than half of surveyed MSMEs' sales throughout Colombia. More than half of MSMEs (61 percent) reported that their sales decreased during the pandemic compared to a typical year. These findings aligned with macroeconomic indicators, which demonstrated that, due to the COVID-19 pandemic, in 2020 Colombia had its worst economic growth in more than a century[19], and 1.4 million people became unemployed.[20]

Despite reported decreases in sales among surveyed MSMEs, many online MSMEs reported that digital tools helped them adapt to the new economic landscape. For example, a large majority (78 percent) of online MSMEs reported that digital tools were important or essential to keeping their business running during COVID-19. From a list of various digital tools, the highest percentage of surveyed online MSMEs reported that Facebook apps (65 percent) helped them adapt to the COVID-19 environment, particularly WhatsApp (61 percent). Furthermore, 48 percent of online MSMEs reported that email helped them adapt to the COVID-19 environment, and 39 percent of online MSMEs reported that digital payment tools helped them adapt to the COVID-19 environment. Aligned with the well-documented phenomenon of technological leapfrogging, by which entrepreneurs in emerging markets bypass the use of established technologies in favor of newer ones,[21] MSMEs in Colombia appeared to favor newer digital tools, such as WhatsApp, social media, and digital payment platforms. With the growing importance of digital payment tools alongside the robust usage of intuitive and cost-effective tools such as Facebook and messaging apps, there may be an opening for public, private, and development sector stakeholders to increase digital tool use among Colombia's MSMEs by using these tools as an 'on-ramp' for increased adoption of other digital tools. By providing MSMEs with a positive user-experience in early adoption and usage, the increase in digital tool use during the COVID-19 pandemic has the potential to convert into long-term behavior change and a sustained process of digitalization by MSMEs.

CASE STUDY

MAQUIEMPANADAS

www.facebook.com/maquiempanadasfans

www.instagram.com/maquiempanadas

MANUFACTURING & INDUSTRY

MEDIUM-SIZED ENTERPRISE

SUBURBAN

SDG5: GENDER EQUITY

SDG9: INDUSTRY, INNOVATION, & INFRASTRUCTURE

As the comida tipica of Latin America, empanadas are usually made by hand by local bakeries or families. To help automate this highly manual process, Emma Mesa and her father designed an empanada-making machine in 2011. Her business Maquiempanadas has since grown into a medium-sized enterprise that manufactures machines to make empanadas and other Latin American food products, with sales to over 30 countries worldwide. An example of SDG 9: Industries, Innovation, and Infrastructure, Maquiempanadas manufactures tools to improve efficiencies in food production and leverages digital technologies to support business growth and global operations.

From the very beginning, Emma Mesa realized that digital tools would be key to growing Maquiempanadas because of their potential to connect her to new customers and promote the brand to a global audience. From posting short written updates on social media in Maquiempanadas' infancy, Emma Mesa has since expanded her business' Facebook and Instagram presence to include multimedia content about its machines and food products. This use of digital tools, such as videos from YouTube and features like Instagram carousel, help potential customers better understand the functionality and uses of Maquiempanadas products while simultaneously enhancing the company's visual brand. Further, on the customer communications and sales side, Maquiempanadas relies on WhatsApp. By allowing the company to quickly share information, address customer inquiries, explain product functionality, and offer links for immediate payment, WhatsApp quickly and efficiently builds customer trust in Maquiempanadas and its products.

Emma Mesa also credited digital tools for helping Maquiempanadas withstand the COVID-19-related economic downturn. The company implemented new digital marketing strategies with the dual goal of maintaining business operations and building brand loyalty, such as posting about Maquiempanadas' donations of empanadas to local communities, reposting content from other food companies, and offering virtual baking and cooking courses. Emma Mesa attributed Maquiempanadas' nine percent sales growth during the pandemic, in part, to the flexibility of digital tools in allowing her company to easily pivot its online marketing and sales strategy.

To support the growth of other women-owned businesses in Colombia, Emma Mesa works with women-led organizations and universities in Colombia to promote digital literacy and help women incorporate digital tools into their business ventures, which aligns with SDG 5: Gender Equality. By increasing access to a staple Latin American food - and by lifting up other local food companies and women-owned businesses in the process - Maquiempanadas helps promote business resilience in Colombia.

> "The results [of using digital tools] have been many. One is the issue of branding, which is very important. The other is on communication, allowing us to speak to many people quickly, effectively, where you can tell everything that happens, but you can also generate an important element of community."

BARRIERS TO THE ADOPTION AND USE OF DIGITAL TOOLS AMONG MSMEs

Both online and offline MSMEs reported lack of knowledge, among others, was a barrier their business faced in using digital tools for business purposes. Additionally, online and offline MSMEs alike reported high levels of interest in learning more about using digital tools to market their business.

Poor or no internet connectivity and lack of knowledge were the most frequently cited barriers to the adoption of digital tools among online and offline MSMEs respectively:

19% of offline MSMEs reported that **lack of knowledge** was a difficulty their business faced in using digital tools

13% of online MSMEs reported that **poor or no internet connectivity** was a difficulty their business faced in using digital tools

Online MSMEs also cited a lack of knowledge was a difficulty they faced in using more digital tools, while offline MSMEs cited a reported lack of relevance:

7% of online MSMEs reported that **lack of knowledge** was a difficulty their business faced in using digital tools

5% of online MSMEs reported that **high cost** was a difficulty their business faced in using digital tools

3% of online MSMEs reported that **lack of customer interest** was a difficulty their business faced in using digital tools

16% of offline MSMEs reported that **lack of relevance** to their business was a difficulty their business faced in using digital tools

13% of offline MSMEs reported that **high cost** was a difficulty their business faced in using digital tools

10% of offline MSMEs reported that **poor or no internet connectivity** was a difficulty their business faced in using digital tools

Both online and offline MSMEs cited the need for more knowledge as the most challenging difficulty their businesses faced in using digital tools:[xxxiii]

2% of online MSMEs reported that **needing more knowledge** was the most challenging difficulty their business faced in using digital tools

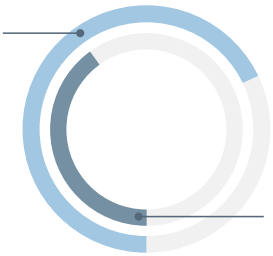
5% of offline MSMEs reported that **needing more knowledge** was the most challenging difficulty their business faced in using digital tools

2% of online MSMEs reported that **poor or no internet connectivity** was the most challenging difficulty their business faced in using digital tools

3% of offline MSMEs reported that **lack of relevance** to their business was the most challenging difficulty their business faced in using digital tools

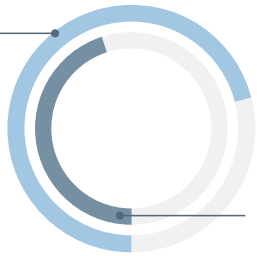
Online and offline MSMEs alike frequently reported an interest in learning more about digital tools to market their businesses:

69% of online MSMEs reported that they were interested in learning more about using digital tools to **find new customers**



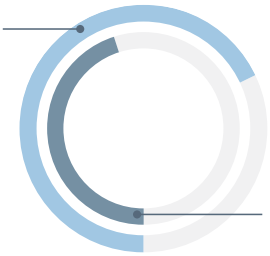
40% of offline MSMEs reported that they were interested in learning more about using digital tools to **find new customers**

71% of online MSMEs reported that they were interested in learning more about using digital tools to **market their business**



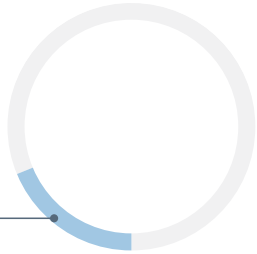
45% of offline MSMEs reported that they were interested in learning more about using digital tools to **market their business**

68% of online MSMEs reported that they were interested in learning more about using digital tools to **communicate with existing customers**

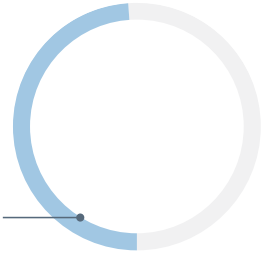


45% of offline MSMEs reported that they were interested in learning more about using digital tools to **communicate with existing customers**

19% of offline MSMEs reported that more education and training would make them more **likely to use digital tools**



49% of offline MSMEs reported that training on how to use digital tools to **communicate with existing customers would benefit their business**



xxxiii When asked what was their most challenging difficulty using digital, responses were coded to fit 18 options. Options: need more knowledge or know-how; poor or no internet connectivity; it is too expensive or the costs are too high; difficult to access a mobile phone, tablet, or computer; do not have consistent access to electricity; customers do not use them; suppliers do not use them; they are not relevant to this business or do not see a need for them; do not trust digital transactions, fear of information being stolen; hard to comply with legal requirements such as digital security and consumer protection standards; not enough relevant posts, articles, pictures or videos in my local language; fear of accessing inappropriate or offensive posts, articles, pictures or videos; digital tools were not effective or did not work; nothing prevents this business from using the internet, social media, or digital tools; other; don't know; refused.

Slightly more than half of online MSMEs reported feeling confident in using digital tools to find information or help online, while a small minority of offline MSMEs reported the same:

56% of online MSMEs reported that they **felt confident** using the internet to find information or help

17% of offline MSMEs reported that they **felt confident** using the internet to find information or help

A substantially higher percentage of online MSMEs reported being self-taught on how to use digital tools, while more offline MSMEs learned from friends and family[xxxiv]

55% of online MSMEs reported that they were **self-taught** on how to use digital tools

12% of offline MSMEs reported that they were **self-taught** on how to use digital tools

24% of online MSMEs reported that they learned how to use digital tools from their **friends or family**

39% of offline MSMEs reported that they learned how to use digital tools from their **friends and family**

xxxiv Statistically significant per Chi squared test of independence, adjusted $p < 0.05$.

KEY INSIGHTS FOR POLICYMAKERS

Both online and offline surveyed MSMEs reported facing similar difficulties when using digital tools, though their most frequently cited difficulties varied. Poor or no internet connectivity was the most frequently reported answer option among online MSMEs (13 percent), followed by a lack of knowledge about digital tools (seven percent). In contrast, the most frequently reported answer option for offline MSMEs was a lack of knowledge about digital tools (19 percent), closely followed by a perceived lack of relevance to their business (16 percent). Both online and offline MSMEs cited digital tools' high cost as the third most frequently reported answer option (five and 13 percent, respectively). However, both online and offline MSMEs cited needing more knowledge as the most challenging difficulty their business faced in using digital tools. These findings suggest that investments by public, private, and development sector stakeholders in tackling areas of common difficulty for both online and offline MSMEs can have compounding positive effects. For example, investments in developing MSMEs digital literacy skills could potentially bring more offline MSMEs online, while also expanding digital tool usage by online MSMEs.

Survey results also showed that surveyed online and offline MSMEs were interested in learning more about digital tools, specifically in their customer-facing business activities. For example, when asked about specific areas of interest in learning more about digital tools, the most frequently cited response by both online (71 percent) and offline MSMEs (45 percent) was marketing their businesses. Furthermore, 49 percent of offline MSMEs reported that training on how to use digital tools for marketing would benefit their business. This finding reinforces the importance of working directly with MSMEs to build their digital skills on existing capabilities and to focus on topics of specific interest, such as online marketing.

CLOSING REMARKS

With continued improvements in internet connectivity, and targeted interventions to improve digital literacy, Colombia's MSME sector will be well-positioned to harness the power of digital tools to improve business outcomes and become more resilient to future economic shocks. Many surveyed MSMEs in Colombia were already employing digital tools for business purposes. For instance, WhatsApp was a popular tool to conduct business activities related to customer engagement. Additionally, Facebook apps helped more than half of online MSMEs adapt to the COVID-19 environment. Despite more than half of surveyed MSMEs already being online, both online and offline MSME respondents expressed an appetite for continued learning about digital tools. In particular, both online and offline MSMEs were interested in deepening their knowledge on how to use digital tools for marketing their businesses. These kinds of insights can serve as a resource for the public sector, private sector, or non-governmental organizations to design programming to support MSMEs in digital tool adoption.

Looking forward, it will be important for policymakers, private sector actors, and non-governmental organizations to design targeted interventions to meet the needs of all MSMEs, but particularly those facing challenges in their digital transformation. Targeted interventions such as specific training will both enhance existing digital skills and teach new MSMEs how to incorporate new digital tools into their business. Promoting equitable digital tool usage within Colombia's MSME sector will help build a Colombian economy that is resilient to the COVID-19 pandemic and future shocks. MSMEs that are poised to grow and scale as the pandemic recedes will accelerate economic growth outcomes and support Colombia in achieving its SDG commitments. Ensuring that the MSME sector can participate in and benefit from digital transformation is crucial to fostering the inclusive and resilient growth of Colombia's economy.

APPENDIX I: METHODOLOGY

OVERVIEW OF THE SURVEY DESIGN

Between June 17 and July 30, 2021, Ipsos conducted 1,000 in-person interviews of enterprises via computer-assisted personal interviewing (CAPI) and computer-assisted telephone interviewing (CATI) to better understand their use of digital tools as well as their challenges and barriers to digitization.[xxxv]

The sample for the study was defined to include and be limited to Colombia's micro (one employee), small (2 to 9 employees) and medium (10 to 249 employees) business populations[xxxvi] (summarized as "business size" in the text). Official statistics from the National Administrative Department of Statistics of Colombia (DANE, for its abbreviation in Spanish) including the 2018 National Census, the 2018 National Household Survey and the National Association of Financial Institutions (ANIF, for its abbreviation in Spanish) Survey of Micro-businesses[22] were used as a basis to estimate the proportion[xxxvii] of businesses for each business size and to establish a target number of interviews for each business size category. These statistics were also used to set targets by departments and urbanicity (urban, suburban and rural) within Colombia.

The targets for business size were set to approximate the distribution of the business population by business size across all of Colombia, however these estimates are imperfect as the official statistics on which they are based do not include informal businesses and are not sufficiently recent to account for the impact of COVID-19 on business operations. Due to the lack of reliable official statistics, the data is not considered to be representative of the entire MSME formal and informal business population in Colombia.

Furthermore, a minimum target of 150 women-owned businesses was set for the sample. This means that if 150 interviews were not reached when the final sample size was achieved, then additional interviews would be conducted to ensure the sample included 150 interviews with women-owned businesses. In Colombia, this minimum was achieved naturally and no oversample was required.

Based on these estimates, the sample target interview counts were allocated as shown below, which also shows the actual completed number of interviews achieved in the fieldwork:

Target and Actual Interview Counts by Business Size, Urbanicity and Business-Owner Gender in Colombia[xxxviii]

BUSINESS SIZE			GEOGRAPHIC COVERAGE			BUSINESS OWNER GENDER		
	TARGET	ACTUAL		TARGET	ACTUAL		TARGET	ACTUAL
Micro	190	192	Urban	700	783	Women	150	627
Small	640	635	Rural	200	198			
Medium	170	173						

xxxv This is one in a series of 13 country reports about micro, small and medium-sized enterprises' (MSMEs) use of digital tools in South America, South Asia, and Southeast Asia. The forthcoming global report will contain a complete description of the research and survey methodology.

xxxvi Across all business size groupings, employees include the respondent (an owner or top-level manager of the MSME), any full-time employees or workers, and any part-time employees or workers.

xxxvii These were considered estimates, as the official statistics do not include informal businesses and are not sufficiently recent to account for the impact of COVID-19 on business operations.

xxxviii Numbers presented in this appendix are based on unweighted interview counts and totals. Some numbers in this text may differ from those discussed in the full body of the report which relies on weighted data.

SAMPLE DESIGN

A hybrid sampling design was employed in Colombia using two different interviewing methodologies and two different sampling frames; specifically the fieldwork was administered using CAPI and CATI. CATI was used to enable access to businesses in rural or areas not easily accessible particularly with travel limitations due to COVID-19. CATI was also used to reach primarily medium businesses in Bogotá to enable greater reach given some businesses are not accessible through random walk for reasons such as fenced areas or security.

For CAPI, the Colombia sample design consisted of five metropolitan areas and their surrounding areas. For CATI, the sample design covered six regions and, with the exception of Bogotá, excluded the five metropolitan areas covered by CAPI. This choice of regions was based on their diversity and importance. The Amazonian region is excluded from both the CAPI and CATI sample designs: it is remote and difficult to access, and while it is nearly one-third of Colombia's land area, it represents less than 2% of the population. Five departments were excluded due to security advisories.

Target interview counts for CAPI and CATI were based on the 2018 DANE National Household Survey and and DANE's 2016 survey of micro businesses that focused on businesses with 1 to 9 employees. The household study showed that 60 percent of person employment was informal and the survey of businesses provided the distribution of businesses by department in Colombia.[23] Although the DANE definition differs from the definition used in this study, the information was still considered sufficient to guide the proportion of micro and small informal businesses in the sample.

CAPI data collection was used for informal micro, small and medium businesses. CATI data collection also covered micro, small and medium businesses and with the exception of Bogotá, was used in the areas not covered by CAPI; however, as CATI used lists of formal businesses, no informal businesses were interviewed by CATI . In Bogotá, where the two survey modes overlapped, the sample was verified to ensure no company was interviewed twice. Also, a modal weight was applied in geographic areas where CAPI and CATI overlapped (described in more detail in the Sample Weighting section).

CAPI Sample Frame

The sample design was a multistage stratified cluster sample. This means that the population was divided into geographic blocks (a "cluster") and then through stages, each time selecting a more limited geographic unit until the final sampling unit for interviewing was selected. Specifically, the three geographic units and the sampling unit of individual businesses defined at each stage were the following:

- **PSUs:** Primary sampling units (PSUs) were defined as regions in Colombia. Five out of the seven regions in Colombia were selected for CAPI interviewing: Bogotá, Caribe, Central, Oriental and Pacifica. These five were selected with certainty (100% probability) due to their commercial importance and proportion of the population covered by these regions.
- **SSUs:** Secondary sampling units (SSUs) are defined as departments. There are 32 departments and one Capital District in Colombia. In addition to the Capital District, 27 departments of the 32 total fall within the five regions selected for the research. The Capital District and five departments were selected: Antioquia, Atlántico, Bolívar, Distrito Capital, Santander, and Valle del Cauca. These six were selected with certainty due to their commercial importance. The six departments selected for the study represent almost 65% and over 75% of the total population and GDP, respectively.[xxxix]
- **TSUs:** Tertiary sampling units (TSUs) were defined as urban centers. Within the Departments (SSUs), specific urban centers were selected with certainty due to their commercial importance. Six urban centers, one per department, were selected[24]. These six urban centers represent 27% of the population.
- A summary of the PSUs, SSUs and urban centers selected for CAPI is provided below:
  - » PSU: BOGOTÁ, SSU: Bogotá: Urban center: Bogotá
  - » PSU: CARIBE: SSU: Atlántico: Urban center: Barranquilla
  - » PSU: CARIBE: SSU: Bolívar,: Urban center: Cartegena
  - » PSU: CENTRAL: SSU: Antioquia: Urban center: Medellin
  - » PSU: ORIENTAL: SSU: Santandar: Urban center: Bucarmanga
  - » PSU: PACÍFICA: SSU: Valle del Cauca: Urban center: Cali
- **Individual businesses (CAPI only):** Within each of the TSUs, enumerators identified businesses to contact by using the random walk method. That is, after beginning at a random spot within a demarcated geographic area, selected by the project management team based on their knowledge of local business districts, enumerators counted off and approached every 'Xth' business, where 'X' was a randomly selected number provided on their interview sheets. First, they walked on the right-hand

xxxix Based on DANE statistics.

side of the street and turned right until they had walked around the entire perimeter, then they repeated the same process on the left side of the street. For the purposes of this survey, Ipsos enumerators only made contact with businesses with a storefront, booth or signage.

Once a business was identified, enumerators proceeded to gain consent for the interview. If the respondent agreed, the enumerator administered the screening questions and, if qualified, conducted the survey. If a business was not available, or the respondent requested that the interview be rescheduled, enumerators made three attempts to reach the business. If the enumerator was unable to reach the business after these three attempts, then that business was marked as a refusal. Survey participation was completely optional, dependent on explicit respondent consent, and non-compensated. Enumerators administered the screening and survey using pre-programmed tablets for data entry, ensuring consistency in the questionnaire administration.

A total of 604 interviews were conducted via CAPI.

CATI Sample Frame

For CATI interviewing, the sample frame was designed to provide national coverage within six regions, excluding all urban centers designated for the CAPI interviews except for Bogotá. In Bogotá, both CATI and CAPI were employed to capture formal and informal businesses. The sample for the CATI interviews was sourced from the CCB (la Cámara de Comercio de Bogotá) national register of businesses.[25]

Weighting was employed to address the use of the two modes in Bogotá (described under Sample Weighting below). Specifically, the CATI geographic unit and sampling unit are as follows:

- **PSUs:** PSUs for the CATI interviewing were the six major regions of Colombia: Bogotá, Caribe, Central, Oriental, Pacifica and Sur-Oriental. These PSUs were selected with certainty due to their importance as commercial centers. All urban and rural areas within these regions were eligible for the CATI sample excluding those urban centers selected for the CAPI interviewing. The one exception is Bogotá which, due to its size and commercial importance, was included in both the CAPI and CATI sample as noted above.
- **SSUs:** No SSUs were assigned for the CATI sample as the sample list had national coverage across the six regions. However, with the exception of Bogotá, the urban centers assigned for the CAPI interviewing were excluded from the CATI sample frame.
- **Individual businesses:** Individual businesses were selected using a simple random sample from the sample list. Using the list of businesses in the national register of businesses, enumerators were randomly assigned businesses from the sample list (i.e., enumerators were not required to select businesses). Once a business was identified, enumerators proceeded to administer the screening and gain consent for the interview. If the respondent agreed, the enumerator administered the screening questions and, if qualified, conducted the survey. If a business was not available by phone, or the respondent requested that the interview be rescheduled, enumerators made three attempts to recontact the business. If the enumerator was unable to reach the business after these three attempts, then that business was marked as a refusal. Survey participation was completely optional, dependent on explicit respondent consent, and non-compensated. Enumerators administered the screening and survey using a pre-programmed telephone interviewing script, ensuring consistency in the questionnaire administration.

A total of 396 interviews were conducted via CATI

Sampling Statistics (CAPI and CATI)

The sampling statistics for the two modes are:

Interview Response and Refusal Rates by Mode in Colombia[xl]

	CAPI	CATI
Contacts	1077	8398
Completes	604	396
Refusals	207	550
Response rate[xli]	57%	5%
Refusal rate (refusals / contacts)[xlii]	19%	7%

xl By showing only the response rate and refusal rate, the table shows a limited set of the outcomes possible. The full set of dispositions includes outcomes such as ineligible respondent (e.g., not owner or top-manager), ineligible company or suspended interview. The response rate and refusal rate calculations are not inclusive of the complete set of outcomes and therefore do not add to 100%. Please see AAPOR Response Rate 3 methodology for more details.

xli Calculated using AAPOR Response Rate 3 methodology.

xlii Calculated by dividing the number of refusals by the number of contacts.

The target allocation and actual completed interviews by regions are detailed below.

Target and Actual Interview Counts by Region and Mode

DISTRICT	TARGET	ACTUAL CAPI[xliii]	ACTUAL CATI	ACTUAL TOTAL
Bogotá	350	254	74	328
Caribe	150	110	47	157
Central	200	100	99	199
Oriental	100	50	64	114
Pacific	150	90	64	154
Sur-Oriental	50	0	48	48
Total	**1000**	**604**	**396**	**1000**

Sample Weighting

Based on the fieldwork dispositions, Ipsos applied three weights to the raw survey data to account for regional distribution, the variation in non-response by urban and rural designations and by gender, and mode weight to account for overlap with regions of in-person and telephone interviewing. Specifically:

- **Design weight:** A weight by PSU was applied to adjust the sample to be proportionate to the number of people within each PSU, as determined by the 2018 Census data[26]. The National Administrative Department of Statistics of Colombia (DANE) data[27]used to create benchmarks by business size were not used here as this data did not include informal businesses. Data on population counts, such as the 2018 Census data, was therefore considered to more closely align with estimates of total (including informal) business counts.
- **Non-response weight (CAPI only):** Weights were applied by urbanicity (urban / rural) and gender of respondent within strata based on response rates. For example, if an enumerator approached a business in region X with a female respondent, and they were ultimately marked as a refusal, the enumerator would still keep track of the fact that a female respondent was approached. During weighting, region X would be weighed to reflect the number of female and male respondents who were approached. Without these weights, the survey results would be biased by propensity to respond based on respondent gender and urbanicity. Statistics on non-response by region and gender are not available for CATI as the information is not recorded in the sample and cannot be recorded by the enumerator in absence of a response to call.
- **Mode weight:** With the exception of Bogotá, there was no overlap in the geographic coverage between the CAPI and the CATI interviewing. Within Bogotá, 77% of the interviews (254) were done by CAPI and 23% (74 interviews) were completed by CATI. CAPI was largely used for the micro and small businesses: 95% (212 interviews) of the micro and small business completed interviews were done by CAPI, while 5% (12 interviews) of the micro and small business completed interviews were done by CATI. Comparatively, 40% of medium size businesses surveyed in Bogotá were done using CAPI (42 interviews) and 60% were done by CATI (62 interviews). The purpose of the mode weight is to address and correct for a potential bias toward formal businesses (CATI interviews were only among formal businesses). As only 12 interviews were conducted with micro and small businesses by CATI, the weight was applied to CATI and CAPI completes for medium businesses only[xliv]. The counts of businesses by district were supplied by the Bogotá Chamber of Commerce business listings[28]. This methodology addressed any overlap within Bogotá and ensured the sample was representative of the region.

xliii With the exception of Bogotá, there was no overlap in the geographic coverage between the F2F and CATI interviews within each region.

xliv The total of 12 interviews by CATI for micro and small businesses is not sufficiently large enough for weighting purposes.

These three weights were combined to create one overall final weight applied to all data points. The design effect for Colombia is 1.18.[xlv]

Ipsos carefully considered a broad spectrum of additional weights to be applied, but was limited by a lack of reliable data sources to weigh against. For example, weights were not applied by company size in regions outside of Bogotá as there are no reliable population statistics that define the proportion of businesses throughout Colombia by company size. Cross-national weights were also not applied. The purpose of a cross-national weight would be to make the data in this report comparable to data for other country reports in this series. Similarly, there was no reliable data source that could account for country sampling differences in fieldwork timing and survey modes.

A weight by business size was not applied in regions outside of Bogotá as the actual interview counts achieved through natural fallout closely matched the targets by business size set using the National Administrative Department of Statistics (DANE) of Colombia including the 2018 National Census, the 2018 National Household Survey and the National Association of Financial Institutions (ANIF) Survey of Micro-businesses.[29]

Due to the limitations of the weighting strategy discussed here, the sample should not be considered to be wholly representative of formal and informal businesses in Colombia.

COVID-19 Protocols

Extensive COVID-19 protocols were observed during CAPI interviews: only 2-3 people were allowed at each interview location, two meters apart. Enumerators wore masks and gloves during all interviews – which they removed, cleaned, and stored or disposed of after every six hours of wear – and sanitized their hands before and after each interview.

Limitations to the Survey Design

While every effort was made to ensure representativeness of the data, there were several limitations to the survey design. In terms of geographic coverage, the Colombia sample design consisted of the six largest metropolitan areas and their surrounding areas based on their diversity and importance. The Amazonian region was excluded from the survey: it is remote and difficult to access, and while it is nearly one-third of Colombia's land area, it represents less than 2% of the population. Five departments were excluded due to US travel advisories on the Venezuelan and Ecuadorian borders. The six study departments selected represented almost 65% and over 75% of the remaining population and GDP, respectively.

Regardless of geography, the dual modes used in Colombia (CAPI and CATI) utilized different sampling approaches in their design: the CAPI portion did not use sample lists, whereas CATI selected participants from country-specific business registries which excluded informal businesses. CATI was used to survey formal micro, small and medium businesses. CAPI covered micro, small and medium formal and informal businesses. This presented additional challenges in estimation given different probabilities of selection for medium size enterprises included in both modes.

In terms of geography, both modes (CAPI and CATI) were used in Bogotá: CAPI covered all three business sizes while CATI was used primarily to reach medium size businesses. As both modes were used for medium businesses in Bogotá, a mode weight was applied within Bogotá **to medium businesses only.**

Outside of Bogotá there was no overlap between CATI and CAPI. Therefore, the survey mode outside of Bogotá was confounded by geography so it was not possible to isolate mode effects in order to apply a mode weight.

In terms of coverage limitations for CAPI, the use of random walk sampling methods in urban and non-urban areas could mean that MSMEs associated with certain characteristics could have a higher likelihood of agreeing to participate in the survey; for example, a grocery store owner would be more apt to agree to participate in a survey during slow business hours than an MSME owner engaged in physical labor. This may lead to overcoverage or undercoverage of certain business sector types. Another key coverage limitation relates to the exclusion of any household-based businesses without signage or storefronts and the geographic coverage; in-person interviews were conducted with businesses with a storefront, stand or stall and/or signage. The random walk methodology could also limit the inclusion of multiple businesses at the same location. For example, for multi-story buildings enumerators were instructed to treat the building as part of the random walk and choose one MSME (or multiple depending on the interval and building size) from the location for screening and consent. However, if multiple businesses were operating from one space or location in the building, only one would

xlv The design effect is the ratio of an actual variance of an estimator that is based on a sample from some sampling design, to the variance of an alternative estimator that would be calculated (hypothetically) using a sample from a simple random sample (SRS) of the same number of elements. A design effect less than one indicates that the sample design has a smaller variance (is more efficient) than the hypothetical SRS design, whereas a design effect greater than one indicates that the sample design has a greater variance (is less efficient). Kish, Leslie (1965). "Survey Sampling". New York: John Wiley & Sons, Inc. ISBN 0-471-10949-5."

be eligible. This limitation would also apply to multiple businesses sharing a stand or booth as only one of the business owners or top-level managers would be screened for qualification and consent.

Finally, firms selected for interviews were from the targeted urban centers listed above; all firms outside of these areas were not included in the CAPI sampling frame.

There were also limitations resulting from COVID-19-specific challenges. These included the impact of social distancing-related restrictions on response and completion rates and the impact of COVID-19 on respondent business outcomes and behavior. Although this study accounts for unit non-response weighting on certain characteristics, there is no way to weight on unobservables such as individual propensity to participate in a survey during a pandemic.

An additional key limitation related to weighting was the lack of post-stratification weights, particularly for national-level calculations and estimates. Without complete data on formal and informal MSMEs for benchmarking, it was not possible to implement post-survey adjustments to reflect the true composition of Colombia's MSME structure. Although the sampling process captured variations in Colombia's MSME structure regarding size, industry, and individual characteristics of business owners, any national-level figures were not adjusted or corrected to reflect business population characteristics.

Finally, the use of multistage cluster sampling represents a limitation on the precision of estimates. This may have led to larger standard errors for estimation at a detriment to the overall precision of results.

NOTES ON ANALYSIS

The primary methods of analysis used in this report are ratio estimations and Rao & Scott's Chi-squared test of Independence to determine statistical significance. All questions required a response to be entered, enabling the interviewer to continue to the next question. All questions included a "don't know" option code and a "refused" option code. These were considered valid responses and were included in the base for a question. The percentage of respondents that refused to answer a question for which they were eligible ranged from 0-16%, depending on the question.

Reported survey results were calculated with a base of all respondents (the total sample), or on all surveyed online MSMEs or surveyed offline MSMEs. The base is specified for each data point. The sample size of online MSMEs and offline MSMEs are both smaller than the base of all surveyed MSMEs. Certain data points may also reflect the results for a subgroup of respondents, such as women-owned businesses or those within a region.

Footnotes are included throughout the report to make note of the analyses conducted, including the corresponding statistical tests and associated outputs. For all tests of statistical significance, the results should be interpreted as levels of association and not causality. Our main criterion for determining statistical significance is the 95% confidence level. For each disaggregate percentage estimation highlighted in the report, the associated p-value is reported as a footnote.

Additionally, findings and results reported here should not be considered representative of Colombia's MSME sector due to the limited geographic scope of the survey, among other considerations.

APPENDIX II: SUMMARY OF MSME AND RESPONDENT CHARACTERISTICS

CATEGORICAL VARIABLES		UNWEIGHTED N	UNWEIGHTED %	WEIGHTED %	UNWEIGHTED STDERROR	WEIGHTED STDERROR
Online Status	Offline	150	15	14.7	1.13	1.18
	Online	850	85	85.3	1.13	1.18
Gender Ownership	Men-owned	352	35.2	35	1.51	1.63
	Women-owned	627	62.7	63.1	1.53	1.65
	Don't Know	21	2.1	1.9	0.45	0.42
Urbanicity	Rural	144	14.4	13.3	1.11	1.14
	Suburban	54	5.4	5.8	0.72	0.82
	Urban	802	80.2	80.9	1.26	1.32
Business Size	Micro	192	19.2	19.6	1.25	1.35
	Medium	173	17.3	13.6	1.2	1.08
	Small	635	63.5	66.8	1.52	1.57
Business Vertical	Agriculture and food production	75	7.5	6.8	0.83	0.8
	Hospitality	202	20.2	19.9	1.27	1.31
	Manufacturing and industry	387	38.7	40	1.54	1.65
	Professional services	292	29.2	28.8	1.44	1.55
	Retail & eCommerce	44	4.4	4.6	0.65	0.72
Region	Bogotá	328	32.8	27.1	1.49	0.14
	Caribe	157	15.7	19.3	1.15	0.08
	Central	199	19.9	18.4	1.26	0.3
	Oriental	114	11.4	11.8	1.01	0.05
	Pacífica	154	15.4	18.1	1.14	0.15
	Sur-Oriental	48	4.8	5.2	0.68	0.02
Owner Education	No formal education or less than primary education	19	2	1.8	0.45	0.47
	Primary education	84	8.7	9.4	0.91	1.05
	Secondary education	272	28.2	27.7	1.45	1.55
	University education or higher (degree)	297	30.8	30.6	1.49	1.61
	Vocational or technical education or training	216	22.4	22.7	1.34	1.46
	Don't Know	69	7.2	7.1	0.83	0.86
	Refused	7	0.7	0.6	0.27	0.25

CATEGORICAL VARIABLES		UNWEIGHTED N	UNWEIGHTED %	WEIGHTED %	UNWEIGHTED STDERROR	WEIGHTED STDERROR
Owner Age	18-24	46	4.8	4.9	0.69	0.77
	25-34	242	25.2	24.3	1.4	1.46
	35-44	286	29.8	29.9	1.48	1.6
	45-54	192	20	20.1	1.29	1.39
	55-64	118	12.3	13.3	1.06	1.22
	65 or older	44	4.6	4.3	0.68	0.69
	Don't Know	28	2.9	2.9	0.54	0.53
	Refused	4	0.4	0.4	0.21	0.2
Respondent Education	No formal education or less than primary education	15	1.5	1.2	0.38	0.36
	Primary education	78	7.8	8.5	0.85	0.99
	Secondary education	313	31.3	31.5	1.47	1.58
	University education or higher (degree)	290	29	28.2	1.44	1.54
	Vocational or technical education or training	297	29.7	29.8	1.45	1.55
	Refused	7	0.7	0.7	0.26	0.27
Banking Status	Banked	498	49.8	48.3	1.58	1.71
	Unbanked	441	44.1	45.1	1.57	1.71
	Don't Know	39	3.9	4.1	0.61	0.63
	Refused	22	2.2	2.5	0.46	0.57
Respondent Role	Owner	636	63.6	63.7	1.52	1.48
	Top-level manager, not an owner	364	36.4	36.3	1.52	1.48
Client Type	Both businesses and individuals	364	36.4	35.9	1.52	1.62
	Primarily Individuals such as consumers or customers	588	58.8	60.3	1.56	1.64
	Primarily businesses	48	4.8	3.8	0.68	0.61

NUMERICAL VARIABLES	UNWEIGHTED N	UNWEIGHTED MEAN	WEIGHTED MEAN	UNWEIGHTED STANDARD DEVIATION	WEIGHTED STANDARD DEVIATION
Respondent Age[1]	994	38	38	11.9	12
Business Age[2]	985	8.4	8.2	9.7	9.7
Number of Owners[3]	1000	1.4	1.4	1.3	1.2

1 Other possible response options: Don't Know (0), Refused (0)

2 Businesses in operation less than one year (101) coded as 0. Other possible response options: Don't Know (13), Refused (2)

3 Other possible response options: Don't Know (0), Refused (0)

ENDNOTES

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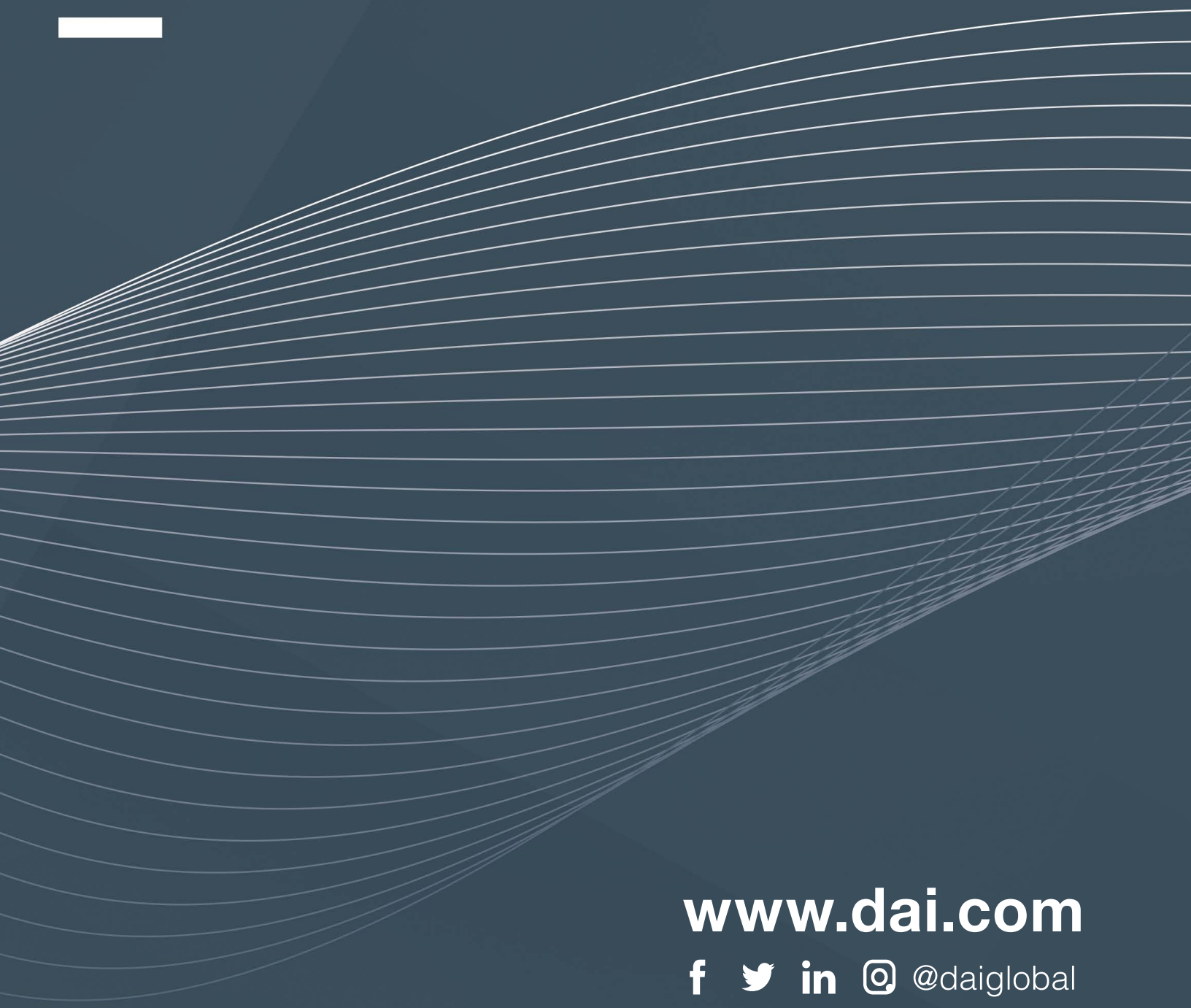
27 https://www.dane.gov.co/; https://www.anif.com.co/encuesta-mipyme-de-anif/gran-encuesta-a-las-microempresas/

28 https://www.ccb.org.co/en/Strengthen-your-business/Databases-and-Enterprise-Information

29 https://www.dane.gov.co/; https://www.anif.com.co/encuesta-mipyme-de-anif/gran-encuesta-a-las-microempresas/

SHAPING A MORE LIVABLE WORLD.



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