



# INSIGHTS FROM EMERGING MARKETS

MSMEs and Digital Tool Use  
Amidst the COVID-19 Pandemic

THE PHILIPPINES COUNTRY BRIEF

---



Shaping a more livable world.

February 2022

*This final report (the “Final Report”) has been prepared by DAI Global, LLC (“DAI”) for Facebook, Inc. in accordance with the contract between the parties dated 1 May 2021 (“the Contract”) and on the basis of the scope and limitations set out below.*

*This Final Report has been prepared solely for the purposes of studying the utilization of digital technologies in the small and medium enterprise sector in developing markets. This includes the business implications of this usage of digital technologies for accelerating and facilitating economic development, inclusion, resilience, and growth post the COVID-19 pandemic, as set out in the Contract.*

*The Final Report is provided exclusively for Facebook, Inc.’s use under the terms of the Contract. No party other than Facebook, Inc. is entitled to rely on the Final Report for any purpose whatsoever and DAI accepts no responsibility or liability or duty of care to any party other than Facebook, Inc. in respect of the Final Report or any of its contents.*

*Any decision to invest, conduct business, enter, or exit the markets considered in the Final Report should be made solely on independent advice and no information in the Final Report should be relied upon in any way by any third party. This Final Report and its contents do not constitute financial or other professional advice, and specific advice should be sought from an independent professional about your specific circumstances.*

*Learn more about the study at [www.dai.com/msme-study](http://www.dai.com/msme-study).*



DAI’s Center for Digital Acceleration helps our clients integrate digital tools and approaches across their portfolio, especially in emerging markets. We do this by engaging end users, building digital products, and understanding the broader ecosystems that drive the success of technology-based initiatives. Our clients include bilateral and multilateral donors, private sector companies, foundations, and others seeking to drive positive social change across a cross-section of sectors including health, governance, agriculture, education, and economic growth.

<https://www.dai.com/our-work/solutions/digital-acceleration>

Ipsos is the world’s third-largest Insights and Analytics company, present in 90 markets and employing more than 18,000 people. Our passionately curious research professionals, analysts and scientists have built unique multi-specialist capabilities that provide true understanding and powerful insights into the actions, opinions and motivations of citizens, consumers, patients, customers, and employees. We serve more than 5,000 clients across the world with 75 business solutions.

ISIN code FR0000073298, Reuters ISOS.PA,  
Bloomberg IPS:FP  
[www.ipsos.com](http://www.ipsos.com).



# CONTENTS

---

EXECUTIVE SUMMARY **4**

INTRODUCTION AND BACKGROUND **6**

MSMEs AND DIGITAL TOOL USE: SNAPSHOTS IN TIME **9**

HOW MSMEs MANAGE KEY BUSINESS ACTIVITIES **11**

MSMEs DURING THE COVID-19 PANDEMIC **17**

BARRIERS TO THE ADOPTION AND USE OF DIGITAL TOOLS AMONG MSMEs **20**

CLOSING REMARKS **26**

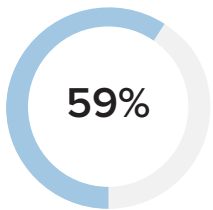
APPENDIX I: METHODOLOGY **27**

APPENDIX 2: SUMMARY OF MSME AND RESPONDENT CHARACTERISTICS **31**

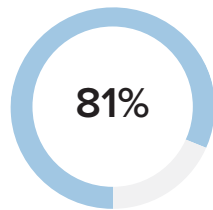
ENDNOTES **33**

# EXECUTIVE SUMMARY

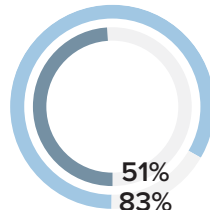
## KEY FINDINGS



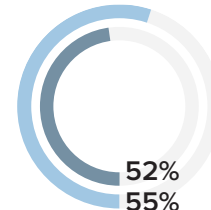
More than half (59 percent) of surveyed online MSMEs<sup>i</sup> reported using digital tools<sup>ii</sup> for business purposes in the past year during COVID-19.



Surveyed online MSMEs looked favorably on digital tool use during the pandemic: a large majority (81 percent) of surveyed online MSMEs reported that digital tools were important or essential to keeping their business running during COVID-19.<sup>iii</sup>



Enterprises recognized the importance of new digital tools during COVID-19<sup>iv</sup> with “Surveyed online MSMEs recognized the help that digital tools provided in adapting to the COVID-19 environment.



Social media tools played a role across the spectrum of business functions about which surveyed MSMEs were asked, with Facebook apps being the most commonly reported digital tools used: more than half of surveyed online MSMEs reported using Facebook apps for customer-facing business activities, specifically marketing to and communicating with customers (55 percent and 52 percent respectively) in the past 30 days.

The Philippines is the third-largest economy<sup>1</sup> in Southeast Asia, with a large micro, small, and medium enterprise (MSME)<sup>v</sup> sector underpinning its consistent growth until the COVID-19-induced economic slowdown in 2020. By allowing some MSMEs to quickly pivot online and maintain their core business functions<sup>2</sup>, digital tools (defined here as internet-based technologies) have become increasingly prominent in the Philippines during the pandemic. A new survey conducted by DAI and Ipsos between June and July 2021<sup>v</sup> found that more than half (59 percent) of surveyed

MSMEs were online, meaning that they had reported using digital tools for business purposes in the past year during COVID-19. Additionally, a large majority (81 percent) of surveyed online MSMEs reported that digital tools were important or essential to keeping their business running during COVID-19.

Surveyed MSMEs recognized the helpfulness of digital tools during COVID-19. Eighty-three percent of surveyed online MSMEs cited that Facebook apps helped them adapt to the COVID-19 environment and 51 percent

<sup>i</sup> The term “Facebook apps” refers to Facebook, WhatsApp, and Instagram.

<sup>ii</sup> “Digital tools” refers to Internet-based technologies and social media. This is a broad term that includes the use of the internet in any of the following activities: social media platforms, such as Facebook, Facebook Messenger, Facebook Marketplace, WhatsApp, or Instagram; other social media platforms, such as Twitter, TikTok, LinkedIn, SnapChat, Pinterest, Tumblr, Reddit, or YouTube; other messaging applications, such as Viber, Line, WeChat, QQ, or Telegram; business software or cloud computing, such as Microsoft Office, Word or Excel, Google Drive, Docs or Sheets, or Amazon Web Services; e-commerce websites, such as Amazon, Alibaba, Etsy, or Mercado Libre; email, such as Gmail, Hotmail, or Yahoo; mobile banking and digital payments, such as PayPal, Venmo, Yape, or Plin; videoconferencing, such as Zoom, Skype, or Google Hangouts.

<sup>iii</sup> 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.

<sup>iv</sup> This brief uses the term “micro, small, and medium enterprises” (MSMEs) to refer to the businesses surveyed for this research, in line with the terminology used by multilateral institutions such as the International Finance Corporation and the United Nations. Although many countries have different official definitions of MSMEs (including the Philippines, where the government of The Philippines officially classifies MSMEs by their total assets) 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 (one employee), small (two to nine employees), and medium (10 to 249 employees).

<sup>v</sup> This survey collected evidence directly from 1,000 MSME owners and top-level managers in the Philippines 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.

reported the same about mobile banking.<sup>vi</sup> Surveyed online MSMEs reported using Facebook apps for conducting various business activities about which they were asked such as: marketing to customers (55 percent), communicating with customers (52 percent), and conducting customer research (44 percent) in the past 30 days.

Survey results show that connectivity was a key barrier affecting surveyed MSMEs digital tool use. For surveyed online and offline MSMEs alike, poor or no internet connectivity was the most frequently reported difficulty that they faced in using digital tools (61 percent and 19 percent respectively). However, additional difficulties were also reported amongst surveyed offline MSMEs – the perceived lack of relevance for digital tools (16 percent) and the high costs of digital tools (14 percent). Additionally, both surveyed online and offline MSMEs were interested in learning more about digital tools to enhance their customer-facing work. Seventy-six percent of surveyed online MSMEs and 47 percent of surveyed offline MSMEs reported that they were interested in learning more about using digital tools to find new customers; 71 percent of surveyed online MSMEs and 42

percent of surveyed offline MSMEs reported the same about communicating with customers, as did 70 percent of surveyed online MSMEs and 45 percent of surveyed offline MSMEs about marketing their business. This finding reinforces the importance of working directly with MSMEs to build their digital skills on topics that they are most interested in and that – by extension – have the most relevance to their work.

With concentrated efforts by policymakers and other stakeholders to address internet connectivity and support targeted interventions to upskill MSMEs in using digital tools, the Philippines' MSME sector will be well positioned to integrate and harness the power of digital tools to improve business outcomes and build resiliency for future economic shocks. These important efforts will ensure that entrepreneurs and business owners across the MSME sector can equitably access and use digital tools to support key business functions and enable the Philippines 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 North America, South America, South Asia, and Southeast Asia. This brief provides an overview of findings from face-to-face surveys that Ipsos conducted with 1,000 MSMEs in the Philippines via computer-assisted personal interviewing (CAPI) from June 3 to July 23, 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 the Philippine Bureau of Domestic Trade Promotion and the Philippine Statistics Authority List of Establishments (2019), as well as the Sourcing Directory from Tradeline Philippines (supplier and buyer databases), Go Lokal Directory of Suppliers (lists of micro, small and medium-sized businesses), and the List of Establishments were used to set targets for the number of completed surveys by categories of business size, as defined by the number of employees: micro (one employee), small (two to nine employees), and medium (10 to 249 employees) businesses.<sup>vii</sup> A random walk method was implemented to conduct interviews in urban, suburban, and rural areas in the Philippines' three island groups, capturing businesses across key segments including subnational geography, owner gender, and business sector. Due to the limited geographic scope of the survey, findings and results reported here are not nationally representative of the Philippines MSME sector. The final survey results presented in this brief were weighted based on strata and differences in response rates by urban-rural geography and gender of respondent within each strata. A complete explanation of the sample design and research methodology is found in [Appendix I](#).

vi Mobile banking as used in this report refers to both mobile banking and digital payments.

vii 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

The Philippines is the third-largest economy<sup>3</sup> in Southeast Asia, with a large micro, small, and medium enterprise (MSME)<sup>viii</sup> sector underpinning its consistent growth until the COVID-19-induced economic slowdown in 2020.<sup>4</sup> By allowing some MSMEs to quickly pivot online and maintain their core business functions<sup>5</sup>, digital tools (defined here as internet-based technologies) have become increasingly important to the Philippines' MSME community during the pandemic.

A new survey conducted by DAI and Ipsos between June and July 2021 collected evidence directly from 1,000 MSME owners and top-level managers in the Philippines to understand how MSMEs have used digital tools<sup>ix</sup> 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. Research findings also delve into differences in digital tool use across key business segments within the Philippines, such as women-owned MSMEs, rural MSMEs, and MSMEs in specific business sectors.<sup>x</sup>

When entrepreneurs across the MSME sector can equitably access and use digital tools in support of key business functions, the Philippines 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 Nations 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 conduct basic business functions, the survey identified challenges that such MSMEs face regarding 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 use 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.

viii This brief uses the term “micro, small, and medium enterprises” (MSMEs) to refer to the businesses surveyed for this research, in line with the terminology used by multilateral institutions such as the International Finance Corporation and the United Nations. Although many countries have different official definitions of MSMEs (including the Philippines, where the government of The Philippines officially classifies MSMEs by their total assets) 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 (one employee), small (two to nine employees), and medium (10 to 249 employees).

ix “Digital tools” refers to Internet-based technologies and social media. This is a broad term that includes the use of the internet in any of the following activities: social media platforms, such as Facebook, Facebook Messenger, Facebook Marketplace, WhatsApp, or Instagram; other social media platforms, such as Twitter, TikTok, LinkedIn, SnapChat, Pinterest, Tumblr, Reddit, or YouTube; other messaging applications, such as Viber, Line, WeChat, QQ, or Telegram; business software or cloud computing, such as Microsoft Office, Word or Excel, Google Drive, Docs or Sheets, or Amazon Web Services; e-commerce websites, such as Amazon, Alibaba, Etsy, or Mercado Libre; email, such as Gmail, Hotmail, or Yahoo; mobile banking and digital payments, such as PayPal, Venmo, Yape, or Plin; videoconferencing, such as Zoom, Skype, or Google Hangouts.

x Research findings reported in this series should not be considered representative of country MSMEs due to the limitations of the surveys. See methodology appendices for more information.

## COVID-19 AND MSMEs IN THE PHILIPPINES

MSMEs form the economic backbone of the Philippines' economy and were a critical driver of the Philippines' 6.4 percent average growth rate between 2010 and 2019.<sup>6</sup> They make up the vast majority (99.5 percent) of all enterprises, employ 63 percent of the country's labor force, and contribute 40 percent to the Philippines' gross domestic product (GDP).<sup>7</sup>

The Philippines' economy was hit hard by the COVID-19 pandemic, experiencing a 9.6 percent decline in GDP in 2020.<sup>8</sup> As a result, Philippine MSMEs are confronting decreased consumer demand, logistics issues, and employee layoffs, according to a 2020 United Nations Development Programme survey.<sup>9</sup> However, digital tools have played an important role in pandemic recovery. For example, mobile banking<sup>xi</sup> has allowed MSMEs to pivot and continue offering goods and services when in-person shopping was unavailable.<sup>10</sup> Accordingly, two of the largest digital payment services in the Philippines (InstaPay and PESONet) recorded a 276 percent increase in volume and 127 percent increase in value in April 2021 as compared to April 2020, per the Bangko Sentral ng Pilipinas (BSP).<sup>11</sup> The increase in high-frequency, low-value digital payments was driven primarily by transactions between consumers and small merchants.<sup>12</sup>

The pandemic's economic effects are changing consumers' behavior as well, leading to more digital tool usage in their everyday lives. For example, according to Deloitte's July 2020 Digital Tools in Crisis and Recovery online survey, 51 percent of surveyed Filipino consumers reported that their online spending had increased since the COVID-19 outbreak, and 76 percent of consumers surveyed reported that social media helped them to discover new businesses.<sup>13</sup> Furthermore, in Deloitte's March 2021 Dynamic Markets survey, 69 percent of surveyed SMBs in the Philippines that use Facebook apps reported that they were important to remaining operational during the pandemic.<sup>14</sup> Lastly, the Philippine government has leveraged digital tools throughout the pandemic to provide citizens with efficient access to social services. For example, the Department of Social Welfare and Development (DSWD) and Department of Labor and Employment (DLE)<sup>15</sup> began to deliver emergency financial assistance through the digital payment platforms PayMaya and GCash in 2020.<sup>16</sup>

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

## 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

66% of MSMEs reported that the business had **female owner/s**

65% of MSME respondents were **male**

35% of MSME respondents were **female**



### Urbanicity

73% of MSMEs were located in **urban areas**

27% of MSMEs were located in **rural areas**

<1% of MSMEs were located in **suburban areas**



### Sector

24% of MSMEs reported that their primary product or service was in the **retail and e-commerce** sector

15% of MSMEs reported that their primary product or service was in the **manufacturing and industry** sector

13% of MSMEs reported that their primary product or service was in the **hospitality** sector

13% of MSMEs reported that their primary product or service was in the **agriculture and food production** sector

3% of MSMEs reported that their primary product or service was in the **professional services** sector



### Customer base

40% of MSMEs reported that their business primarily served **consumers**

30% of MSMEs reported that their business served **both businesses and consumers**

30% of MSMEs reported that their business primarily served **other businesses**



### Business owner education

86% of MSMEs had business owners with a **secondary education or higher**

13% of MSMEs had business owners with **less than a secondary education**



### Age of business owner

64% of MSMEs had business owners **ages 18-44**

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



### Bank account access

20% of MSMEs reported that they had **access to a bank account**



# MSMEs AND DIGITAL TOOL USE: SNAPSHOTS IN TIME

Surveyed MSMEs in the Philippines are increasingly adopting digital tools in their business practices: the reported use of digital tools for business purposes rose in the past year during COVID-19. Both Facebook apps and digital payments were frequently used by surveyed MSMEs, with a mobile-centric approach in which a large majority of MSMEs primarily used a mobile phone to connect to the internet.



**Surveyed MSMEs' use of digital tools for business purposes rose in the past year during COVID-19. Usage has declined slightly in the past 30 days but remains higher than pre-COVID-19.<sup>xii xiii</sup>**

50% of MSMEs reported that they used digital tools for business purposes **prior to the COVID-19 pandemic**

59% of MSMEs reported that they used digital tools for business purposes **in the past year** during COVID-19

55% of MSMEs reported that they used digital tools for business purposes **in the past 30 days**



**Digital payment tools were frequently used by surveyed MSMEs during all time periods, with a noticeable increase during COVID-19.<sup>xiv</sup>**

29% of MSMEs reported that they had used digital payment tools for business purposes **prior to the COVID-19 pandemic**

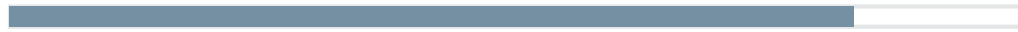
35% of MSMEs reported that they had used digital payment tools for business purposes **in the past year** since COVID-19

32% of MSMEs reported that they had used digital payment tools for business purposes **in the past 30 days**

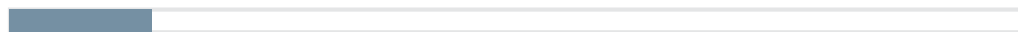
- xii Difference between digital tool use in the past 30 days and digital tool use prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted  $p < 0.05$ .
- xiii Not all MSMEs who reported ever using digital tools for business purposes were considered "online" for 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.
- xiv Difference between digital payment use in the past year and digital payment use prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted  $p < 0.05$ .



**Over three-quarters of surveyed online MSMEs used a mobile phone to connect to the internet:**



83% of online MSMEs reported that they primarily used a **mobile phone** to connect to the internet



14% of online MSMEs reported that they primarily used a **laptop or PC** to connect to the internet

## KEY INSIGHTS FOR POLICYMAKERS



Survey findings demonstrate that MSMEs in the Philippines are adopting digital tools as a key part of their business practices. A larger percentage of surveyed MSMEs reported using digital tools in the past year since COVID-19 (59 percent) as compared to prior to the COVID-19 pandemic (50 percent). Digital tools such as Facebook apps and mobile banking have seen the largest increases over time among surveyed MSMEs. In terms of mobile banking, 29 percent of surveyed MSMEs reported that they had used digital payment tools for business purposes prior to the COVID-19 pandemic, which increased to 35 percent in the past year during COVID-19, then dipped back down to 32 percent in the past 30 days. This evidence shows that surveyed MSMEs are willing to use digital tools (even if inconsistently), which provides an important opportunity and opening for public, private, and development sector stakeholders to facilitate the full-fledged digital transformation of the Philippines' MSME sector.

Throughout emerging markets, mobile phones are a key way that individuals access the internet.<sup>17</sup> According to the survey results, surveyed online MSMEs in the Philippines were no exception. A large majority of surveyed online MSMEs (83 percent) reported that they primarily used mobile phones to connect to the internet. Given the near ubiquity of a mobile phone in the Philippines,<sup>18</sup> 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.

# HOW MSMEs MANAGE KEY BUSINESS ACTIVITIES

Surveyed MSMEs reported using a variety of both online and offline tools to manage business activities. However, offline methods<sup>xv</sup> had a strong foothold in surveyed MSMEs' operations, suggesting that digital tools augmented and amplified, rather than replaced, more traditional offline methods.

An interview with the owner of MSME Aguilar Healthy Mushroom, illustrates how one small business in the Philippines is using digital tools to conduct key business functions, like marketing and communicating with customers. Jerwin noted that Facebook apps have helped him understand market trends and customer preferences, which allows his company to reach more customers. See [page 16](#) for full case study.



**Surveyed online MSMEs reported using Facebook to conduct various business activities about which they were asked:**

55% of online MSMEs reported that they used Facebook to **market to customers** in the past 30 days

52% of online MSMEs reported that they used Facebook to **communicate with customers** in the past 30 days

42% of online MSMEs reported that they used Facebook to **communicate with suppliers** in the past 30 days

44% of online MSMEs reported that they used Facebook to do **customer research** in the past 30 days

11% of online MSMEs reported that they used Facebook to **hire or find new employees** in the past 30 days

xv

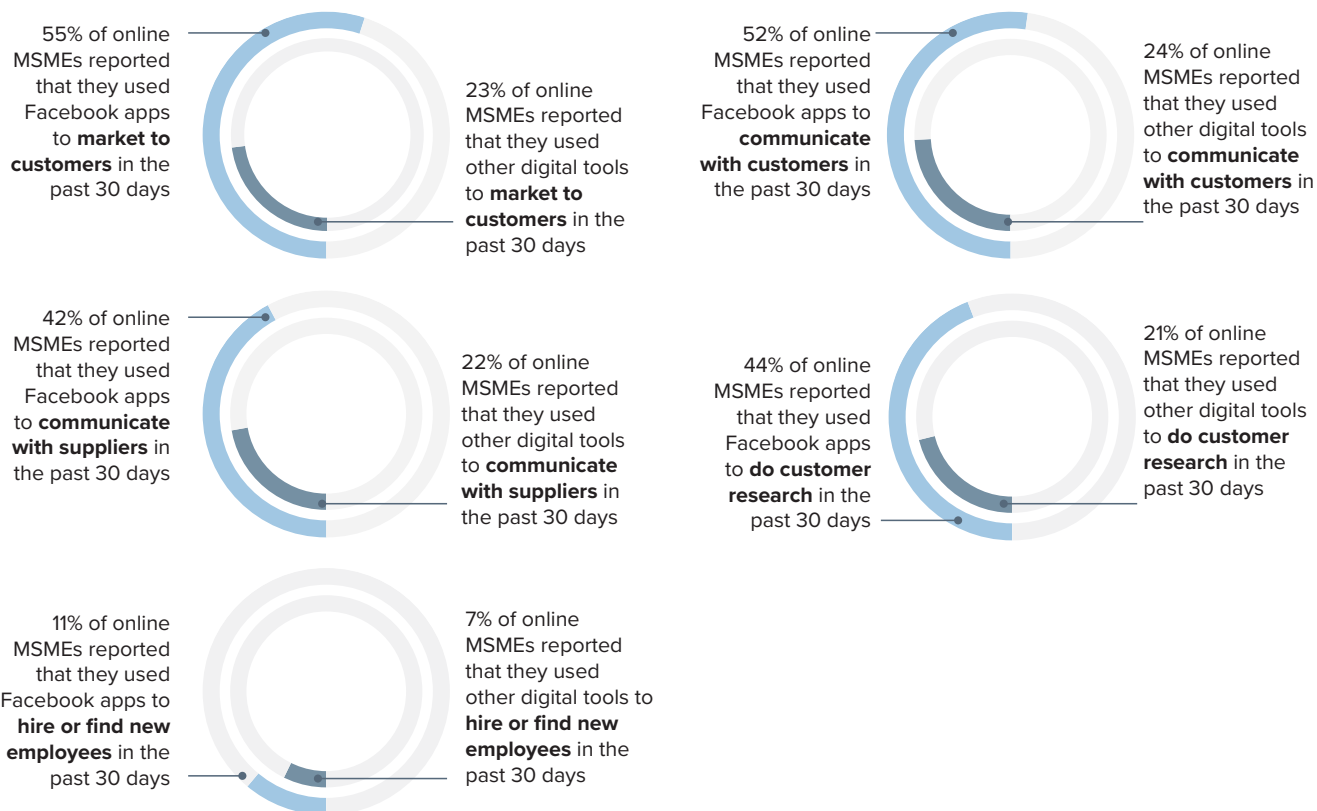
The term "offline methods" includes face-to-face interaction; paper-based methods such as letters, fliers or billboards; and through a telephone call, SMS, or text message (does not include WhatsApp).



Surveyed MSMEs across all business sectors<sup>xvi</sup> increased their usage of digital tools for business purposes during the COVID-19 pandemic – but each sector adapted using different tools

Across all business sectors, surveyed MSMEs increased their usage of digital tools for business purposes during the pandemic, but – like seen elsewhere in the brief – they have slightly reduced their digital tool use in the past 30 days. This holds true even for the agriculture and food production sector, which is less likely than other sectors to use digital tools.<sup>19</sup> For example, 36 percent of surveyed MSMEs in the agriculture and food production sector reported that they used digital tools for business purposes prior to COVID-19, increasing to 46 percent in the past year during COVID-19.<sup>xvii</sup> A higher percentage of surveyed MSMEs in all sectors – except manufacturing and industry – reported using digital tools in the past 30 days than prior to the COVID-19 pandemic.<sup>xviii</sup> This finding likely indicates that MSME use of digital tools will remain higher than before the pandemic, though this may not be universally true for all sectors.

**A higher percentage of surveyed online MSMEs reported using Facebook apps than other digital tools to conduct various business activities about which they were asked...**

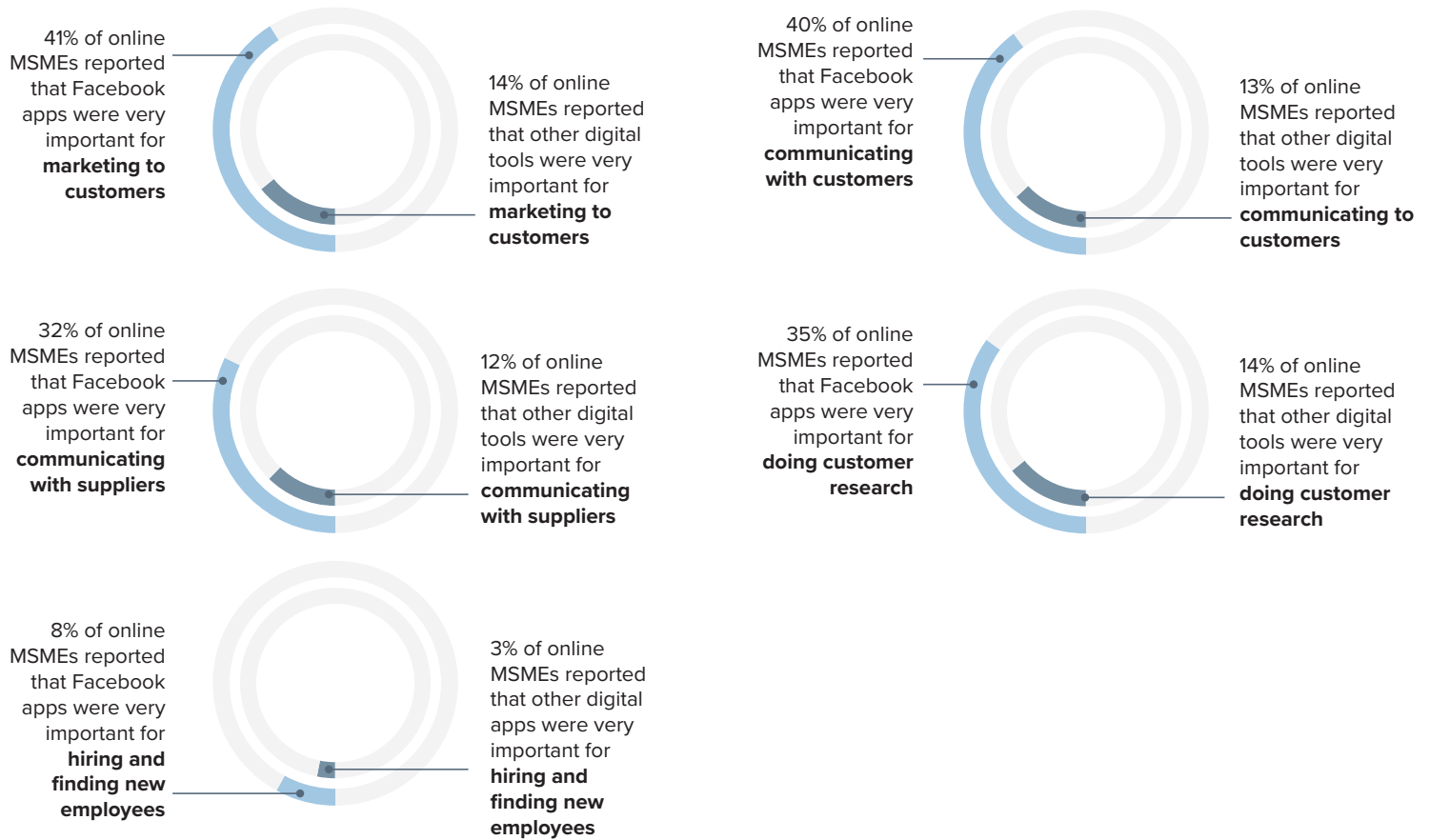


xvi Surveyed business sectors included agriculture and food production, manufacturing and industry, professional services, hospitality, and retail and e-commerce. Statistics about the hospitality sector are not included here due to sample size limitations.

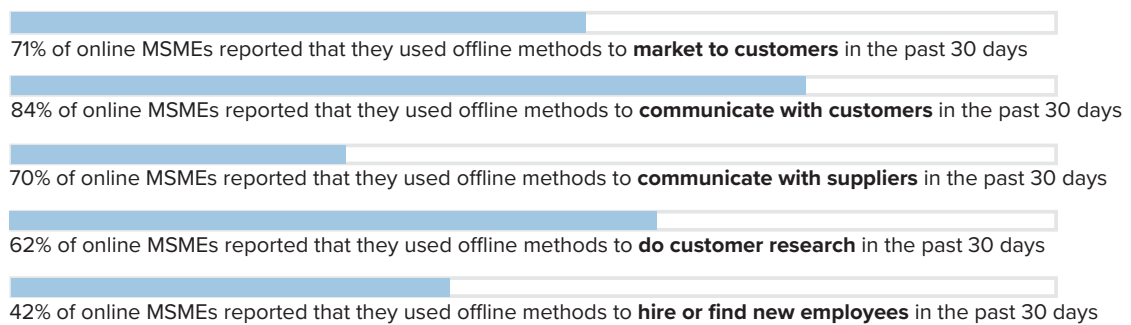
xvii Among MSMEs in the agriculture and food production sector, the difference between digital tool use in the past year and digital payment use prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted  $p < 0.05$ .

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

...And a higher percentage of surveyed online MSMEs stated that Facebook apps were very important for each business activity about which they were asked than other digital tools...



...but offline methods<sup>xix</sup> were the most popular method for surveyed online MSMEs to conduct each business activity:



xix The term "offline methods" 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).



## Surveyed MSMEs' digital tool use to sell goods and services increased during COVID-19

Selling goods and services is a key business activity for all MSMEs. In the survey, 52 percent of surveyed MSMEs reported that they have ever used digital tools to sell goods and services. However, survey results showed a considerable increase in the use of digital tools to sell goods and services during the COVID-19 pandemic. More specifically, 37 percent of surveyed MSMEs reported that they used digital tools to sell goods and services prior to COVID-19, which then increased to 48 percent in the past year during COVID-19.<sup>xx</sup> In terms of specific digital tools used to sell goods and services, 35 percent of surveyed MSMEs reported that they used social media prior to COVID-19. This percentage increased to 47 percent in the past year during COVID-19.<sup>xxi</sup> However, survey results also showed a recent decrease in digital tool use for selling goods and services. Forty-five percent of surveyed online MSMEs reported that they used digital tools to sell goods and services in the past 30 days (including 45 percent who reported using social media for this purpose).<sup>xxii</sup> This recent decrease in digital tool use for selling goods and services may indicate that surveyed MSMEs only temporarily increased their digital tool usage for sales.



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

70% of offline MSMEs reported that they used offline methods to **market to customers** in the past 30 days

92% of offline MSMEs reported that they used offline methods to **communicate with customers** in the past 30 days

64% of offline MSMEs reported that they used offline methods to **communicate with suppliers** in the past 30 days

51% of offline MSMEs reported that they used offline methods to **do customer research** in the past 30 days

17% of offline MSMEs reported that they used offline methods to **hire or find new employees** in the past 30 days



### Surveyed offline MSMEs reported using face-to-face interactions to conduct key business activities at a higher rate than other offline interactions, like telephone calls/SMS or paper-based methods:

92% of offline MSMEs reported that they used face-to-face to **communicate with customers** in the past 30 days

69% of offline MSMEs reported that they used face-to-face to **market to customers** in the past 30 days

10% of offline MSMEs reported that they used telephone calls, SMS or text messages to **communicate with customers** in the past 30 days

7% of offline MSMEs reported that they used telephone calls, SMS or text messages to **market to customers** in the past 30 days

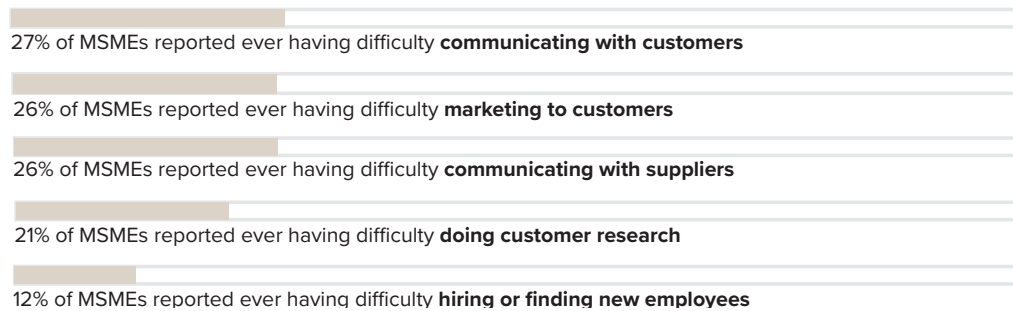
xx Difference between use of digital tools to sell goods and services prior to COVID-19 and during COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted  $p < 0.05$ .

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

xxii Difference between use of digital tools to sell goods and services during COVID-19 and in the past 30 days is not statistically significant per Chi-squared goodness of fit test, adjusted  $p > 0.05$ .



### Surveyed MSMEs reported ever having difficulty with customer-facing business activities and other external communications at a higher rate than other back-end business functions:



## KEY INSIGHTS FOR POLICYMAKERS



According to survey results, Facebook apps were the most frequently reported digital tools that online MSMEs reported using to conduct each business activity about which they were asked. For example, 55 percent of surveyed online MSMEs reported that they used Facebook to market to customers in the past 30 days, compared to 23 percent who reported using other digital tools in the same timeframe. Accordingly, surveyed online MSMEs also reported that Facebook apps were very important for each business activity about which they were asked at a higher rate than for other digital tools. To this end, 41 percent of surveyed online MSMEs reported that Facebook apps were very important for marketing to customers, compared to 14 percent of surveyed online MSMEs who said the same about other digital tools. These survey findings indicate that Facebook apps were a key digital tool for surveyed MSMEs to run multiple aspects of their business. It also points to the importance of public, private, and development sector stakeholders continuing to promote the use of simple and intuitive digital tools among the Philippines' MSME community.

However, survey findings also indicated that surveyed online MSMEs in the Philippines augmented, rather than wholly replaced, their use of offline techniques with digital tools to conduct each business activity about which they were asked. More specifically, a higher percentage of surveyed online MSMEs in the Philippines reported using offline methods, especially face-to-face techniques, in the past 30 days than digital tools for each business activity about which they were asked. (This finding also echoed the high reported usage of face-to-face among surveyed offline MSMEs across all business activities, with 92 percent of surveyed offline MSMEs reporting that they used face-to-face to communicate with customers in the past 30 days.) For example, while 52 percent of surveyed online MSMEs reported that they used Facebook apps to communicate with customers in the past 30 days, 84 percent reported using offline methods for the same purpose over the same time period. Supporting MSMEs to survive and thrive during and after the COVID-19 pandemic requires looking across the full spectrum of business methods, given the complementary usage of both digital tools and offline methods across business activities.

## CASE STUDY

# AGUILAR HEALTHY MUSHROOM



[www.facebook.com/  
agUILARhealthymushroom/](https://www.facebook.com/agUILARhealthymushroom/)



[www.instagram.com/  
agUILARhealthymushroom/](https://www.instagram.com/agUILARhealthymushroom/)



AGRICULTURE  
& FOOD  
PRODUCTION



SMALL  
ENTERPRISE



RURAL



SDG 9: RESPONSIBLE  
CONSUMPTION AND  
PRODUCTION

In late 2019, Jerwin transformed his family's oyster mushroom farm into a community-wide livelihood endeavor in rural Luzon. "...even if it's just a small livelihood, [it provides] something for people to do and benefits the company, but also the people around them." Employing local farmers and community members, Aguilar Healthy Mushroom contributes to SDG 8: Decent Work and Economic Growth by supporting job creation in rural areas and SDG 9: Responsible Production and Consumption by utilizing farm waste to encourage sustainable food production with minimal environmental impact.



Jerwin credits digital tools for successfully managing his business's shift to a direct-to-consumer model and growing his sales across the country. Launching his business at the same time that the COVID-19 pandemic arrived in the Philippines, he shifted his planned sales strategy from local resellers to 100 percent online sales across the country. Jerwin uses Facebook apps to market Aguilar's goods to the growing Philippine consumer segment interested in a healthy lifestyle. With Facebook Business and his use of Facebook groups, Jerwin better understands market trends and customer preferences. Through Instagram Stories and ads, Jerwin regularly posts curated content using hashtags like #healthy or #vegan to connect with customers eager to explore eco-friendly health food products. Leveraging WhatsApp, Facebook Messenger, and Instagram's

messaging and chat features, Jerwin connects to customers directly, responds to inquiries, and closes sales on his products.

To increase Aguilar's competitiveness and grow his business in the long run, Jerwin seeks to expand into international markets and to integrate more analytics and artificial intelligence tools into his business practices. By providing income-producing opportunities to local community members, Jerwin's business enhances the economic resilience of his own community in rural Luzon.

**"Social media really helps my business a lot, especially to reach customers. I'm in a rural area, but I can reach anywhere in the Philippines. I'm grateful to have those features."**

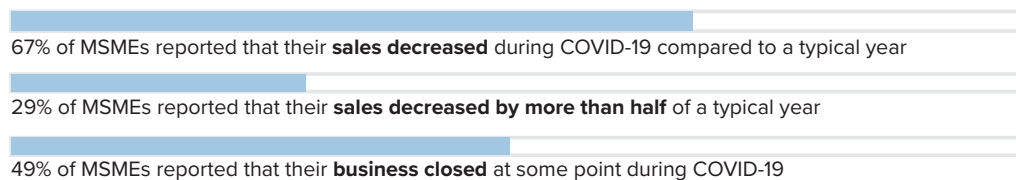


# MSMEs DURING THE COVID-19 PANDEMIC

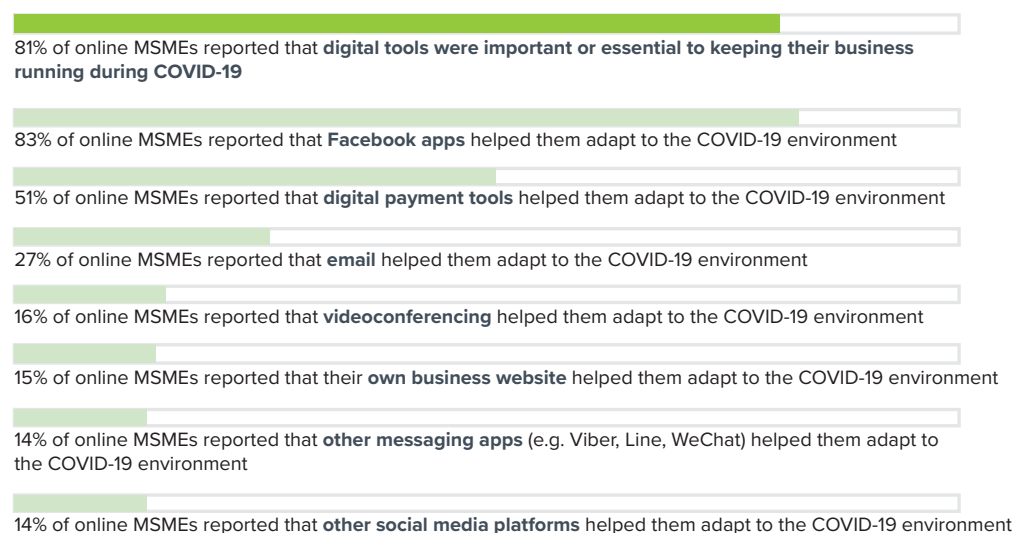
The COVID-19 pandemic was a major crisis for surveyed MSMEs in the Philippines. Businesses, struggling with challenging economic conditions in which their sales decreased substantially, embraced digital tools in their adaptation to the new economic environment. Surveyed online MSMEs largely found digital tools to be crucial to keeping their business running during the pandemic.



## Surveyed MSMEs sales decreased substantially during the COVID-19 pandemic:



## Digital tools helped surveyed online MSMEs adapt to the COVID-19 economic environment:



## KEY INSIGHTS FOR POLICY MAKERS



Survey results show the economic slowdown stemming from the COVID-19 pandemic negatively impacted the more than half of surveyed MSMEs' sales throughout the Philippines. Two-thirds of surveyed MSMEs (67 percent) reported that their sales decreased during COVID-19 compared to a typical year. These findings align with a May 2020 Asian Development Bank survey conducted in the Philippines, which reported that 77 percent of enterprises surveyed<sup>xxiii</sup> experienced sharp declines in sales between March and April 2020, while only 22 percent had their sales stay the same.<sup>20</sup>

Despite reported decreases in sales among surveyed MSMEs, many surveyed online MSMEs reported that digital tools helped them adapt to the new economic landscape. For example, a large majority (81 percent) of surveyed online MSMEs reported that digital tools were important or essential to keeping their business running during COVID-19. Among digital tools, the highest percentage of surveyed online MSMEs reported that

Facebook apps (83 percent) helped them adapt to the COVID-19 environment, followed by digital payment tools (51 percent) and email (27 percent). 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,<sup>21</sup> surveyed MSMEs in the Philippines appeared to favor newer digital tools, such as social media and digital payments. The widespread use of digital payment tools among surveyed online MSMEs may offer an opening for public, private, and development sector stakeholders to increase digital tool use among Philippine MSMEs. With survey evidence suggesting that many surveyed MSMEs were already use digital payment platforms, as well as the Philippine government's use of digital payment platforms PayMaya and GCash to deliver emergency financial assistance in 2020,<sup>22</sup> there is an opportunity for stakeholders to introduce more complex digital tools through these channels.

xxiii Survey respondents consisted of 52 percent microenterprises, 27 percent small firms, 13 percent medium-sized firms, and 8 percent large firms.



## A higher percentage of surveyed women-owned MSMEs reported using digital tools for business purposes than surveyed men-owned MSMEs

According to survey results, a higher percentage of surveyed women-owned MSMEs reported using digital tools for business purposes than surveyed men-owned MSMEs before the pandemic, in the past year, and in the past 30 days.<sup>xxiv</sup> More specifically, 52 percent of surveyed women-owned MSMEs reported that they used digital tools prior to COVID-19, which increased to 61 percent in the past year since COVID-19, but dipped slightly to 57 percent in the past 30 days. Surveyed men-owned MSMEs followed a similar pattern, but with lower digital tool usage rates: 47 percent of surveyed men-owned MSMEs reported using digital tools for business purposes prior to the COVID-19 pandemic, which increased to 54 percent in the past year since COVID-19, then decreased to 51 percent in the past 30 days. These survey findings align with a Social Weather Stations survey in the Philippines from March 2019, which found that a higher proportion of women (50 percent) were internet users, compared to 41 percent of men.<sup>23</sup>

Internet connectivity was a key difficulty facing surveyed women-owned and surveyed men-owned MSMEs alike. Though poor or no internet connectivity was the most frequently reported difficulty among both groups, a greater percentage of surveyed women-owned MSMEs (65 percent of online women-owned MSMEs and 21 percent of offline women-owned MSMEs) reported that poor or no internet connectivity was a difficulty their business faced in using digital tools than surveyed men-owned MSMEs (51 percent of online men-owned MSMEs and 14 percent of offline men-owned MSMEs). This survey finding indicates that internet access challenges inhibited MSME digital tool use more so among women-owned MSMEs than men-owned MSMEs.

Survey results also showed disparities in how offline women-owned and men-owned MSMEs viewed their lack of knowledge about digital tools. For example, 20 percent of surveyed offline women-owned MSMEs reported that lack of knowledge was a difficulty their business faced in using digital tools, compared to 14 percent of surveyed offline men-owned MSMEs (the second most frequently reported difficulty for surveyed offline women-owned MSMEs, but tied for third among surveyed offline men-owned MSMEs). Similarly, nine percent of surveyed women-owned offline MSMEs reported that needing more knowledge was the most challenging difficulty their business faced in using digital tools, compared to three percent for surveyed offline men-owned MSMEs (the most cited answer option for most challenging difficulty among offline women-owned MSMEs, but tied for third among offline men-owned MSMEs).

xxiv Digital tool use during COVID-19 is statistically significant per Chi-squared test of independence, adjusted  $p < 0.05$ . Digital tool use prior to COVID-19 and in the past 30 days is not statistically significant per Chi-squared test of independence, adjusted  $p > 0.05$ .

# BARRIERS TO THE ADOPTION AND USE OF DIGITAL TOOLS AMONG MSMEs

Internet connectivity was a major barrier faced by both surveyed online and offline businesses in using digital tools. Surveyed offline businesses additionally struggled with knowledge gaps in how to use digital tools and low confidence in using digital tools. Both surveyed online and offline MSMEs were eager to learn more about using digital tools in their customer-facing work.

An interview with the owner of HUNI Ukuleles, illustrates how one small business in the Philippines is using digital tools and social media to find new customers and market his growing business. In particular, Brian noted a steep learning curve as his biggest challenge in using more digital tools, but he also expressed a strong desire to learn more about digital tools to help his business mature and grow. See [page 25](#) for full case study.



**Poor or no internet connectivity was the most frequently reported difficulty that surveyed online and offline MSMEs reported facing in using digital tools:**

61% of online MSMEs reported that **poor or no internet connectivity** was a difficulty their business faced in using digital tools

19% of offline MSMEs reported that **poor or no internet connectivity** was a difficulty their business faced in using digital tools



**Other commonly cited difficulties among surveyed online and offline MSMEs included a lack of knowledge, access to devices, and a perceived lack of relevance to their businesses:**

13% of online MSMEs reported that **lack of knowledge** was a difficulty their business faced in using digital tools

18% of offline MSMEs reported that **lack of knowledge** was a difficulty their business faced in using digital tools

12% of online MSMEs reported that **access to a mobile phone, tablet or computer** 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 they faced in using digital tools



While the largest percentage of surveyed online MSMEs reported that **poor or no internet connectivity** was the most challenging difficulty their business faced in using digital tools, surveyed offline MSMEs reported the same about **needing more knowledge** and a perceived **lack of relevance**.<sup>xxv</sup>

18% of online MSMEs reported that **poor or no internet connectivity** was the most challenging difficulty their business faced in using digital tools

7% of offline MSMEs reported that **needing more knowledge** was the most challenging difficulty their business faced in using digital tools

7% of offline MSMEs reported that **lack of relevance to their business** was the most challenging difficulty they faced in using digital tools



Surveyed online and offline MSMEs were interested in learning more about digital tools to enhance their customer-facing work:

76% of online MSMEs reported that they were interested in learning more about using digital tools to **find new customers**

47% 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 **communicate with existing customers**

42% of offline MSMEs reported that they were interested in learning more about using digital tools to **communicate with existing customers**

70% 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**

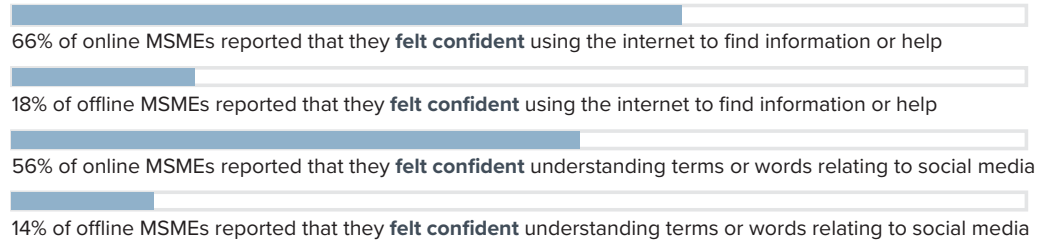
45% of offline MSMEs reported that **training on how to use digital tools** to find new customers would benefit their business

22% of offline MSMEs reported that **more education and training** would make them more likely to use digital tools

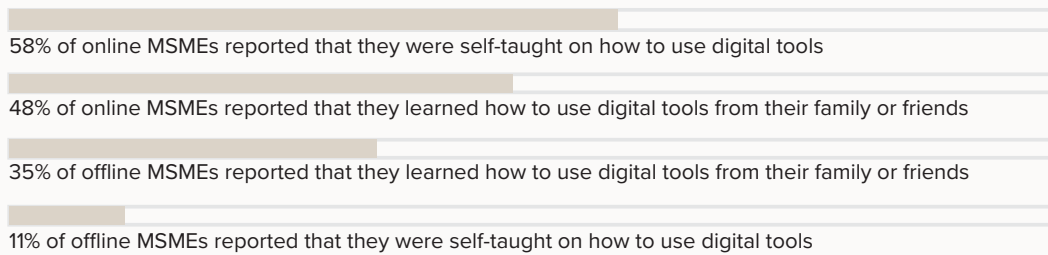
xxv When asked what was their most challenging difficulty using digital, responses were coded to fit 18 options. The options displayed in this figure correspond to those displayed in the prior graph where most common difficulties are displayed. Options: need more knowledge or know-how; poor or no internet 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.



**A higher percentage of surveyed online MSMEs reported feeling confident in using various aspects of digital tools than surveyed offline MSMEs:**



**A much higher percentage of surveyed online MSMEs than surveyed offline MSMEs are self-taught on how to use digital tools<sup>xxvi</sup>**



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

## KEY INSIGHTS FOR POLICYMAKERS



Survey results show that connectivity is a key barrier affecting MSME digital tool use. For surveyed online and offline MSMEs alike, poor or no internet connectivity was the most frequently reported difficulty that they faced in using digital tools (61 percent and 19 percent respectively). It was also the most cited answer option among surveyed online MSMEs when asked about their most challenging difficulty when using digital tools (18 percent). These findings suggest that if public, private, and development sector stakeholders collaborated to tackle this key connectivity barrier, there could well be an increase in both the number of MSMEs overall who use digital tools, and the amount of digital tool use among online MSMEs. However, it is also important for key stakeholders to develop and implement tailored programming and policy solutions that address difficulties reported more frequently among surveyed offline MSMEs – the perceived lack of relevance for digital tools (16 percent) and the high costs of digital tools (14 percent) – so that they feel empowered, justified, and well-resourced enough to come online.

Echoing the findings reported in previous sections, which showed that a more than half of surveyed online

MSMEs had recently used Facebook apps to conduct customer-facing business activities,<sup>xxvii</sup> surveyed online and offline MSMEs were interested in learning more about digital tools to enhance their customer-facing work. Seventy-six percent of surveyed online MSMEs and 47 percent of surveyed offline MSMEs reported that they were interested in learning more about using digitals to find new customers; 71 percent of surveyed online MSMEs and 42 percent of surveyed offline MSMEs reported the same about communicating with customers, as did 70 percent of surveyed online MSMEs and 45 percent of surveyed offline MSMEs about marketing their business. As noted in the box above, a higher proportion of surveyed offline MSMEs learned how to use digital tools from friends or family, possibly because their lack of knowledge about digital tools discourages them from self-teaching, while surveyed online MSMEs were more comfortable with these tools and learning them on an individual basis. This finding reinforces the importance of working directly with MSMEs to build their digital skills on topics that they are most interested in and that – by extension – have the most relevance to their work.

xxvii Fifty-five percent of online MSMEs reported that they used Facebook apps to market to customers in the past 30 days, and 52 percent of online MSMEs reported that they used Facebook apps to communicate with customers in the past 30 days.



## A higher percentage of surveyed urban MSMEs reported using digital tools than surveyed rural MSMEs for multiple business activities

Survey results showed that surveyed online MSMEs in urban areas reported using digital tools for multiple business activities about which they were asked at a higher rate than surveyed online MSMEs in rural locations. For example, 56 percent of surveyed online urban MSMEs reported that they used Facebook apps to market to customers in the past 30 days, compared to 50 percent of surveyed online rural MSMEs.<sup>xxviii</sup> Accordingly, a higher percentage of surveyed online urban MSMEs (43 percent) reported that Facebook apps were very important for marketing to customers compared to surveyed rural MSMEs (35 percent).<sup>xxix</sup> This trend held for all surveyed business activities about which they were asked including communicating with customers and with suppliers, conducting customer research, and hiring or finding new employees. These findings align with other external literature: for example, a March 2019 survey by *Social Weather Stations*, the foremost public-opinion polling body in the Philippines, found that 62 percent of Filipinos in urban areas were internet users, compared to 37 percent in rural locations.<sup>24</sup>

Despite the well-known challenges related to digital tool and internet use in rural areas,<sup>25</sup> surveyed MSMEs in urban and rural areas reported experiencing similar challenges related to their digital tool use. For surveyed online MSMEs in urban and rural areas alike, poor or no internet connectivity was the most frequently selected difficulty that their business faced in using digital tools (63 percent and 52 percent respectively) – exactly 60 percentage points higher than any other difficulty among surveyed online urban MSMEs and 49 percentage points higher than any other difficulty for surveyed online rural MSMEs. These findings indicate that it is important for public, private, and development sector stakeholders to continue improving internet access throughout the country and making it more accessible for MSMEs.

xxviii Not statistically significant per Chi-squared test of independence, adjusted  $p > 0.05$ .

xxix Not statistically significant per Chi-squared test of independence, adjusted  $p > 0.05$ .



## CASE STUDY

# HUNI UKULELES



[www.facebook.com/huniukuleles/](https://www.facebook.com/huniukuleles/)



[www.instagram.com/huniukuleles/](https://www.instagram.com/huniukuleles/)



MANUFACTURING & INDUSTRY



SMALL ENTERPRISE



URBAN



SDG 12: SUSTAINABLE PRODUCTION & CONSUMPTION

What started out as a hobby to showcase homemade ukuleles has evolved into an international manufacturing business, thanks to the global reach of digital tools. After Brian and his wife shared videos of their homemade ukuleles in a Facebook group, potential customers in the Philippines and Australia contacted them to purchase their instruments. This widespread interest prompted Brian to found HUNI Ukuleles in 2019. He then opened up a small factory in Cebu to create bespoke ukuleles for international customers after receiving a large order bound for the U.S. In alignment with SDG 12: Sustainable Production and Consumption, HUNI's ukuleles are 100 percent hand-crafted out of bamboo sourced from local smallholder farmers in Mindanao. This piece of Brian's supply chain supports sustainability in domestic production in an environmentally and socially responsible way.

Brian uses digital tools – specifically Facebook and Instagram – to build his brand and tap into the growing customer base for ukuleles. He posts photos and videos of his latest ukulele models on both platforms to build brand awareness among his customer base. With over 80 percent of HUNI's total sales coming through Facebook, Brian uses Facebook Messenger and his profile page to communicate with his customers and suppliers. He also sees conversion rates of over 80 percent on Instagram, with many international customers finding out about HUNI through the platform and then direct messaging him to arrange purchases.

Brian's business is still recovering from the impact of the COVID-19 pandemic, which



has impacted the way he uses Facebook and Instagram. Despite high interest from potential customers and a large volume of orders, the COVID-19 pandemic reduced HUNI Ukuleles' production capacity during lockdowns. Fewer ukuleles in production means that Brian has less content to post on Facebook and Instagram, though he is slowly rebuilding his online presence. He has also decided to launch a Facebook Shop as part of HUNI's comeback.

Brian's biggest challenge in using digital tools is the steep learning curve and the lack of a dedicated staff member for social media. Even though he is a fast learner, a successful social media presence requires a solid strategy, the right kind of knowledge and know-how, and enough time to implement and see results. Despite Brian's challenges in using social media, HUNI Ukuleles' international growth and popularity shows that MSMEs grounded in sustainable business practices and ethical supply chains can contribute to macro-level economic growth outcomes through their use of digital tools.

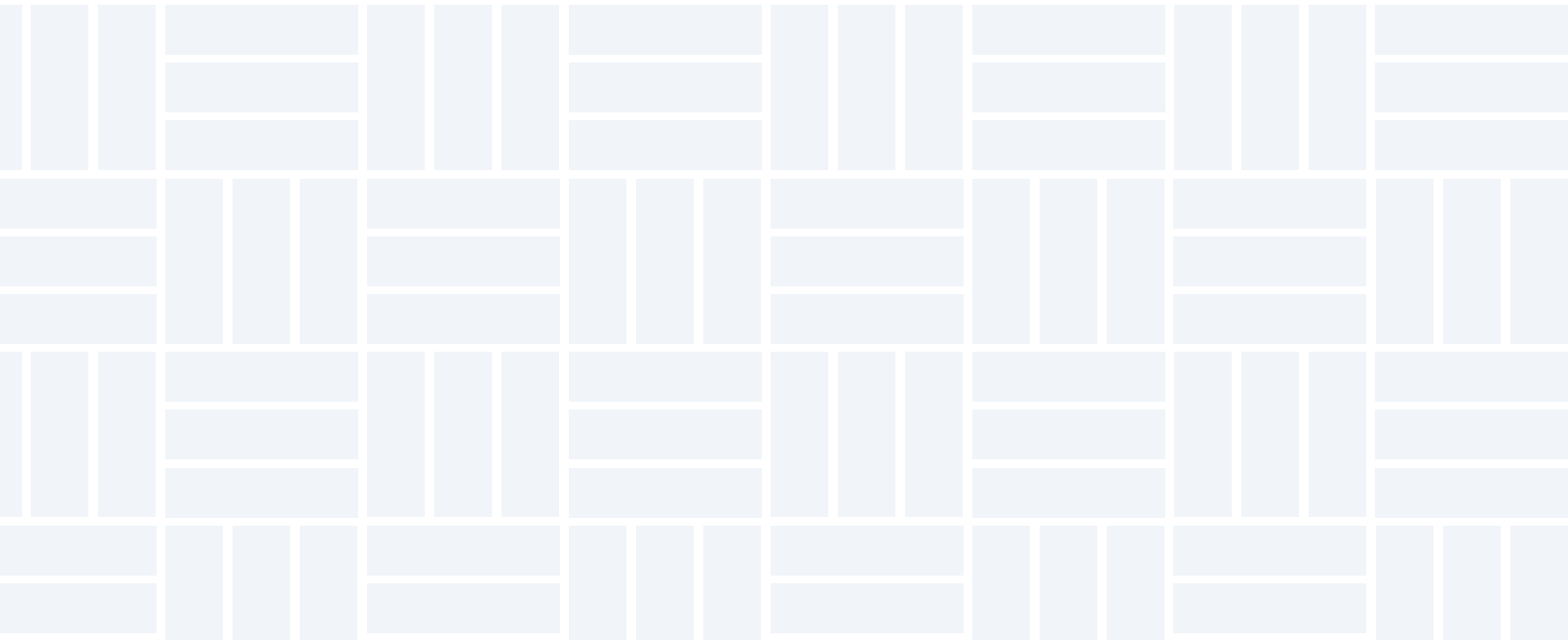
**“This business I have would not be where it is without Facebook. Started from thin air as an idea and Facebook made it happen. I'm thankful because Facebook helped us be appreciated elsewhere – U.S. and UK – and then helped gain popularity here in the Philippines.”**

## CLOSING REMARKS

---

With continued improvements in internet connectivity and targeted interventions to upskill MSME owners in digital literacy, the Philippines' 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. As evidenced by the survey findings presented in this research study, more than half of surveyed MSMEs in the Philippines used digital tools to conduct basic business functions. In addition, surveyed online MSMEs reported that digital tools such as Facebook apps were important or essential to their ability to maintain business operations during the COVID-19 pandemic. However, barriers such as internet connectivity proved a challenge to MSMEs seeking to fully leverage digital tools in their business practices: our findings reported that surveyed MSMEs, both online and offline, were constrained by a lack of poor or no internet connectivity, limiting their ability to adopt more digital tools. Nevertheless, surveyed MSMEs still reported a strong desire to learn more about digital tools for business purposes, such as using them to find new customers on social media. This evidence shows that targeted solutions are required to maintain forward momentum and continue growing MSME digital tool usage equitably across all MSME segments.

Looking ahead, the economic uncertainties stemming from the COVID-19 pandemic will undoubtedly cause continued challenges and increased opportunities for MSMEs to harness the power of digital tools. Commonly used digital payment tools such as online banking can serve as an entry point for MSMEs who are transitioning from offline to online and provide an introduction that will help MSMEs begin to develop long-term digital skills. Promoting equitable digital tool usage within the Philippines' MSME sector will help build a Philippine economy resilient to the COVID-19 pandemic and future shocks. MSMEs poised to grow and scale as the pandemic recedes will accelerate economic growth outcomes and support the Philippines 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 the Philippines' economy.



# APPENDIX I: METHODOLOGY

## OVERVIEW OF THE SURVEY DESIGN

Between June 3 and July 23, 2021, Ipsos conducted 1,000 in-person interviews of enterprises via computer-assisted personal interviewing (CAPI) to better understand their use of digital tools as well as their challenges and barriers to digitization.<sup>xxx</sup>

The sample for the study was defined to include and be limited to the micro (1 employee), small (2 to 9 employees) and medium (10 to 249 employees) business populations based in the Philippines (summarized as “business size” in the text).<sup>xxxi</sup> Official statistics from the Philippine Bureau of Domestic Trade Promotion’s Statistics Authority List of Establishments (2019)<sup>26</sup>, as well as two 2020 MSME business directories maintained by the Bureau of Trade,<sup>xxxi</sup> were used to estimate the proportion of businesses within each of the micro (1 employee), small (2 to 9 employees) and medium (10 to 249) business-size categories. The

proportions by business size as defined are 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.

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 the Philippines, this minimum was achieved naturally and no oversample was required.

Based on these estimates, the sample targets were allocated as shown below, which also shows the actual counts achieved from fieldwork:

Target and Actual Interview Counts by Business Size, Urbanicity and Business-Owner Gender in the Philippines

	BUSINESS SIZE		URBANICITY			BUSINESS-OWNER GENDER		
	TARGET	ACTUAL		TARGET	ACTUAL		MINIMUM REQUIRED	ACTUAL
Micro	800	788	Urban	700	713	Women	150	674
Small	100	114	Rural	300	287			
Medium	100	98						

xxx This is one in a series of 13 country reports about micro, small and medium-sized enterprises’ (MSMEs) use of digital tools in North America, South America, South Asia, and Southeast Asia. These are accompanied by a global report, containing a complete description of the research and survey methodology.

xxxi 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.

xxxi The two directories used in this study were the 2020 Sourcing Directory from Tradeline Philippines (a supplier and buyer of Philippine business databases), and the 2020 Go Lokal Directory of Suppliers for micro, small and medium businesses. <https://tradelinephilippines.dti.gov.ph/web/tradeline-portal/ph-exporters-directory-interactive-> <https://www.dti.gov.ph/negosyo/go-lokal/>

### Sample Design

The sample design was a multistage stratified cluster sample. This means that the population was divided into geographic blocs and then through stages, each time selecting a more limited geographic unit until the final sampling unit for interviewing was selected.

The sample design called for creating a list of businesses within the final geographic unit prior to the selection of the business. The sources used for list creation were from two registered business lists<sup>xxxiii</sup> (referred to as the “Government list”) and an in-person enumeration of businesses within the final geographic unit (the “Ipsos list”). The enumeration process, list creation, and geographic and sampling units defined at each stage were the following:

- **PSUs:** Primary sampling units (PSUs) were defined as cities, municipalities and barrios.<sup>xxxiv</sup> The Philippines’ three island groups – Luzon, the Visayas, and Mindanao – were divided into five regions based on their commercial importance within the country: National Capital Region (Metropolitan Manila), North Luzon, South Luzon, Visayas, and Mindanao.<sup>xxxv</sup> PSUs were stratified by these five regions and a total of 57 PSUs were selected with random probability proportional to the number of persons in these five regions.
- **SSUs:** Secondary sampling units (SSUs) were defined as business districts. These districts were stratified by urbanicity (urban/rural) within their respective PSUs. Of the 279 business districts nationally, 39 were selected as SSUs with random probability proportional to the number of persons in the PSU based on 2020 Census data.<sup>27</sup>
- **Enumeration process:** Enumerators were deployed to each SSU to canvass the business district and create a list of businesses (the “Ipsos list”). Eligible businesses included formal and informal businesses for the three business sizes in this study. The actual business size was recorded during the interview. Only businesses with an evident store front, booth or signage were canvassed.

- **List creation:** For each SSU, the Ipsos list was combined with the Government list and duplicate business names were removed so individual businesses appeared only once in the combined list. The combined list had greater representation of informal and micro businesses than the Government list alone and better coverage of larger and out-of-the-way businesses.
- **Individual businesses:** Within each SSU, individual businesses were selected at random using a systematic selection interval (i.e. every “Nth” business). 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.

### Sampling Statistics

The sampling statistics are as follows:

#### Interview Response and Refusal Rates in the Philippines<sup>xxxvi</sup>

	CAPI
Contacts	1,846
Completes	1,000
Refusals	413
Response rate <sup>xxxvii</sup>	54%
Refusal rate (refusals / contacts) <sup>xxxviii</sup>	22%

xxxiii Ibid.

xxxiv Cities, municipalities, and barrios have clear size and registration differences based on their municipal charters. Municipalities are often referred to as towns; barrios outside of cities are referred to as villages; and barrios within cities are referred to as districts or wards.

xxxv Luzon and Mindanao are both named after the largest island in their respective groups, while the Visayas (also referred to as the Visayan Islands) is an archipelago. Some portions of Mindanao, the Sulu Archipelago, and the Zamboanga Peninsula were excluded due to security.

xxxvi Showing only the response and refusal rates presents 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 percent.

xxxvii Calculated using AAPOR Response Rate 3 methodology.

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

### Locations for Research in the Philippines

The target interview count and actual interview count by region are detailed below:

Target and Actual Interview Counts by Region

REGION	TARGET	ACTUAL
NCR	203	202
North Luzon	219	219
South Luzon	213	214
Visayas	163	163
Mindanao	202	202
<b>Total</b>	<b>1,000</b>	<b>1,000</b>

### Sample Weighting

Based on the fieldwork dispositions, Ipsos applied two weights to the raw survey data to account for regional distribution as well as the variation in non-response by urban and rural designations and by gender.

- Design weight:** A weight by region was applied to adjust the sample to be proportionate to the number of persons within each province, as determined by the 2020 Census data.<sup>28</sup> The 2020 Census data was used as a proxy for the proportion of businesses in each region, as opposed to the 2019 Philippine Statistics Authority List of Establishments and the two 2020 business directories<sup>29</sup> used to create target interview counts by business size (as these sources do not include informal businesses). Therefore, general population counts were more likely to mirror the total (formal and informal) business population.
- Non-response weight:** 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 province 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, province 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.

These two weights were combined to create one overall final weight applied to all data points. The design effect for the Philippines is 1.01.<sup>xxxix</sup>

Ipsos carefully considered a broad spectrum of weights to be applied. Two in particular – business-size and cross-national – were not applied. A business-size weight was not applied because no reliable data exists in the Philippines against which to weight. Finally, a cross-national weight, to enable comparison across countries in this series of reports, was not applied because there were no reliable data sources that could account for sampling differences across all countries in fieldwork timing and survey modes.

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 the Philippines.

### COVID-19 Protocols

Extensive COVID-19 protocols were observed during CAPI interviews: only two to three 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 every interview.

### Limitations to the Survey Design

While every effort was made to ensure representativeness of the data, there are several limitations to the survey design. In terms of coverage limitations, 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; interviews were conducted with businesses with a storefront, stand or stall and/or signage. The random walk methodology may also limit the inclusion of multiple businesses at the same location. For multi-storey buildings, enumerators were instructed to treat the building as part of the random

xxxix 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.

walk and choose one (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 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.

In terms of geographic coverage limitations, some portions of Mindanao, the Sulu Archipelago, and the Zamboanga Peninsula were assessed as high-crime areas and excluded due to safety concerns for the enumerators.

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 by business size within PSU. Without complete data on the counts of formal and informal MSMEs for establishing population targets, it was not possible to implement post-survey adjustments to reflect the true composition of the Philippines' MSME structure by business size. Although the sampling process captured variation in the Philippines' 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.

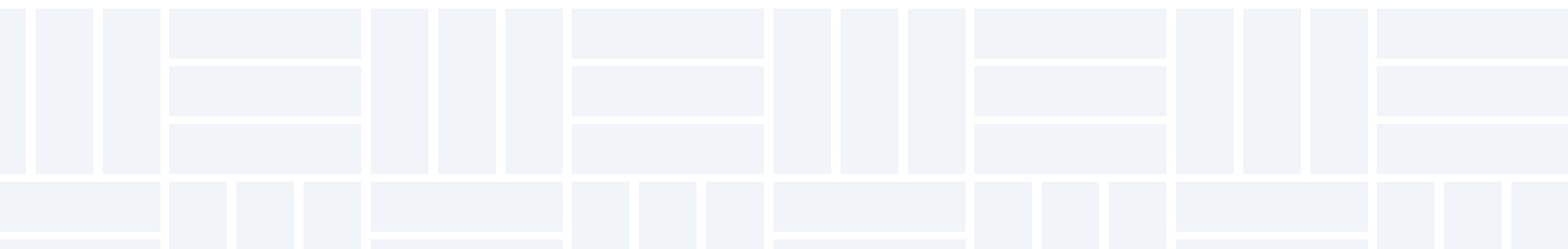
## NOTES ON ANALYSIS

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 zero to 10 percent, 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 criteria for determining statistical significance is the 95 percent confidence level. For each disaggregate percentage estimation highlighted in the report, the p-value in relation to alpha (less than or equal to .05 or greater than .05) is reported as a footnote.

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



# APPENDIX 2: SUMMARY OF MSME AND RESPONDENT CHARACTERISTICS

CATEGORICAL VARIABLES		UNWEIGHTED N	UNWEIGHTED %	WEIGHTED %	UNWEIGHTED STDERROR	WEIGHTED STDERROR
<b>Online Status</b>	Offline	417	41.7	41.4	1.56	1.56
	Online	583	58.3	58.6	1.56	1.56
<b>Gender Ownership</b>	Men-owned	325	32.5	34.2	1.48	1.54
	Women-owned	674	67.4	65.7	1.48	1.54
	Don't know	1	0.1	0.1	0.1	0.12
<b>Urbanicity</b>	Rural	287	28.7	26.5	1.43	1.33
	Suburban	2	0.2	0.2	0.14	0.16
	Urban	711	71.1	73.3	1.43	1.33
<b>Business Size</b>	Micro	788	78.8	78.2	1.29	1.35
	Medium	98	9.8	10.4	0.94	1
	Small	114	11.4	11.5	1.01	1.04
<b>Business Vertical</b>	Agriculture and food production	132	13.2	13.1	1.07	1.08
	Hospitality	205	20.5	20.6	1.28	1.3
	Manufacturing and industry	146	14.6	14.9	1.12	1.15
	Professional services	28	2.8	3	0.52	0.56
	Retail and e-commerce	238	23.8	23.6	1.35	1.35
	Other	251	25.1	24.7	1.37	1.38
<b>Region</b>	Mindanao	202	20.2	20.2	1.27	0.28
	NCR	202	20.2	20.3	1.27	0.16
	North Luzon	219	21.9	21.9	1.31	0.16
	South Luzon	214	21.4	21.3	1.3	0.25
	Visayas	163	16.3	16.3	1.17	0.3
<b>Owner Education</b>	No formal education or less than primary education	14	1.4	1.3	0.37	0.37
	Primary education	113	11.4	11.2	1.01	1.01
	Secondary education	500	50.3	50.2	1.59	1.61
	University education or higher (degree)	239	24	24.1	1.36	1.37
	Vocational or technical education or training	117	11.8	11.9	1.02	1.04
	Don't know	3	0.3	0.4	0.17	0.21
	Refused	9	0.9	0.9	0.3	0.31

CATEGORICAL VARIABLES		UNWEIGHTED N	UNWEIGHTED %	WEIGHTED %	UNWEIGHTED STDERROR	WEIGHTED STDERROR
<b>Owner Age</b>	18-24	65	6.5	6.5	0.78	0.8
	25-34	284	28.5	28.7	1.43	1.45
	35-44	286	28.7	28.8	1.44	1.45
	45-54	189	19	19	1.24	1.25
	55-64	126	12.7	12.5	1.05	1.06
	65 or older	42	4.2	4.3	0.64	0.66
	Don't know	3	0.3	0.3	0.17	0.18
<b>Respondent Education</b>	No formal education or less than Primary education	14	1.4	1.3	0.37	0.37
	Primary education	113	11.3	11.2	1	1
	Secondary education	506	50.6	50.5	1.58	1.61
	University education or higher (degree)	238	23.8	23.9	1.35	1.36
	Vocational or technical education or training	119	11.9	12	1.02	1.04
	Refused	10	1	1.1	0.31	0.33
<b>Banking Status</b>	Banked	200	20	20	1.27	1.27
	Unbanked	763	76.3	76.2	1.35	1.35
	Don't know	21	2.1	2.2	0.45	0.47
	Refused	16	1.6	1.7	0.4	0.41
<b>Respondent Role</b>	Mid-level manager	1	0.1	0.1	0.1	0.12
	Owner	937	93.7	93.3	0.77	0.82
	Top-level manager, not an owner	62	6.2	6.6	0.76	0.81
<b>Client Type</b>	Both businesses and individuals	298	29.8	29.7	1.45	1.46
	Primarily individuals such as consumers or customers	401	40.1	40.4	1.55	1.53
	Primarily businesses	301	30.1	29.9	1.45	1.44

NUMERICAL VARIABLES	UNWEIGHTED N	UNWEIGHTED MEAN	WEIGHTED MEAN	UNWEIGHTED STANDARD DEVIATION	WEIGHTED STANDARD DEVIATION
Respondent Age <sup>1</sup>	1,000	40.1	40	11.8	11.8
Business Age <sup>2</sup>	1,000	7.7	7.7	9.4	9.4
Number of Owners <sup>3</sup>	1,000	1.8	1.8	7.5	7.4

<sup>1</sup> Other possible response options: Don't know (0), Refused (0).

<sup>2</sup> Businesses in operation less than one year (67) coded as 0. Other possible response options: Don't know (0), Refused (0).

<sup>3</sup> Other possible response options: Don't know (0), Refused (0).



# ENDNOTES

- 1 “GDP (Current US\$) – Philippines, Thailand, Indonesia, Malaysia, Vietnam, Cambodia, Singapore, Lao PDR, Brunei Darussalam, Myanmar.” 2021. The World Bank. 2021. <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=PH-TH-ID-MY-VN-KH-SG-LA-BN-MM>.
- 2 “How COVID-19 Has Pushed Companies over the Technology Tipping Point – and Transformed Business Forever.” 2020. McKinsey&Company. <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever>.
- 3 “GDP (Current US\$) – Philippines, Thailand, Indonesia, Malaysia, Vietnam, Cambodia, Singapore, Lao PDR, Brunei Darussalam, Myanmar.” 2021. The World Bank. 2021. <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=PH-TH-ID-MY-VN-KH-SG-LA-BN-MM>.
- 4 “GDP Growth (Annual %) – Philippines.” 2020. The World Bank. 2020. <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=PH>.
- 5 “How COVID-19 Has Pushed Companies over the Technology Tipping Point – and Transformed Business Forever.” 2020. McKinsey&Company. <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever>.
- 6 “GDP Growth (Annual %) – Philippines.” 2020. The World Bank. 2020. <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=PH>.
- 7 “Asia Small and Medium-Sized Enterprise Monitor 2020 – Volume I: Country and Regional Reviews.” 2020. Asian Development Bank. <https://www.adb.org/publications/asia-sme-monitor-2020-country-regional-reviews>.
- 8 Dela Cruz, Enrico. 2020. “Philippines Revises 2020 GDP Contraction to 9.6%.” *Reuters*, April 8, 2020. <https://www.reuters.com/article/philippines-economy-gdp/philippines-revises-2020-gdp-contraction-to-9-6-id1N42M11V5>.
- 9 “MSME Sector Is Key to COVID-19 Inclusive Recovery for PH.” 2020. *United Nations Philippines* (blog). October 2, 2020. <https://philippines.un.org/en/93680-msme-sector-key-covid-19-inclusive-recovery-ph>.
- 10 Xiao, Yan, and Martin Chorzempa. 2020. “How Digital Payments Can Help Countries Cope with COVID-19, Other Pandemics: Lessons from China.” *The World Economic Forum*, May 2020. <https://www.weforum.org/agenda/2020/05/digital-payments-cash-and-covid-19-pandemics/>.
- 11 Gonzales, Anna. 2021. “PESONet, Instapay Transactions Rise.” *The Manila Times*, June 2, 2021. <https://www.manilatimes.net/2021/06/02/business/top-business/peonet-instapay-transactions-rise/1801600>.
- 12 Estioko, Raymond, Bridget Rose Mesina-Romero, and Maria Christina Masangkay. 2020. “Highlights Report: State of Digital Payments in The Philippines – 2019 Update and 2020 Preview.” The Philippines: Bangko Sentral ng Pilipinas. [https://www.bsp.gov.ph/PaymentAndSettlement/210616\\_BTC\\_Philippines\\_Report\\_DPS.pdf](https://www.bsp.gov.ph/PaymentAndSettlement/210616_BTC_Philippines_Report_DPS.pdf).
- 13 “Digital Tools in Crisis and Recovery: Consumer Report.” Deloitte, 2020. Accessed July 2021. <https://about.fb.com/wp-content/uploads/2020/09/Deloitte-Digital-Tools-in-Crisis-and-Recovery-Report.pdf>. Also see “Digital Tools in Crisis and Recovery: How Consumers in the Philippines Have Adapted to COVID-19.” Facebook, 2020. Accessed August 2021. Unpublished.
- 14 “Dynamic Markets Unlocking small business growth in the Philippines.” Facebook, 2021. Accessed August 2021. Unpublished.
- 15 Cho, Yoonyoung, Yasuhiro Kawasoe, Ruth Rodriguez, and Myra Valenzuela. 2021. “COVID-19 G2P Cash-Transfer Payment – Case Study: PHILIPPINES.” The World Bank. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/368351625163110870/covid-19-g2p-cash-transfer-payments-case-study-philippines>.
- 16 Lai, Julianna. 2020. “On the Fast Track: The Rise of Digital Welfare States in the Philippines and Indonesia.” *CSIS Center for Strategic & International Studies* (blog). September 22, 2020. <https://www.csis.org/blogs/new-perspectives-asia/fast-track-rise-digital-welfare-states-philippines-and-indonesia>.
- 17 Silver, Laura, Aaron Smith, Courtney Johnson, Kyle Taylor, Jingjing Jiang, Monica Anderson, and Lee Rainie. 2019. “Mobile Connectivity in Emerging Economies.” Pew Research Center. [https://www.pewresearch.org/internet/wp-content/uploads/sites/9/2019/03/PI\\_2019.03.07\\_Mobile-Connectivity\\_FINAL.pdf](https://www.pewresearch.org/internet/wp-content/uploads/sites/9/2019/03/PI_2019.03.07_Mobile-Connectivity_FINAL.pdf).
- 18 *Ibid.*
- 19 Trendov, Nikola, Samuel Varas, and Meng Zeng. 2019. “DIGITAL TECHNOLOGIES IN AGRICULTURE AND RURAL AREAS BRIEFING PAPER.” Food and Agriculture Organization of the United Nations. <https://www.fao.org/ca4887en/ca4887en.pdf>.
- 20 Shinozaki, Shigehiro, and Paul Vandenberg. 2020. “The COVID-19 Impact on Philippine Business: Key Findings from the Enterprise Survey.” Asian Development Bank. <https://dx.doi.org/10.22617/SPR200214-2>.
- 21 How Technology Creates Markets: Trends and Examples for Private Investors in Emerging Markets. International Finance Corporation. 2018. Accessed July 2021. [https://www.ifc.org/wps/wcm/connect/6616fd9f-854a-45bd-8588-6c3d57bec589/IFC-EMCompass-TechMarketsReport\\_FIN+2018-ForWeb.pdf?MOD=AJPERES&CVID=mdwBXRb](https://www.ifc.org/wps/wcm/connect/6616fd9f-854a-45bd-8588-6c3d57bec589/IFC-EMCompass-TechMarketsReport_FIN+2018-ForWeb.pdf?MOD=AJPERES&CVID=mdwBXRb) pg 5
- 22 Lai, Julianna. 2020. “On the Fast Track: The Rise of Digital Welfare States in the Philippines and Indonesia.” *CSIS Center for Strategic & International Studies* (blog). September 22, 2020. <https://www.csis.org/blogs/new-perspectives-asia/fast-track-rise-digital-welfare-states-philippines-and-indonesia>.
- 23 “First Quarter 2019 Social Weather Survey: Internet Usage Steady at 46% of Adult Filipinos.” 2019. The Philippines: Social Weather Stations. <https://www.sws.org.ph/swsmain/ppage/?artcsyscode=ART-20190604221437>.
- 24 “First Quarter 2019 Social Weather Survey: Internet Usage Steady at 46% of Adult Filipinos.” 2019. The Philippines: Social Weather Stations. <https://www.sws.org.ph/swsmain/artcltdis/ppage/?artcsyscode=ART-20190604221437>.
- 25 Trendov, Nikola, Samuel Varas, and Meng Zeng. 2019. “DIGITAL TECHNOLOGIES IN AGRICULTURE AND RURAL AREAS BRIEFING PAPER.” Food and Agriculture Organization of the United Nations.
- 26 <https://www.dti.gov.ph/resources/msme-statistics/>
- 27 <https://psa.gov.ph/content/2020-census-population-and-housing-2020-cph-population-counts-declared-official-president>
- 28 <https://psa.gov.ph/content/2020-census-population-and-housing-2020-cph-population-counts-declared-official-president>
- 29 Op. cit. <https://www.dti.gov.ph/resources/msme-statistics/>; <https://tradelinphilippines.dti.gov.ph/web/tradeline-portal/ph-exporters-directory-interactive->; <https://www.dti.gov.ph/negosyo/go-lokal/>

# SHAPING A MORE LIVABLE WORLD.

---

[www.dai.com](http://www.dai.com)

f  in  @daiglobal