

# **INSIGHTS FROM EMERGING MARKETS**

MSMEs and Digital Tool  
Use amidst the COVID-19  
Pandemic

THAILAND COUNTRY BRIEF

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Shaping a more livable world.

November 2021

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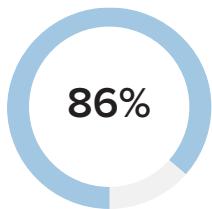
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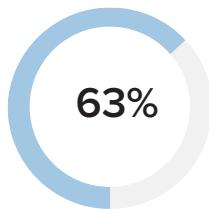
# EXECUTIVE SUMMARY

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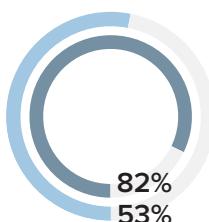
## KEY FINDINGS:



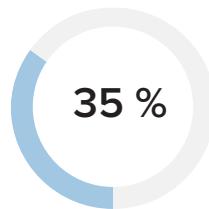
A large majority (86 percent) of surveyed micro, small, and medium enterprises (MSMEs) had used digital tools for business purposes in the past year during COVID-19.



Online respondents looked favorably on digital tool use during the pandemic: more than half (63 percent) of surveyed online MSMEs reported that digital tools were important or essential to keeping their business running during COVID-19.<sup>i</sup>



Digital tools such as Facebook apps and mobile banking helped online MSMEs adjust to the pandemic. Online MSMEs reported that digital payment tools (82 percent) and Facebook apps (53 percent) helped them adapt to the COVID-19 environment.



Surveyed MSMEs used a variety of both online and offline tools to manage business activities, with Facebook apps emerging as useful tools for conducting multiple business activities. Thirty-five percent of online MSMEs reported that they used Facebook apps to market to customers in the past 30 days.

Thailand is the second largest economy<sup>1</sup> in Southeast Asia, with a large micro, small, and medium enterprise (MSME)<sup>ii</sup> sector underpinning its consistent growth until the COVID-19-induced economic slowdown in 2020.<sup>2</sup> 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 Thailand's MSME community during the pandemic.<sup>3</sup> A survey conducted by DAI and Ipsos in June and July 2021 found that a

large majority (77 percent) of surveyed MSMEs were online, meaning that they had reported using digital tools for business purposes over the past year during COVID-19.<sup>iii</sup> Additionally, more than half (63 percent) of surveyed online MSMEs reported that digital tools were important or essential to keeping their business running during COVID-19.

Enterprises recognized the importance of embracing new digital tools during COVID-19. Digital tools such

<sup>i</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>ii</sup> 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. Thailand’s Office of SME Promotion officially classifies MSMEs by number of employees, annual revenue, and by sector. However, DAI applied a standardized definition for consistency across all survey countries, based solely 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).

<sup>iii</sup> This survey collected evidence directly from 999 MSME owners and top-level managers in Thailand 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.

as Facebook apps and mobile banking helped online MSMEs adjust to the pandemic. Online MSMEs reported that digital payment tools (82 percent) and Facebook apps (53 percent) helped them adapt to the COVID-19 environment. Online MSMEs also reported that Facebook apps were very important for each business activity at a much higher rate than for other digital tools. For example, 22 percent of online MSMEs reported that Facebook apps were very important for marketing to customers, compared to eight percent of online MSMEs who said this about other digital tools. The survey's findings indicated that Facebook apps were key digital supports for surveyed MSMEs to run multiple aspects of their businesses.

Both online and offline MSMEs reported facing difficulties when using digital tools for business purposes, though their most frequently cited barriers differed. For example, poor or no internet connectivity and a lack of knowledge were tied as the most frequently reported answer option among online MSMEs (17 percent) in using digital tools for business purposes. In comparison, the most frequently reported answer option for offline MSMEs was a lack of customer interest (14 percent). Survey results also showed that online and offline MSMEs were interested in learning

more about digital tools that are specifically relevant to their customer-facing work. 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. Furthermore, with a large majority (81 percent) of online MSMEs being self-taught on how to use digital tools, policymakers and other development stakeholders can leverage this baseline of knowledge to further increase digital tool usage amongst MSMEs.

With concentrated efforts by policymakers and other stakeholders to holistically address the multiple barriers faced by both online and offline MSME segments, Thailand's MSME sector will be well-positioned to integrate and harness the power of digital tools to improve business outcomes and build resilience to future economic shocks. These efforts will ensure that entrepreneurs and business owners across the MSME sector can equitably access and use digital tools to support key business functions. This will, in turn, enable Thailand 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 surveys that Ipsos conducted with 999 MSMEs in Thailand via computer-assisted personal interviewing (CAPI) from June 4 - July 16, 2021. Eligibility for the survey was restricted to owners or top-level managers of businesses with 249 or fewer employees<sup>iv</sup> 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 Royal Thai Ministry of Commerce Registry of Companies and the Royal Thai Government Department of Business Development were used to allocate the sample across three categories: micro (one employee), small (2-9 employees), and medium (10-249 employees) businesses. A random walk method was implemented to conduct interviews in urban, suburban, and rural areas in seven provinces and the Bangkok special administrative area, capturing businesses across key segments including subnational geography, owner gender, and business sector. The final survey results presented in this report were weighted based on geography and differential non-response rates by province, urbanity, and gender. 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 Thailand. A complete explanation of the sample design and research methodology is found in Appendix I.

<sup>iv</sup> 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

Thailand is the second largest economy<sup>4</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.<sup>5</sup> 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 Thailand's MSME community during the pandemic.<sup>6</sup>

A new survey conducted by DAI and Ipsos in June and July 2021 collected evidence directly from 999 MSME owners and top-level managers in Thailand<sup>vi</sup> 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.<sup>vii</sup> Research findings also delve into differences in digital tool use across key business segments within Thailand, such as women-owned, rural, 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, Thailand 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.

- v 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. Thailand's Office of SME Promotion officially classifies MSMEs by number of employees, annual revenue, and by sector. However, DAI applied a standardized definition for consistency across all survey countries, based solely 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).
- vi This survey collected evidence directly from 999 MSME owners and top-level managers in Thailand. See Appendix I for more details on survey methodology.
- vii 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 THAILAND

As Southeast Asia's second largest economy, Thailand has experienced a consistent annual growth rate between 2000 and 2019<sup>7</sup>, with MSMEs serving as the country's economic backbone.<sup>8</sup> Accounting for 40 percent of Thailand's GDP,<sup>9</sup> MSMEs make substantial contributions to the retail and wholesale, transport, hospitality, and agriculture sectors.<sup>10</sup>

The COVID-19 crisis presented significant challenges for Thailand's economy. In May 2021, the Federation of Thai SMEs—a local industry group—estimated that 2.7 million small businesses and 400,000 medium enterprises were struggling to keep their businesses open and that if COVID-19 restrictions remained in place, 100,000 SMEs could shut down within 2-3 months.<sup>11</sup> This is a finding supported by a June 2020 Asia Foundation survey of Thai MSMEs, that reported 49 percent of Thai business owners stated their business was at high risk of permanently closing or had already closed.<sup>12</sup> Similarly, in October 2020, the 2020 Global State of Small Business Report found that 66 percent of surveyed SMBs in Thailand had lower sales in the past month, than the same month last year.<sup>13</sup>

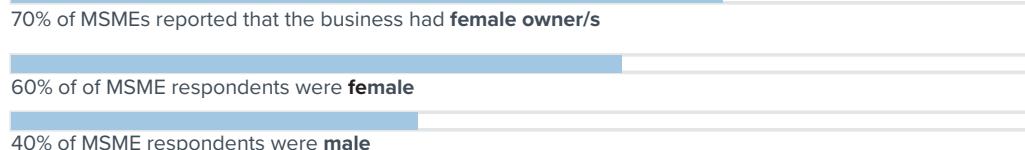
However, digital tools have provided Thailand's MSMEs with the opportunity to innovate and thrive despite the pandemic's economic disruption. For example, according to the 2020 Global State of Small Business Report, 41 percent of operational SMEs reported that 25 percent or more of their sales were made digitally in the past month, and 20 percent reported that the proportion of sales they made digitally had increased compared to before the pandemic.<sup>14</sup>

## SAMPLE OVERVIEW

This survey had 999 MSME respondents comprised of business owners and top-level managers; the below percentages provide detail on the sample.



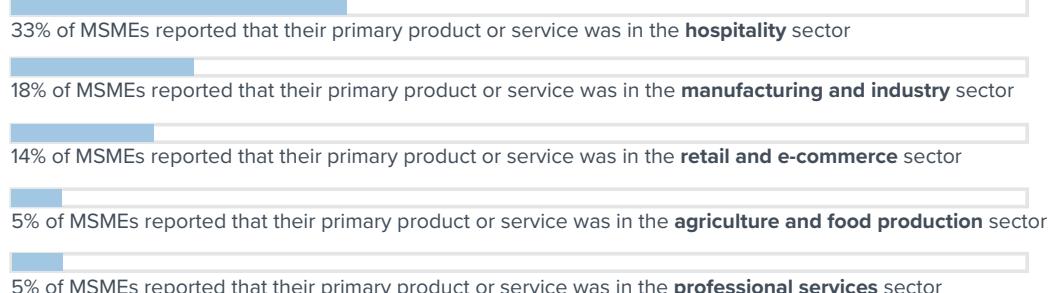
### Gender



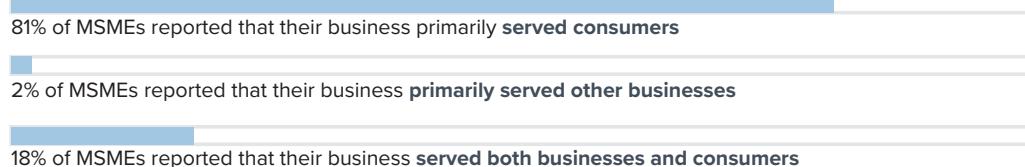
### Urbanicity



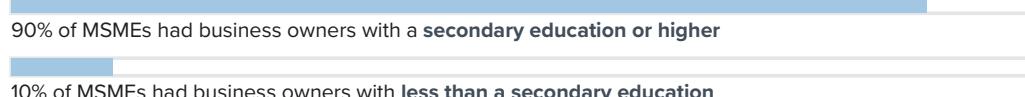
### Sector



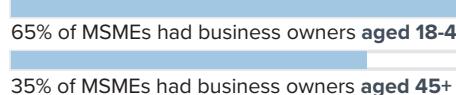
### Customer base



### Business owner education



### Age of business owners



### Bank account access



# MSMEs AND DIGITAL TOOL USE: SNAPSHOTS IN TIME

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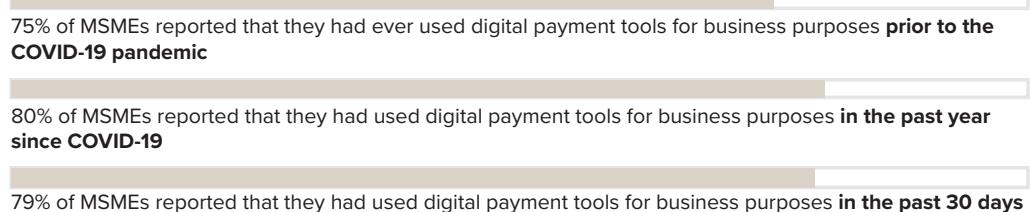
MSMEs in Thailand already had high digital tool use prior to the COVID-19 pandemic, but have increased their usage of digital tools for business purposes in the past year. Both Facebook apps and mobile banking platforms were frequently cited by surveyed MSMEs as commonly used digital tools, with a large majority of online MSMEs taking a mobile-centric approach to connecting onto the internet.<sup>viii</sup>



**Use of digital tools for business purposes was already high before the COVID-19 pandemic, but there was still an increase in usage over the past year, which remains higher than pre-COVID-19 levels:<sup>ix</sup>**



**Mobile banking was the most frequently used digital tool by MSMEs during all time periods, with an increase during COVID-19:<sup>x</sup>**



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

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 not statistically significant per Chi-squared goodness of fit test, adjusted  $p > 0.05$ .

x Difference in use of mobile banking for business purposes in the past year and use of mobile banking 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 mobile banking for business purposes in the past year and use of mobile banking for business purposes in the past 30 days is not statistically significant per Chi-squared goodness of fit test, adjusted  $p > 0.05$ .



### Over three-quarters of online MSMEs used mobile phones to connect to the internet.<sup>xi</sup>

86% of online MSMEs reported that they **primarily used a mobile phone** to connect to the internet

12% 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



More men-owned MSMEs used digital tools for business purposes, but women-owned MSMEs increased their usage of digital tools more during the COVID-19 pandemic

According to survey results, a higher percentage of surveyed men-owned MSMEs reported using digital tools for business purposes than surveyed women-owned MSMEs before the COVID-19 pandemic, in the past year, and in the past 30 days. More specifically, 86 percent of men-owned MSMEs used digital tools prior to the pandemic compared to 78 percent of women-owned MSMEs.<sup>xii</sup> While digital tool use did increase in the past year during the pandemic, men-owned businesses still used digital tools more than women owned (91 percent and 84 percent, respectively).<sup>xiii</sup> This finding somewhat aligns with a recent GSMA report that showed a one percent gender gap in mobile phone ownership across the East Asia and Pacific region every year from 2017 through 2020.<sup>xiv</sup>

However, while men-owned MSMEs digital tool usage declined closer to pre-pandemic levels in the past 30 days (87 percent), women-owned MSMEs digital tool use has not declined in the past 30 days (84 percent) and remains six percentage points higher than what it was before the pandemic.<sup>xv</sup> This nuance in the data could indicate that there was a more permanent increase in digital tool use by women-owned MSMEs compared to men-owned MSMEs during the pandemic. Additionally, in regards to well-known digital tools, such as Facebook apps, online women-owned MSMEs usage was higher than online men-owned MSMEs. This finding was also mirrored in the survey results which showed that 56 percent of online women-owned MSMEs reported that Facebook apps helped them adapt to the COVID-19 environment, while only 46 percent of men-owned MSMEs reported the same thing.<sup>xvi</sup> These findings could indicate that policymakers and other development stakeholders should focus on increasing women-owned MSMEs access to intuitive and simple digital tools like Facebook apps, as they were already used by more than half of women-owned MSMEs.

<sup>xi</sup> Other answer options included don't know or refused.

<sup>xii</sup> Not statistically significant per Chi squared test of independence, adjusted  $p > 0.05$

<sup>xiii</sup> Statistically significant per Chi squared test of independence, adjusted  $p < 0.05$

<sup>xiv</sup> Difference between digital tool use in the past 30 days and digital tool use in the past year among men-owned MSMEs is not statistically significant per Chi squared test of independence, adjusted  $p > 0.05$ . Difference between digital tool use in the past 30 days and digital tool use in the past year among women-owned MSMEs is not statistically significant per Chi squared test of independence, adjusted  $p > 0.05$ .

<sup>xv</sup> Statistically significant per Chi squared test of independence, adjusted  $p < 0.05$

## KEY INSIGHTS FOR POLICYMAKERS

Survey findings demonstrated that a large majority of surveyed MSMEs in Thailand used digital tools for business purposes, both before and during the COVID-19 pandemic. More specifically, 86 percent of MSMEs reported using digital tools for business purposes in the past year, and 80 percent reported using digital tools prior to the COVID-19 pandemic. Although digital tool usage has slightly dipped in the past 30 days to 85 percent of MSMEs, usage was still higher than it was before COVID-19. Despite this recent fluctuation in usage, these survey results demonstrated that surveyed MSMEs were willing to use digital tools in their businesses, perhaps especially when normal business transactions cannot take place. Digital tools such as Facebook apps and mobile banking saw some of the largest increases over time among surveyed MSMEs. In terms of mobile banking, 75 percent of MSMEs reported that they had ever used digital payment tools for business purposes prior to the pandemic, increasing to 80 percent in the past year, and



slightly decreasing to 79 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, resource management, or human resource management.

Throughout emerging markets, mobile phones were a key way for individuals to access the internet.<sup>16</sup> According to the survey results, online MSMEs in Thailand were no exception. A large majority of online MSMEs (86 percent) reported that they primarily used mobile phones to connect to the internet, while only a very small minority used either a laptop or tablet. Given the near ubiquity of mobile phones in Thailand,<sup>17</sup> public, private, and development sector stakeholders could look for opportunities to enhance MSMEs' use of mobile internet as an accessible 'on ramp' for expanding digital tool use amongst offline MSMEs.

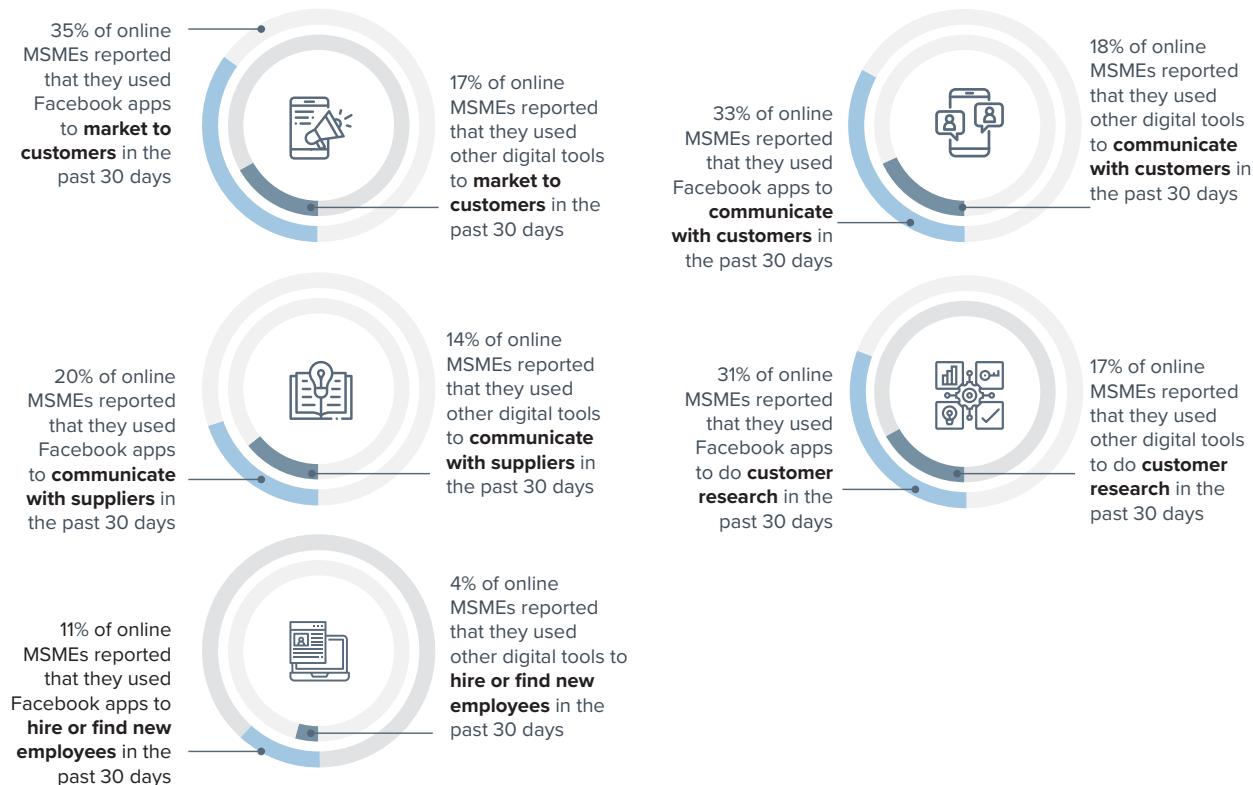
# HOW MSMEs MANAGE KEY BUSINESS ACTIVITIES

Surveyed MSMEs 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.

## Facebook was cited as a useful tool across multiple business activities for online MSMEs:



## A higher percentage of online MSMEs reported using Facebook apps than other digital tools to conduct each business activity<sup>xvi</sup>...



<sup>xvi</sup> 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.



More urban based MSMEs used digital tools than other areas, but there was a substantial increase in digital tool use by rural MSMEs during COVID-19

According to survey results, a higher percentage of surveyed MSMEs in urban areas used digital tools for business purposes compared to surveyed MSMEs in suburban and rural locations. For example, 89 percent of urban based MSMEs used digital tools for business purposes in the past year during COVID-19, while 84 percent of MSMEs in rural and 83 percent of MSMEs in suburban locations used them in the same time period.<sup>xvii</sup> These findings about the urban-suburban-rural digital divide aligns with existing research, such as a 2020 report by the International Telecommunication Union that found 81 percent of urban households had internet access at home compared to 69 percent in rural areas.<sup>18</sup>

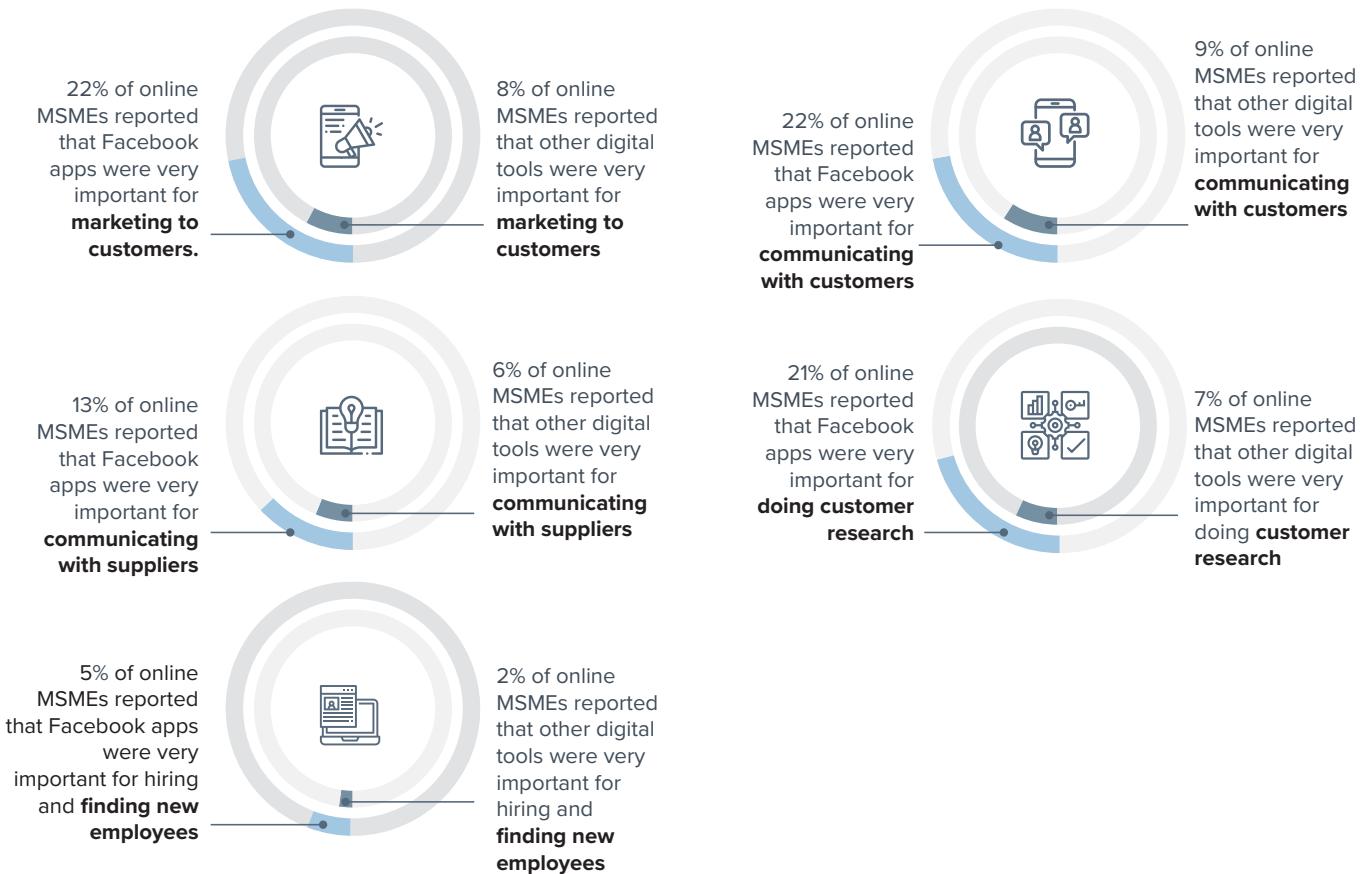
In addition, survey results found that urban and rural MSMEs increased their usage of digital tools for business purposes during the COVID-19 pandemic, but at uneven rates. For example, 85 percent of urban MSMEs used digital tools for business purposes prior to the pandemic, increasing to 89 percent in the past year, and declining to 88 percent in the past 30 days.<sup>xviii</sup> Meanwhile, 74 percent of rural MSMEs used digital tools prior to the pandemic, increasing substantially - ten percentage points - to 84 percent in the past year, and declining to 79 percent in the past 30 days.<sup>xix</sup> These results could indicate rural MSMEs began to use digital tools at a faster rate during the pandemic than urban MSMEs in order to continue business activities. However, the increase in rural MSMEs usage of digital tools occurred in tandem with offline methods for business activities, as survey results showed that rural MSMEs reported higher usage of face-to-face in all business activities compared to urban and suburban.

xvii Not statistically significant per Chi squared test of independence, adjusted  $p > 0.05$

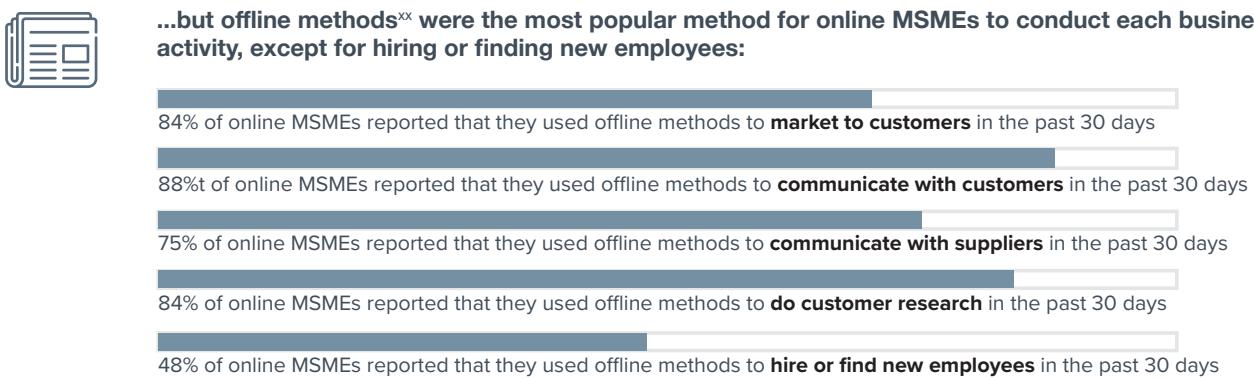
xviii Statistically significant per Chi squared test of independence, adjusted  $p < 0.05$

xix Among rural MSMEs, the difference between digital tool use in the past 30 days and digital tool use in the past year is not statistically significant per Chi-squared goodness of fit test, adjusted  $p > 0.05$  and the difference between digital tool use prior to COVID-19 and digital tool use in the past year 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 more important for each business activity than other digital tools...**



**...but offline methods<sup>xx</sup> were the most popular method for online MSMEs to conduct each business activity, except for hiring or finding new employees:**



<sup>xx</sup> 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).



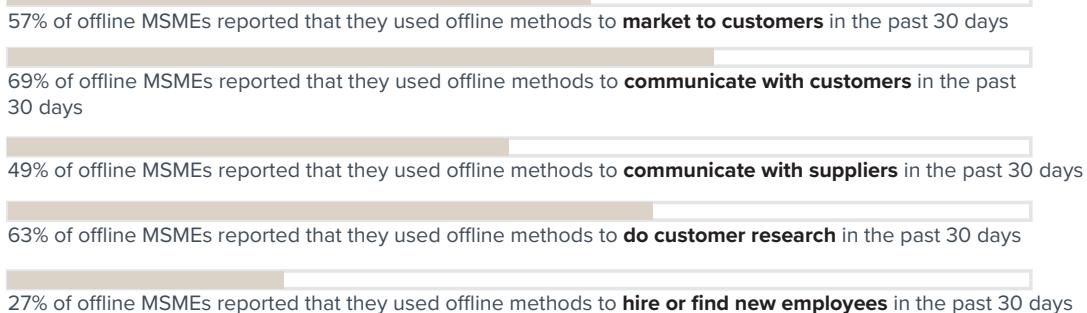
## MSME digital tool use to sell goods and services slightly increased during COVID-19

Selling goods and services is a key business activity for all MSMEs. In the survey, 38 percent of surveyed MSMEs reported that they have ever used digital tools to sell goods and services. However, survey results showed an increase in the use of digital tools to sell goods and services during the COVID-19 pandemic. More specifically, 31 percent of MSMEs reported that they used digital tools to sell goods and services prior to COVID-19, which then increased to 36 percent during COVID-19.<sup>xxi</sup> While digital tool use for selling goods and services only slightly increased, the survey results found a somewhat larger increase in the use of social media to sell goods and services. For example, 30 percent of MSMEs reported that they used social media to sell goods and services prior to COVID-19, which then increased five percentage points to 35 percent during the pandemic.<sup>xxii</sup> This finding illustrates that social media played a distinct role in selling goods and services in Thailand.

However, survey results also showed a recent decrease in digital tool use for selling goods and services across all digital tools. Thirty-six percent of MSMEs reported that they used digital tools to sell goods and services in the past 30 days (including 35 percent who reported using social media for this purpose).<sup>xxiii</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 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:



<sup>xxi</sup> 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.

<sup>xxii</sup> 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.

<sup>xxiii</sup> Difference between use of digital tools to sell goods and services in the past year and in the past 30 days is not 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 or paper-based methods<sup>xxiv</sup>:**

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

6% of offline MSMEs reported that they **used telephone calls, SMS or text message to communicate with customers** in the past 30 days

63% of offline MSMEs reported that they **used face-to-face to hire or find new employees** in the past 30 days

6% 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 facing business activities and other external communications at a higher rate than other back-end business functions<sup>xxv</sup>:**

66% of MSMEs reported ever having **difficulty marketing to customers**

50% of MSMEs reported ever having **difficulty communicating with suppliers**

73% of MSMEs reported ever having **difficulty communicating with customers**

72% of MSMEs reported ever having **difficulty doing customer research**

27% of MSMEs reported ever having **difficulty hiring or finding new employees**

<sup>xxiv</sup> 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.

<sup>xxv</sup> Difference between difficulty in marketing to customers and difficulty in communicating with suppliers 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, 33 percent of online MSMEs reported that they used Facebook apps to communicate with customers in the past 30 days, compared to 18 percent for other digital tools. Accordingly, online MSMEs also reported that Facebook apps were very important for each business activity at a much higher rate than for other digital tools. For example, 22 percent of online MSMEs reported that Facebook apps were very important for marketing to customers, compared to eight percent of online MSMEs who said this about other digital tools. These findings indicated that Facebook apps were key 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 Thailand's MSME community, promoting their ongoing resilience to future economic shocks and business disruptions.



Nevertheless, survey findings indicated that online MSMEs in Thailand were supplementing, rather than wholly replacing, their use of offline techniques with digital tools. More specifically, a higher percentage of online MSMEs in Thailand reported using offline methods, especially face-to-face techniques, in the past 30 days than digital tools for each business activity, except for marketing to customers and doing customer research. This finding also echoed the high reported usage of face-to-face interactions among surveyed offline MSMEs across all business activities, with 69 percent of offline MSMEs reporting that they used face-to-face to communicate with customers in the past 30 days. In this context, public, private, and development sector stakeholders have an opportunity to develop digital tools 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, or how to use digital tools to track both digital and cash payments made.

# MSMEs DURING THE COVID-19 PANDEMIC

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The COVID-19 pandemic was a challenge for MSMEs in Thailand. Businesses, struggling with difficult economic conditions in which their sales decreased substantially, embraced digital tools in their adaptation to the new economic environment. Online MSMEs largely found digital tools to be crucial to keeping their business running during the pandemic.

An interview with Piyanart, the owner of a durian farm called Thongthai Farm, showed how her MSME pivoted to online sales during the pandemic. During this period, she reported expanding her use of digital tools - such as Facebook and Line - to conduct her business online and promote her products. These tools also enabled Thongthai customers to interact with the business directly and contact customer service to coordinate purchase and delivery of products. See [page 20](#) for case study.



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

81% of MSMEs reported that their **sales decreased** during COVID-19 compared to a typical year

38% of MSMEs reported that their **sales decreased by more than half** of a typical year

23% of MSMEs reported that their **business closed at some point** during COVID-19



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

63% of online MSMEs reported that **digital tools were important or essential** to keeping their business running during COVID-19

82% of online MSMEs reported that **digital payment tools helped them adapt** to the COVID-19 environment

53% of online MSMEs reported that **Facebook apps helped them adapt** to the COVID-19 environment

53% of online MSMEs reported that **Facebook helped them adapt** to the COVID-19 environment

47% of online MSMEs reported that **messaging apps helped them adapt** to the COVID-19 environment

12% of online MSMEs reported that **email helped them adapt** to the COVID-19 environment

10% of online MSMEs reported that **business software or cloud computing helped them adapt** to the COVID-19 environment



All business sectors<sup>xxvi</sup> increased their digital tool use during COVID-19, but businesses in professional services lagged other sectors

Across business sectors, surveyed MSMEs increased their usage of digital tools for business purposes during the pandemic, but have slightly reduced their digital tool use in the past 30 days. For example, 85 percent of MSMEs in the manufacturing sector used digital tools for business purposes prior to the COVID-19 pandemic, increasing to 91 percent during the pandemic, and then subsequently decreasing to 88 percent in the past 30 days.<sup>xxvii</sup> Additionally, in the retail and e-commerce sector, 85 percent of MSMEs used digital tools for business purposes prior to the pandemic, increasing to 87 percent during the pandemic, and decreasing to 86 percent in the past 30 days.<sup>xxviii</sup> Lastly, MSMEs in the professional services sector followed the same trend, but their digital tool usage was noticeably lower than the other two business sectors. Only 74 percent of MSMEs in this sector used digital tools prior to the pandemic, increasing to 81 percent during the pandemic, and decreasing to 79 percent in the past 30 days.<sup>xxix</sup> This finding indicates that policymakers and other development stakeholders could provide MSMEs in the professional services sector with focused training and upskilling in order to increase these MSMEs' usage of digital tools and lessen the gap in digital usage between professional services and other sectors.

To this end, online MSMEs in all business sectors expressed an interest in learning more about digital tools to find new customers. However, more MSMEs in the professional services sector reported a desire to learn more about using digital tools to communicate with existing customers (43 percent) and learn more about using digital tools to make digital payments (43 percent), than MSMEs in the other two sectors. This suggests that stakeholders can provide MSMEs in professional services with education and upskilling on two well-established topics.

<sup>xxvi</sup>The hospitality and agriculture and food sectors are omitted due to insufficient sampling size figures.

<sup>xxvii</sup> Among MSMEs in the Manufacturing & Industry sector, the difference between digital tool use in the past year and digital tool use prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted  $p < 0.05$ .

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

<sup>xxviii</sup> Among MSMEs in the Retail & e-Commerce sector, the difference between digital tool use in the past year and digital tool use prior to COVID-19 is not statistically significant per Chi-squared goodness of fit test, adjusted  $p < 0.05$ .

Among MSMEs in the Retail & e-Commerce sector, the difference between digital tool use in the past year and digital tool use in the past 30 days is not statistically significant per Chi-squared goodness of fit test, adjusted  $p > 0.05$ .

<sup>xxix</sup> Among MSMEs in the Professional Services sector, the difference between digital tool use in the past year and digital tool use prior to COVID-19 is statistically significant per Chi-squared goodness of fit test, adjusted  $p < 0.05$ .

Among MSMEs in the Professional Services sector, the difference between digital tool use in the past year and digital tool use in the past 30 days is not statistically significant per Chi-squared goodness of fit test, adjusted  $p > 0.05$ .

Among MSMEs in the Professional Services sector, the 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  $p < 0.05$ .

## CASE STUDY

**TONGTHAI FARM**

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



[https://www.instagram.com/  
thongthai.farm/](https://www.instagram.com/thongthai.farm/)



AGRICULTURE  
& FOOD  
PRODUCTION



SMALL  
ENTERPRISE



RURAL



SDG 5:  
GENDER EQUALITY

Piyanart Chuaybangyeero is the sole manager of her family's 64,000 sq meter durian farm in Surat Thani, Thailand. A third-generation durian farmer, Piyanart returned home after receiving her marketing degree to help her family's business grow its customer base across Thailand. Her education helped launch her family's expansion into online sales. As she commented, "I studied marketing, so I created the content and took care of the marketing component myself. It's not an easy job and you have to have some technical knowledge to do it." Using digital tools, Piyanart expanded her family's business and sold fresh durian fruit to customers within Thailand and abroad. Her business stands as an example of SDG 5: Gender Equality to promote the empowerment of women through technology, as digital tools such as Facebook Business and Instagram helped Piyanart first to expand her market internationally, and then to quickly pivot her business strategy during the Covid-19 pandemic.

Due to the pandemic, demand for international sales waned. As a result, instead of selling to international customers in Malaysia, Singapore, and Vietnam, Piyanart pivoted to focus on the local rural market in Surat Thani. Simultaneously, more customers at home exploring new health trends during COVID-19 began to reach out to her via Facebook to purchase fresh fruit and boosted the interest in her online profile.

Although sales to the international market still haven't returned to pre-pandemic levels, Piyanart has been able to quickly pivot her business strategy by integrating other digital tools such as Line, a popular online messaging platform to connect directly to customers and complete purchases online. She also learned how to use targeted advertising from Facebook to expand her customer base in the local market. While she benefited from Facebook customer support to learn how to use the application's marketing tools effectively, she noted the challenges in keeping up with the changing technology. "You notice that it changes season by season, I have to sit down and relearn things again. It took me a while to continue progressing."

Still, Piyanart has shown that the persistence to stay on top of ever-changing technologies pays off. Leveraging new online features on Facebook apps and Line enabled her business to remain resilient during the pandemic, by helping her to connect to her customers, localize and promote her products, and be responsive to changing trends and preferences. Thongthai Farm shows how women-



owned MSMEs are empowered by technology which has helped Piyanart and others like her to reach new customers and contribute to the local economy.

**"But despite COVID, our business keeps growing because there has been a 'Durian Fever,' a popular health phenomena in Thailand, and I kept [implementing] advertisements. So, my business keeps growing."**

## KEY INSIGHTS FOR POLICYMAKERS

Survey results showed the economic slowdown stemming from the COVID-19 pandemic negatively affected the majority of surveyed MSMEs' sales throughout Thailand. Four-fifths of MSMEs (81 percent) reported that their sales decreased during the pandemic compared to a typical year. These findings aligned with a survey conducted by The Asia Foundation in May/June 2020, which reported that 95 percent of surveyed MSMEs in Thailand's tourism and manufacturing sectors who continued to operate during the pandemic reported that their revenue decreased.<sup>19</sup> 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, more than half (63 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 digital payment tools (82 percent) helped them adapt to the COVID-19 environment. Further, 53 percent of online MSMEs reported that Facebook apps helped them adapt to

the COVID-19 environment. Additionally, 47 percent of online MSMEs reported that messaging apps 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,<sup>20</sup> MSMEs in Thailand appeared to favor newer digital tools, such as social media and digital payments, compared to older digital tools such as email and business software. With the growing importance of digital payment tools alongside the robust usage of intuitive, 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 Thailand'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.

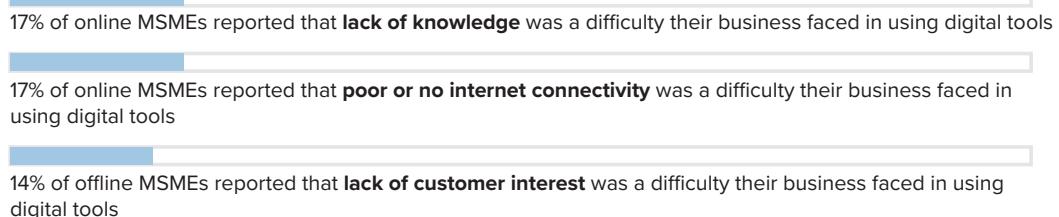


# BARRIERS TO THE ADOPTION AND USE OF DIGITAL TOOLS AMONG MSMEs

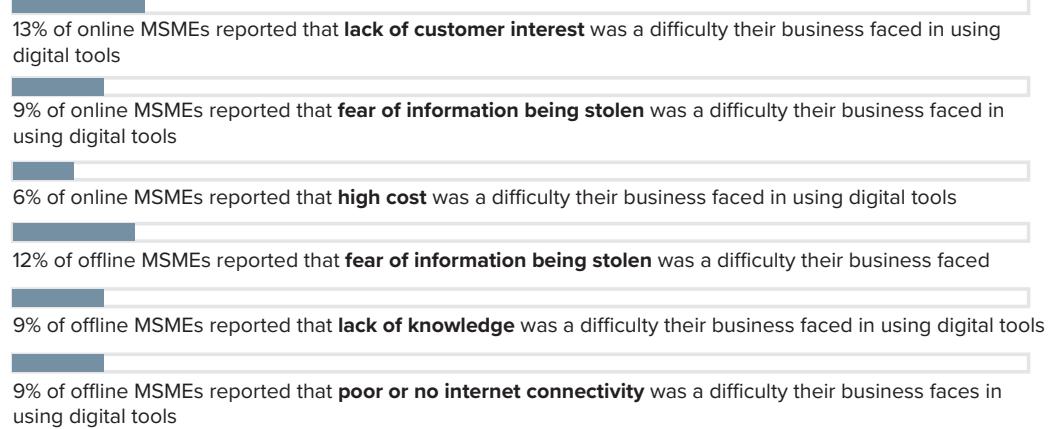
Both online and offline MSMEs reported that a lack of knowledge and customer interest were difficulties their business faced in using digital tools for business purposes. Additionally, online and offline MSMEs alike reported high levels of interest in learning more about digital tools in their customer facing work.



**A lack of knowledge and poor or no internet connectivity were tied as the most frequently cited barrier online MSMEs faced in using digital tools, while a lack of customer interest was the most frequently cited barrier by offline MSMEs:**



**Online and offline MSMEs reported a fear of information being stolen was a difficulty their business faced in using digital tools for business purposes, in addition to other barriers:**





**Online and offline MSMEs reported different most challenging difficulties in using digital tools for business purposes. Poor or no internet connectivity was cited as the most challenging difficulty faced by online MSMEs and a lack of customer interest was reported as the most challenging difficulty faced by offline MSMEs in using digital tools for business purposes:**<sup>xxx</sup>

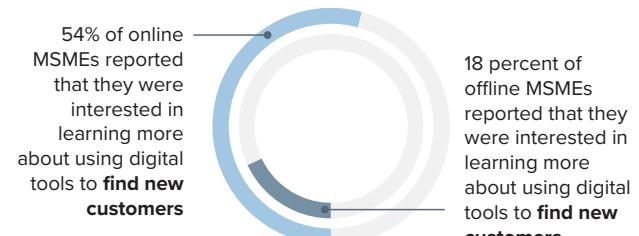
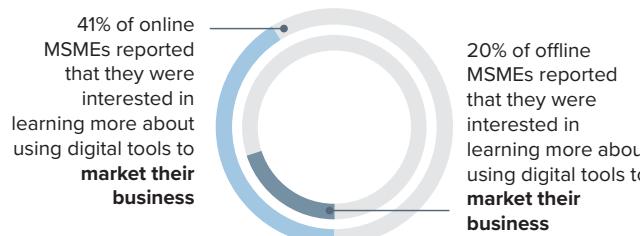
8% of offline MSMEs reported that **lack of customer interest** was the most challenging difficulty their business faced in using digital tools

6% of online MSMEs reported that **poor or no internet connectivity** was the most challenging difficulty their business faced in using digital tools

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

4% of offline MSMEs reported that **fear of information being stolen** was the most challenging difficulty their business faced in using digital tools

**Online MSMEs reported that they were interested in learning more about using digital tools to find new customers, while offline MSMEs expressed an interest in learning more about using digital tools to communicate with existing customers:**



<sup>xxx</sup> 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 various aspects of digital tools, while a minority of offline MSMEs reported the same:<sup>xxxii</sup>**

52% of online MSMEs reported that they **felt confident** using a phone app or computer program to make a voice call or send a voice note

16% of offline MSMEs reported that they **felt confident** using a phone app or computer program to make a voice call or send a voice note



A substantially higher percentage of online MSMEs reported being self-taught on how to use digital tools compared to offline MSMEs<sup>xxxiii</sup>

81% of online MSMEs reported that they were **self-taught** on how to use digital tools

11% of offline MSMEs reported that they were **self-taught** on how to use digital tools

45% of online MSMEs reported that they learned how to use digital tools from their **friends or family**

18% of offline MSMEs reported that they learned how to use digital tools from their **friends and family**

<sup>xxxii</sup> For each question on aspects of use of digital tools, the difference in percent reporting very confident between online and offline firms is statistically significant per Chi squared test of independence, adjusted p < 0.05

<sup>xxxiii</sup> Statistically significant per Chi squared test of independence, adjusted p < 0.05

## KEY INSIGHTS FOR POLICYMAKERS

Both surveyed online and offline MSMEs reported facing similar difficulties when using digital tools for business purposes, though their most frequently cited barriers differed. For example, poor or no internet connectivity and a lack of knowledge were tied as the most frequently reported answer option among online MSMEs (17 percent) in using digital tools for business purposes. In comparison, the most frequently reported answer option for offline MSMEs was a lack of customer interest (14 percent). Nevertheless, 13 percent of online MSMEs cited a lack of customer interest as a difficulty (their third most cited response) and nine percent of offline MSMEs cited poor or no internet connectivity as a barrier (their fourth most cited response). In addition, the fear of information being stolen was cited by 12 percent of offline MSMEs and nine percent of online MSMEs. When examining which of these difficulties were the most challenging, online MSMEs cited poor or no internet connectivity (six percent) and offline MSMEs cited a lack of customer interest (eight percent). These results indicated that while online and offline MSMEs cited difficulties differently, they faced a similar set of barriers to using digital tools for business purposes. 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 address information security and knowledge concerns that could bring more offline MSMEs online, while also expanding digital tool usage by online MSMEs.

Survey results also showed that online and offline MSMEs were interested in using digital tools to improve their customer-facing activities, with online MSMEs reporting higher percentages of interest. For example, when asked about specific areas of interest in learning more about digital tools, the most frequently cited response by online MSMEs was finding new customers (54 percent) and offline MSMEs selected communicating with existing customers (21 percent). Furthermore, 18 percent of offline MSMEs reported that training on how to use digital tools to communicate with existing customers 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 communicating with new and existing customers. Additionally, as 81 percent of online MSMEs reported they were self-taught in using digital tools, policymakers and other stakeholders could explore leveraging digital means to enhance the skills of this large population of independent learners.



## CLOSING REMARKS

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The high rate of digital tools usage among surveyed online MSMEs in Thailand can strengthen their resilience to economic downturns and improve their business outcomes. Many Thai MSMEs were using digital tools to conduct some of their business functions, and MSMEs continued to rely on digital tools during the pandemic. Additionally, women-owned and rural MSMEs increased their use of digital tools during COVID-19, which showed positive steps towards bridging the digital divide. Promoting equitable digital tool usage within Thailand's MSME sector will help build a Thai economy that is resilient to the COVID-19 pandemic and future shocks.

Looking ahead, the economic uncertainties posed by the continued pandemic continue to provide an opportunity for Thai MSMEs to leverage the power of digital tools to improve their business operations. Key to this will be supporting women entrepreneurs and supporting connectivity in rural areas, strengthening trust, facilitating digital payments, and improving knowledge of the digital tools available to MSMEs owners and building their capacity to use them. Increasing the usage of digital tools among MSMEs will demand not only the digital transformation of MSMEs, but also the greater adoption of digital tools by their customers, including through customer-facing digital skills training and increased access to information about digital tools. MSMEs that are poised to grow and scale as the pandemic recedes will accelerate economic growth outcomes and support Thailand 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 Thailand's economy.

# APPENDIX 1: METHODOLOGY

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## OVERVIEW OF THE SURVEY DESIGN

Between June 4 and July 16, 2021, Ipsos conducted 999 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>xxxiii</sup>

The sample for the study was defined to include and be limited to Thailand's micro (one employee), small (2 to 9 employees) and medium (10 to 249 employees) business populations<sup>xxxiv</sup> (summarized as "business size" in the text). Official statistics from the Royal Thai Ministry of Commerce Registry of Companies and the Royal Thai Government Department of Business Development<sup>21</sup> were used as a basis to estimate the proportion<sup>xxxv</sup> of businesses for each business size and to establish targets by business size (measured by the number of employees). The lists were also used to set targets by province and urbanicity (urban, suburban and rural) within Thailand.

The targets for business size were set to approximate the distribution of the business population by business size across all of Thailand, 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 Thailand.

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 Thailand, this minimum was achieved naturally and no oversample was required.

Based on these estimates, the sample targets were allocated as shown in Figure 10, which also shows the actual counts achieved from fieldwork:

BUSINESS SIZE		GEOGRAPHIC COVERAGE				BUSINESS OWNER GENDER		
	TARGET	ACTUAL		TARGET	ACTUAL		TARGET	ACTUAL
Micro	400	400	Urban	580	580	Women	Min 150	776
Small	500	499	Suburban	270	269	Men		233
Medium	100	100	Rural	150	150	Unspecified		

<sup>xxxiii</sup> This is one in a series of 12 country reports about micro, small and medium-sized enterprises' (MSMEs) use of digital tools in South America and Asia. The forthcoming global report will contain a complete description of the research and survey methodology.

<sup>xxxiv</sup> 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.

<sup>xxxv</sup> 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.

## SAMPLE DESIGN

The sample design is 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 two geographic units and the sampling unit defined at each stage were the following:

- **PSUs:** First, Ipsos designated eight PSUs (provinces) out of a total of 77 provinces in Thailand. Of the eight PSUs selected, four of these are certainty strata. These four strata contain the central areas of business activity and therefore were assigned a probability of one for guaranteed inclusion. The other four PSUs are provinces selected from within each region. The probability that a province was selected within the region is based on the business counts supplied by the Department of Business Development statistics<sup>xxxvi</sup>. The four certainty strata were as follows: Bangkok (Special Administrative Area), Nonthaburi, Pathum Thani, Samut Prakan. The remaining four strata selected were: North – Chiang Mai, Northeast – Khon Kean, South – Songkhla, Central – Chonburi.
- **SSUs:** Across the eight designated PSUs, 54 Districts were selected out of a total of 120. These districts were selected proportional to the counts from the Department of Business Development statistics.<sup>xxxvii</sup> Ipsos assigned the target number of interviews to be completed for each SSU based on Department of Business Development statistics. If the assigned number of interviews was less than 10 through this process, Ipsos increased the target to a minimum of 10. This was to ensure a sufficient total number of rural completes across the national sample.
- **Individual Businesses:** Within each city and rural area, 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 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 (see Figure 11). 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.

	CAPI
Contacts	4282
Completes	999
Refusals	2643
Response rate	23%
Refusal rate (refusals / contacts)	62%

Response and refusal rates in Thailand<sup>xxxviii</sup>

xxxvi <https://www.moc.go.th/index.php/moc-english.html>

xxxvii <https://www.moc.go.th/index.php/moc-english.html>

xxxviii By showing only the response rate and refusal rate, Figure 12 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.

The target allocation and actual completes by province are detailed below:

DISTRICT	TARGET	ACTUAL
Bangkok	220	221
Chaing mai	110	109
Chonburi	90	90
Khonkaen	110	110
Nonthaburi	120	120
Pratum Thani	120	120
Samutprakarn	110	109
Songkha	120	120
<b>Total</b>	<b>1,000</b>	<b>999</b>

### Sample Weighting

Based on the fieldwork dispositions, the raw survey data was weighted to account for the variation in non-response by urban and rural designations and by gender. Specifically, Ipsos applied the following:

- **Design weight:** A weight by strata (province) was applied to adjust the sample to be proportionate to the number of people within each province, as determined by the 2010 Census data<sup>22</sup>. Data on population counts, such as this Census data, is considered to more closely align with estimates of total (including informal) business counts than the business-level data that were used to benchmark survey targets.
- **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 Thailand is 1.79.<sup>xxxix</sup>

Ipsos carefully considered a broad spectrum of additional weights to be applied, but was limited by a lack of reliable data sources to weigh on. For example, weights were not applied by company size as there are no reliable population statistics that define the proportion of businesses throughout Thailand 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 as the actual counts achieved through natural fallout closely matched the targets by business size (Figure 10) which were set using the Royal Thai Ministry of Commerce Registry of Companies and the Royal Thai Government Department of Business Development.<sup>23</sup>

Finally, a modal weight was not applied. Weighting by mode was rendered moot as there was only one mode used in the study for interviewing: namely, in-person CAPI interviewing.

<sup>xxxix</sup> 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."

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 Thailand.

#### ***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 every interview.

#### ***Limitations to 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; F2F 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-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 are 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, firms selected for interviews were from the targeted SSUs listed above; all firms outside of these areas were not included in the 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 weigh 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 Thailand's MSME structure. Although the sampling process captured variation in Thailand'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 two-stage 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 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 Thailand's MSME sector due to the limited geographic scope of the survey, among other considerations.

## APPENDIX 2: SUMMARY OF MSME AND RESPONDENT CHARACTERISTICS

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CATEGORICAL VARIABLES		UNWEIGHTED N	UNWEIGHTED %	WEIGHTED %	UNWEIGHTED STDERROR	WEIGHTED STDERROR
Online Status	Offline	101	10.1	13.7	0.95	1.49
	Online	898	89.9	86.3	0.95	1.49
Gender Ownership	Men-owned	223	22.3	30.2	1.32	2
	Women-owned	776	77.7	69.8	1.32	2
Urbanicity	Rural	150	15	21.8	1.13	1.88
	Suburban	269	26.9	25.2	1.4	1.72
	Urban	580	58.1	53	1.56	2.05
Business Size	Micro	400	40	37	1.55	2.03
	Medium	100	10	12.3	0.95	1.48
	Small	499	49.9	50.7	1.58	2.11
Business Vertical	Agriculture and food production	52	5.2	4.8	0.7	0.87
	Hospitality	346	34.6	33.5	1.51	1.98
	Manufacturing and industry	192	19.2	17.8	1.25	1.55
	Professional services	58	5.8	4.8	0.74	0.88
	Retail & eCommerce	184	18.4	14.1	1.23	1.32
	Other	167	16.7	25.1	1.18	1.94
Region	Bangkok	221	22.1	15	1.31	0.24
	ChaingMai	109	10.9	19	0.99	0.48
	Chonburi	90	9	17.6	0.91	0.7
	KhonKean	110	11	27.8	0.99	0.41
	Nonthaburi	120	12	2.2	1.03	0.13
	Pratumthani	120	12	1.8	1.03	0.06
	Samutprakarn	109	10.9	2.2	0.99	0.04
	Songkha	120	12	14.4	1.03	0.31
Owner Education	No formal education or less than primary education	5	0.5	0.3	0.22	0.17
	Primary education	76	7.6	9.8	0.84	1.29
	Secondary education	266	26.6	27.1	1.4	1.88
	University education or higher (degree)	373	37.3	38.1	1.53	2.04
	Vocational or technical education or training	274	27.4	24.2	1.41	1.66
	Don't Know	5	0.5	0.5	0.22	0.4

CATEGORICAL VARIABLES		UNWEIGHTED N	UNWEIGHTED %	WEIGHTED %	UNWEIGHTED STDERROR	WEIGHTED STDERROR
Owner Age	18-24	34	3.4	2.8	0.57	0.61
	25-34	248	24.8	23.9	1.37	1.76
	35-44	403	40.3	38.3	1.55	1.99
	45-54	249	24.9	27	1.37	1.93
	55-64	54	5.4	6.9	0.72	1.15
	65 or older	9	0.9	1.2	0.3	0.54
	Don't Know	2	0.2	0.1	0.14	0.06
Respondent Education	No formal education or less than primary education	5	0.5	0.3	0.22	0.17
	Primary education	76	7.6	9.8	0.84	1.29
	Secondary education	265	26.5	27.1	1.4	1.88
	University education or higher (degree)	377	37.7	38.2	1.53	2.04
	Vocational or technical education or training	276	27.6	24.6	1.42	1.68
Banking Status	Banked	666	66.7	72.2	1.49	1.82
	Unbanked	270	27	24.4	1.41	1.77
	Don't Know	2	0.2	0.4	0.14	0.32
	Refused	61	6.1	2.9	0.76	0.67
Respondent Role	Owner	959	96	95.7	0.62	0.95
	Top-level manager, not an owner	40	4	4.3	0.62	0.95
Client Type	Both businesses and individuals	177	17.7	17.6	1.21	1.61
	Primarily Individuals such as consumers or customers	806	80.7	80.8	1.25	1.66
	Primarily businesses	16	1.6	1.6	0.4	0.52

NUMERICAL VARIABLES	UNWEIGHTED N	UNWEIGHTED MEAN	WEIGHTED MEAN	UNWEIGHTED STANDARD DEVIATION	WEIGHTED STANDARD DEVIATION
Respondent Age <sup>1</sup>	999	39.6	40.5	9.3	9.5
Business Age <sup>2</sup>	999	6.5	7.1	6.1	6.6
Number of Owners <sup>3</sup>	999	1.5	1.6	1.8	2.9

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

<sup>2</sup> Businesses in operation less than one year (49) 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

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- 14 GLOBAL STATE OF SMALL BUSINESS - END OF YEAR LOOKBACK REPORT - How small businesses in Thailand have been impacted by COVID-19, pg 2.
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