

GUIDELINES FOR DRIVING BUSINESS SECTOR INTO DIGITAL TRANSACTIONS FOR BUSINESS SURVIVAL: A CASE STUDY OF THE IMPACT OF COVID-19 TO SMEs BUSINESS IN THAILAND

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Abstract: The purposes of this research are to study SMEs' level of digital literacy for digital financial transactions and the level of impact of digital transactions on SMEs' business transactions and to investigate the effect of digital literacy and competence for digital transactions on the impact of digital transactions on SMEs' business operations. Employing questionnaires and interviews as tools, the research finds that overall digital literacy, competence and capability are perceived to be at mid-level. The impact of digital transactions on SMEs businesses is high, while the overall impact of the COVID-19 pandemic situation on SMEs businesses is at the highest level. Moreover, the research finds that digital literacy, competence, capability, and digital transaction literacy influence the impact of digital transactions on SMEs' business operations. Altogether, they can forecast 40.7 % of the impact. Digital transaction literacy, digital competence and capability influence the impact of the COVID-19 pandemic situation. Altogether, they can forecast 61.6 % of the impact. The research proposes four ways to encourage SMEs to adopt digital transactions for business continuity: 1) promotion of SMEs' literacy for digital financial management 2) promotion of the development of digital innovation for financial transactions, including a support system and updates 3) promotion of data analysis and management technology 4) legal overhaul of agencies overseeing financial institutions.

Key words: SMEs, digital transactions, Covid-19, Business Transformation, Blockchain

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Introduction

Thailand has a large number and variety of small and medium-sized enterprises (SMEs). The way SMEs operate their businesses vary across industries, and they face different problems and limitations. SMEs play an important role in national development in terms of income generation, provision of employment, and poverty reduction. Most SMEs operating in the informal sector in emerging markets and developing economies (EMDEs) face similar challenges that inhibit the adoption of advanced technologies and innovations needed to improve business operations and re-engineer processes (Akpan et al., 2020). The rapid advancement in technology can lead to sudden changes in business models and often improve or re-engineer business processes. Therefore, Thailand must attach importance to encouraging new

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generations of entrepreneurs to enter the market, increase investment, and raise internal and international competitiveness. Elevating national competitiveness in the next 20 years necessitates developing and transitioning Thai entrepreneurs into “new generation entrepreneurs” with technological and innovative skills to drive their businesses. These new generation entrepreneurs must possess skills of the future as well as outlooks, capabilities and knowledge for fiercer competition stemming from rapid changes in technology (National Strategy (8): the issue of new generation entrepreneurs and SMEs (B.E. 2018-2037), 2018). Thailand is inclined to develop and encourage SMEs to become adept and capable of using technology and innovation to drive their businesses to withstand fiercer competition from rapid technological changes.

The rapid growth of COVID-19 infections led national authorities in many countries to impose restrictions, such as lockdowns, which severely affected individuals, businesses, industries and even national economies (Giones et al., 2020; Kuckertz et al., 2020). The lockdowns abruptly affected SMEs by banning important business activities, such as face-to-face sales and marketing activities of most firms (Sørheim et al., 2020). The lockdown caused severe economic downturns. The pandemic has led to business closures and bankruptcy (Amankwah-Amoah et al., 2020). Thai economy started to slow down in the last half of 2019, and the major sectors that are the main drivers of the Thai economy suffered from the pandemic. The United Nations Industrial Development Organization (UNIDO) (2020) found that small-size firms and low-tech firms were groups hit the hardest by the COVID-19 pandemic and the subsequent measures to prevent its spread. Reduction of orders caused the heaviest toll on companies, leading to cashflow shortages and supply chain disruptions. The cashflow shortfall was the biggest problem for businesses. For medium-sized enterprises, cashflow problems impacted human resources and other tangible assets. The impact of the COVID-19 pandemic on such companies put a spoke in the wheel of economic activities and led to a recession. As the IMF predicted, 2020 was the beginning of a recessionary period (UNIDO Report: Impact Assessment of COVID-19 on Thai Industrial Sector, 2020).

Furthermore, the COVID-19 pandemic in the era of the “New Economy” brought about rapid digital disruption. As a result, several SMEs began to adjust by adopting new technology in their operations and workforce behaviour. The digital disruption did not occur only in the organizational sense but also caused behavioral change in people’s daily lives. More and more people prefer to use services via digital platforms, especially digital financial services, which can be used everywhere, instantly and conveniently via mobile devices, such as phones and tablets. There has been a continuously rising trend among consumers to use more digital banking. Hence, COVID-19 was another factor in motivating SMEs to digitalize more rapidly so that they could be data-driven and connected digitally with consumers (Chairavanond, 2020). Additionally, digital disruption gave rise to new technology that could elevate agencies’ or organisations’ capacity to support entrepreneurs in business expansion and improve SMEs’ business operations through new digital

platforms. Agencies tasked with SMEs promotion also incorporated technology into their system development to enhance SMEs' ability to access available resources to support their business.

The above discussion reflects that the most important factors for SMEs' business continuity during the COVID-19 pandemic have been digital technology and new technology, which SMEs employed to increase sales through digital platforms or created systems for managing and supporting business operations. Digital transaction literacy was another important factor that helped SMEs adapt for growth and continuity in every situation. Therefore, providing support for organizations related to digital finance to create innovation for SMEs is also important.

The article aims to study the effect of the level of literacy for digital transactions on SMEs' business operations and the level of impact of digital transactions on SMEs' business operations, to study the literacy for digital transactions and digital competence which affects the impact of digital transactions on SMEs' business operations, and to recommend a guideline for business continuity planning based on the use of digital transactions in SMEs business operations. Using the COVID-19 impact in Thailand as a case study, the researcher examined digital transactions, the adoption and benefits of digital transaction systems, and digital literacy according to the Thailand Digital Competence Framework for Citizens. They complemented this by examining the concept of technological impact and digital literacy to analyze and propose a plan for driving the business sector toward adopting digital transactions for SMEs' business continuity. Samples were selected from entrepreneurs and employees of SMEs in Thailand. Each sample group had a size of 400 persons at the maximum. The researcher expanded the sample size to cover 5 different areas, each with 400 persons, for a total of 2,000 persons. Each area was selected according to the highest level of economic activities, namely, the provinces of Bangkok, Chiang Mai, Nakhon Ratchasima, Phuket and Chonburi. The researcher used purposive sampling to select participants for informational interviews, with a sample group of academics and specialists, business people and policy-level civil servants, for a total of 12 persons. Five provinces with high economic activities, Bangkok, Chiang Mai, Nakhon Ratchasima, Phuket, and Chonburi, are considered. As a result, the researcher, therefore, investigated the impact of digital transactions on SMEs' business operations and considered the issue of level of literacy in digital transactions, which affected the usage of digital transactions in SMEs' business operations, to develop a plan for firms to adapt and prepare for situations that can present both opportunities and risks in the future.

Research Methodology

This research employed a mixed method of quantitative and qualitative research. The researcher employed quantitative research to fulfill research and to find out the level of literacy in digital transactions for SMEs' business operations. In 2020, there were approximately 3.13 million SMEs in Thailand, which constituted 99.6% of all enterprises (OECD, 2022). The sampling size was determined by Cochran formula.

The result of the calculation was 384 persons. However, the researcher used a maximum sample size of 400 persons to maximise comprehensiveness and minimise errors. To enhance research robustness, the researcher expanded the sample group to cover all regions of the country, using multi-stage sampling as follows:

1) Random selection in specific areas in each region – classifying into 5 regions and selecting provinces with high economic activities to represent each region. For example, Phuket represented the southern region, Chonburi represented the middle and eastern regions, Nakhon Ratchasima represented the northeastern region, Chiang Mai represented the northern region, and Bangkok represented the capital. The sample group from each region numbered 400 persons, with an overall total of 2,000 persons.

2) Voluntary selection – sample group was selected from volunteers who participated willingly. The researcher recruited volunteers through announcements.

3) Snowball selection – for complete and sufficient data collection, the sample group was selected based on the possession of desirable qualities through the introduction from another sample group which could identify the groups with similar qualities. Once achieved, data collection was concluded.

Both close-ended and open-ended questionnaires examined the process for driving the business sector to use digital transactions for SMEs' business continuity with the impact of the COVID-19 pandemic on Thailand as a case study. Using the index of consistency (IOC), the validity test found that the questionnaire had an IOC value between 0.66-1.00, which passed the standard. The questionnaire was also subject to a reliability analysis through a try-out, the result being that the confidence test alpha value was 0.97, and every question had a reliability value within the standard. Therefore, it could be concluded that the questionnaire was a tool fit for the study. For the quantitative analysis, the researcher collected the data and ran an integrity and accuracy test of the questionnaire based on parts 1-3 of the questionnaire, organized the data by coding, and processed the data by computer using the SPSS program for studying personal factors that influenced the impact of digital finance transactions on SMEs business operations. The researcher employed the analytical method of independent sample t-test and one-way ANOVA. For the analysis of digital transaction literacy in SMEs' business operations, which influenced the impact of digital transactions on SMEs business operations, the researcher applied simple linear regression analysis with a significance level of 0.05. The correlation was tested by Pearson's Product Moment Correlation Coefficient.

The researcher used qualitative research to recommend a guideline for business continuity planning by incorporating digital transactions into SMEs business operations. The researcher used the purposive selection method to choose the main data providers for qualitative research. The criteria for selection were 4 academics and digital transactions specialists with at least 3 years of experience in digital transactions-related work, 4 policy-level civil servants with authority to oversee digital transactions with at least 3 years of experience, and 4 SME entrepreneurs who have used digital transactions, with at least 3 years of experience using digital

transactions. The researcher used interviews as the tool for data collection, which has been subjected to a validity test. The data collected from interviews were subjected to content analysis, classified and categorized before reaching a conclusion. Results from data analysis served as the basis for the recommendations for business continuity planning by incorporating digital transactions into SMEs business operations.

Research Results and Discussion

From the 2,000 persons in the sample group, the research found that most of the sample were male, 1,050 persons or 52.50% of the sample size. 806 persons were of the age between 40-54 years old, equivalent to 40.30% of the sample size. 1,348 persons, or 67.40 %, were single. 1,117 persons, or 55.90%, had more than 90,001 baht in income per month. 1,687 persons, or 84.30%, had bachelor's degrees. 697 persons, or 34.90 %, had businesses related to services. All persons in the sample, or 100%, were entrepreneurs, with 761 or 38.10, having had their businesses for 4-5 years.

The researcher examined the following 3 issues: level of digital literacy, level of digital competence, and digital transaction behaviors, with the following results:

The digital literacy test conducted on the sample found that most respondents (95.90%) answered affirmatively to question number 11 (Q: Are you able to create content and express yourself creatively online? A: Yes). 85.50% answered affirmatively to question number 8 (Q: Are you able to find and identify the source of information needed online? A: Yes). 83.10 % answered affirmatively to question number 27 (Q: Are you able to buy goods online? A: Yes). 81.80 % answered affirmatively to question number 29 (Q: Are you able to do electronic transactions using digital equipment or via other online channels? A: Yes). 81.80 % answered affirmatively to question number 31 (Q: Are you able to sell goods online? A: Yes.) Results of the analysis of digital competence based on the Thailand Digital Competence Framework for Citizens showed that, in general, respondents of the questionnaire had mid-level digital literacy and competence ($\bar{x} = 2.84$, S.D. = 0.37). When the respondents' average level of digital literacy and competence was considered, the researcher found three issues for which respondents demonstrated digital competence. Respondents showed a mid-level ability to use basic digital tools or applications for work such as document filing, sharing views, editing, inserting and adjusting tables, computational functions and basic presentation applications. For other areas of mid-level digital competence, respondents showed an aptitude for co-working online, the ability to access hardware and troubleshoot hardware, online information management and data security. The lowest level of digital competence among respondents was in the area of producing publicly available data sets whereby data was made public with respect to the relevant rules and regulations. The Open Data standard average score was 1.93, which was a low score.

For digital transaction behavior, the researcher found that 100% of the sample group, all 2,000 persons, have made digital transactions. 1,442 persons, or 72.10% of the

sample, made digital transactions daily. 1,448 persons, or 72.70% of the sample, have high confidence in digital financial services. 1,412 persons, or 70.60%, have made digital transactions via mobile/smartphones.

The perception of the impact of digital transactions

In their study about the perception of the impact of digital transactions, the researcher analyzed two issues: the impact level of digital transactions on SMEs' businesses and the impact level of the COVID-19 pandemic on SMEs's businesses. The research found that for the impact level of digital transactions on SMEs, overall, the respondents experienced a high level of impact ($\bar{x} = 4.18$, S.D. = 0.11). When evaluating the average level of impact, the respondents said there were three issues of the highest impact. First, digital transactions allow financial transactions to be made through easier channels. Digital transactions decreased the use of cash or credit/debit cards to pay for goods or services, with an average score of 4.96, considered the highest level. Second, digital transactions allow for easier and faster financial transactions. They were easy to access, uncomplicated, and reduced the time and cost of traveling to the bank, with an average score of 4.95, considered the highest level. Third, digital transactions could help reduce business costs, making transactions systematic, secure, and fast, with an average score of 4.94, considered the highest level. The lowest level of impact of digital transactions on SMEs had to do with the ease of online borrowing services, which had an average score of 2.69. Regarding the impact level of COVID-19 on SMEs' businesses, overall, respondents experienced the highest level of impact ($\bar{x} = 4.60$, S.D. = 0.10). When evaluating the average impact level experienced by the respondents, results showed three issues with the highest impact levels of COVID-19 on SMEs' businesses. First was the decrease in demand (sales figures), with an average score of 5.00, which was considered the highest level. Second, the issue of cashflow shortages, with an average score of 4.99, which was considered the highest level. The third issue is the difficulty in accessing funding sources, with an average score of 4.98, considered the highest level. The issue with the lowest level of COVID-19 impact on SMEs' businesses is a contribution to social security, with an average score of 3.08, which was considered mid-level.

The effect of personal factors and behavior in digital transactions on the impact of digital transactions on SMEs business operations

Analysis of the effect of personal factors on the impact of digital transactions on SMEs' business operations found that variables in gender, age, marital status, monthly income, educational level, type of SME business of the person, type of services business and the duration of SME business affect the varying perception of the impact of digital transactions on SMEs' business operations with the level of significance of 0.05. Details are as follows:

The sample group of 20-39 years-old persons had different perceptions of the impact from sample groups of 40-54 years old and 55-73 years old persons. Persons in 40-54 years age range had different perceptions from those in the 55-73 age range. Similarly, people of different marital statuses held different perceptions about the

impact of digital transactions on SMEs business operations, with a level of significance of 0.05. The sample group of single/unmarried people held different views about the impact compared to married people and widowed/divorced/separated. Moreover, people of different income levels had different perceptions about the impact of digital transactions on SMEs, with a level of significance of 0.05. The focus group with an income range of 30,001-50,000 baht per month had a different perception from those with 75,001-100,000 baht per month income range. The focus group with an income range of 50,001-75,000 baht per month had a different perception of the impact from those with 75,001-100,000 baht per month income range and the sample group with a monthly income greater than 100,000 baht. Likewise, the sample group with a monthly income of 75,001-100,000 baht had a different perception of the impact compared to those with a monthly income of greater than 100,000. Similarly, those with different educational levels held different perceptions about the impact of digital transactions on SMEs business operations, with a level of significance of 0.05. Those with undergraduate degrees had a different perception of the impact from those with higher than undergraduate education. Owners of different types of SME businesses also had different perceptions of the impact of digital transactions on SMEs' business operations, with a significance level of 0.05. The manufacturers' sample group had a different perception from the sample group of trading companies and service providers. Meanwhile, the sample group of trading companies held different perceptions from those in services. As for the duration of business, SMEs that had been operating for different years had different perceptions about the impact of digital transactions on SMEs' business operations, with a significance level of 0.05. The sample group of SMEs that had been in business for less than 1 year had a different perception from those who had been operating their business for 1-3 years and those who had been operating their business for 4-5 years. SMEs that had been in business for 1-3 years had a different perception from those that had been in business for 4-5 years and the group that had been operating for more than 6 years.

The analysis of the effect of behaviors in making digital transactions on the impact of digital transactions on SMEs business operations found that differences in the way digital transactions would made, if the digital transaction had been made within the past 1 month, the frequency of making digital transactions, confidence in digital financial services, channel for using digital financial services, affect the sample group's views of the impact of digital transactions on SMEs business operations differently, with the level of significance of 0.05. The details are discussed as follows:

Sample groups with different frequencies of making digital transactions viewed the impact of digital transactions on SMEs' business operations differently, with a significance level of 0.05. The sample group of those who had all frequencies of making digital transactions (every day, every other day, and 2-3 days per week) had a different view of the impact of digital transactions on SMEs' business operations. Likewise, groups with different confidence towards digital financial services viewed

the impact of digital transactions on SMEs business operations differently, with a significance level of 0.05. The sample group with mid-level confidence in digital financial services had a different perception of the impact from the group with high confidence in digital financial services. Meanwhile, the sample group with high confidence in digital financial services had a different perception of the impact from the sample group with the highest confidence level. Furthermore, sample groups that used different digital transaction channels had different views about the impact of digital transactions on SMEs business transactions, with a significance level of 0.05. The sample group that used mobile/smartphones had a different perception from those that used desktop or laptop computers.

The effect of digital transactions literacy and competence on the impact of digital transactions on SMEs business operation

The result of stepwise multiple regression analysis showed that there were two levels of the effect of digital literacy on the impact of digital transactions on SMEs' business operations with a statistical level of significance of 0.05. These were digital competence (X_2) and digital transactions literacy (X_1). The independent variables were arranged according to the degree of influence on variables, from the highest degree downwards. Together, variables could forecast 40.7 % of the impact of digital transactions on SMEs business operations ($R^2 \times 100$). The multiple correlation coefficient was equal to 0.327, and the standard errors of forecast (S.E.est) were equal to 0.108

Effect of digital transactions literacy and digital competence on the impact of COVID-19 pandemic

The stepwise multiple regression analysis showed that there were two levels of the effect of digital transactions literacy and digital competence on the impact of the COVID-19 pandemic, with a significance level of 0.05. These were digital competence (X_2) and digital transactions literacy (X_1). The independent variables were arranged according to the degree of influence on variables, from the highest degree downwards. Together, variables could forecast 61.6 % of the impact of the COVID-19 pandemic - 19(Y_2). The multiple correlation coefficient was equal to 0.465, and the standard errors of forecast (S.E.est) were equal to 0.088

Interviews and evaluation of the process of driving the business sector to integrate digital transactions for SMEs' business continuity revealed three main conclusions as follows:

The impact of digital transactions on SMEs business operations has the following two details:

1) SMEs' adjustment towards digital platforms has changed. First, the adjustment of business operation method/style is the adjustment in the overall SME business operation, encompassing all means of doing business in the wider sense of introducing new technology. Within SMEs groups, there could be the introduction of digital technology to improve each business procedure or a ready-made digital platform, which could be used for improving business operations or providing business solutions. Examples include the use of online platforms to modernize and access new sale and promotional channels; the use of digital technology to develop

a complete sale/back-office support system using social media platforms; or technology for logistics/delivery and online stock management systems that can better respond to the needs of SMEs in stocking and delivering products, thereby helping entrepreneurs to adapt their businesses to e-commerce and expand their businesses worldwide easily. Such introduction of ready-made digital platforms developed by other service providers to improve business operations reflects how SMEs have adopted digital platforms for advancement and growth.

The second point concerns changing customer attitudes towards interacting with the business or the brand. When SMEs change the way they operate, especially the interaction process between firms and customers, both directly and indirectly, the delivery of products could be expedited. This change should make customers feel differently towards SMEs' services, such that digital technology could make customers experience convenience, speed, and saving of resources through means such as reduced commute time or shorter payment steps for goods and services. Furthermore, the change can enhance interactions such that customers feel attached to the product or the brand, thereby building brand loyalty for the future.

2) Digital transactions and increased SMEs efficiency: presently, digital technology is widely used to develop financial transaction services, resulting in several innovations that boost SME businesses directly and indirectly. The innovation, which has become very popular in the past 5 years, is digital transactions through mobile banking and internet banking. Indirectly, the use of digital transaction services has contributed to the growth of e-commerce because it has helped facilitate payment for goods and services. Directly, digital banking will become an important way to help decrease SMEs' interest rates on loans. Besides reducing the cost of managing cash for banks, digital banking allows banks to get sufficient data for assessing information-based lending. Banks can mobilize data about financial transactions, account movements, transfers and various trading activities to evaluate customers' behaviors and risks. It can be said that digital banking will help decrease interest rates and lessen the burden of inaccessibility to credit for SMEs. Thai government agencies have used digital technology to upgrade financial transactions. The Bank of Thailand has promoted and supported SMEs' access to credit by developing a digital ecosystem for enhancing digital factoring financial services. This is done by (1) developing a central web service (CWS) for centralized data storage and (2) standardizing digital invoices to increase efficiency in sending documents and confirm the accuracy of digital invoices through digital signatures. Digital factoring transactions will help build confidence for banks and factoring firms when considering loans for SMEs, especially for small companies. This plays an important role in helping SMEs access funding sources to increase liquidity and provide a solution for limited access to credit due to concerns about counterfeit commercial documents and repeated loan applications (double financing). Hence, the digital factoring system is an important digital platform for agencies responsible for finance in helping firms operate their businesses more efficiently and grow faster.

Conclusion

Guideline for driving the business sector to adopt digital transactions for SMEs business continuity, interview results of research participants, who provided information about the process of driving the business sector to adopt digital transaction for SMEs' business continuity, provide three main conclusions:

1) Promotion of SMEs' capacity for digital financial management: the popularity of digital technology adaptation, both through general platforms and SMEs' digital transactions, may be limited due to the capacity for learning and understanding digital technology for business operations. Furthermore, some SME entrepreneurs might be discouraged by the initial high costs of investing in digital technology. Coupled with the difficulty in using digital technology during the transition phase, these entrepreneurs might not have comprehended the benefit of digital technology usage. Nevertheless, during the COVID-19 pandemic, many SMEs had to modify to respond to changing customer behaviors. Digital financial management that played an important role in helping SMEs included data storage for accounting, data analysis of customers' needs, A.I. technology for forecasting production, capacity building for e-commerce business from the step of packaging, delivery, stock management and e-payment. Digital financial management also helped SMEs to store digital data in their system.

Therefore, promoting SMEs' capacity for digital financial management is a way to drive the business sector to adopt digital transactions for SMEs' business continuity. Preliminarily, the responsible agencies should be encouraged to organize training courses for understanding digital transactions and the process for adopting and using digital transaction platforms and conduct public outreach to entrepreneurs. Training should occur simultaneously as outreach to encourage SME entrepreneurs to gain knowledge through publicly available information. The responsible agencies should also organize online training courses during the COVID-19 pandemic so entrepreneurs can conveniently study and learn. Certificates should be given to those who attend the course for their future benefit. Public outreach could be done through a variety of channels or online social media platforms. Responsible agencies should also consider which topic should be prioritized, such as access to funding. Therefore, if the responsible agencies provide more training about accessing financial resources via digital platforms, SMEs could gain more access to funding upon which they could expand their business, increase sales and hire more staff. In this regard, the training and information provided should lead to efficient digital financial management.

2) Promoting the development of digital innovation relating to digital finance, including its support system: the relevant public and private agencies and financial institutions have undertaken efforts to promote and support SMEs in their access to and integration of digital technology and innovation in order to upgrade and transform their businesses in the digital age, the process of which has become crucial for business operations. Institutional support includes a collaborative mechanism, financial mechanism, and tax incentives to motivate SMEs to access and integrate

digital technology efficiently. Building an environment suitable for digital adaptation involves various collaborators through activities such as digital factoring development and cooperation to promote and support technology and innovation for electronic finance and commerce. As a result, SME entrepreneurs are motivated to get to know the latest platforms which can be used to upgrade their businesses. It is expected that entrepreneurs become capable of introducing innovations for electronic financial transactions in their field and can exchange information with other institutions to allow the relevant authorities to conduct transparency assessments via electronic transactions. Creating such an environment suitable for digital innovation requires developing a system, innovation, and tool to enable SMEs to make digital transactions more conveniently and faster. Therefore, digital technology is introduced to modernize financial management so SME entrepreneurs can access funding easier, improve the financial system, and promote business growth. As a result, SMEs can better respond to shocks. Moreover, the relevant agencies should develop an effective support and capacity-building system for SMEs, such as mentoring, advising, and diagnosis. However, in the past, such services have suffered from several limitations. Hence, the system offering a variety of services in support of SMEs should be developed with efficacy in mind.

3) Promotion of data management and analytical technology. SME entrepreneurs have become more aware of using new technology, such as big data analytics and blockchain, of benefiting data analysis, especially for customer service. If SMEs can continuously store data, these technologies can help them understand the qualities of each customer, such as their desires and tastes. SMEs can therefore feed this information to their workers to provide the right service and use it in their promotional campaigns. Sales could increase due to product and service presentations tailored to the customers' tastes. Therefore, introducing new technology for SMEs' data management and analytics could lead to business growth and business continuity during the COVID-19 pandemic. However, there remain two challenges. The first is investment capital for acquiring technology for institutional management, which has a high premium. The second is digital technology literacy and digital competence, which is still lacking, especially for operational workers.

4) Regulatory reform of agencies overseeing financial institutions: the law, regulations, and rules enforced by government agencies do not respond to the rapid changes in technology and the digital technology industry. This has become a major obstacle for SME business growth. Therefore, the impetus for reforming the law, regulations, and rules of governmental agencies, creating a standard for new digital products and services, as well as developing regulations and rules relating to the regulatory sandbox to test new regulations on the digital economy industry, is important. The first phase of law reform to support SME growth should include the reform of the Civil and Commercial Code, particularly provisions relating to convertible debt, reverse vesting, employee stock option plan and preferred stock. Furthermore, reform of the Civil and Commercial Code should include regulatory reforms to support SMEs' competitiveness in the public market and enhance SMEs'

participation in government procurement, for example, allowing price preferences for SMEs, setting aside projects that can only procure from SMEs, and increasing the speed and efficiency of payment for SMEs. The development of a regulatory sandbox to test new regulations, based on a plausible scenario and one that is least risky for financial institutions, especially under the COVID-19 situation, could be useful for setting up the framework for SME assistance. Regulatory reform is a way to support SMEs' business operations and continuity. The assistance should also be provided through subsidies or other financial assistance measures to develop infrastructure to support the growth of the digital industry and create an environment conducive to the growth of digital SMEs.

Recommendations

The researcher proposed two main recommendations from the study:

Policy recommendations

1) SMEs still face challenges in creating value for products and services, as well as in enhancing efficiency through applying technology in business operations, especially in financial management, which would help SMEs build capacity and obtain sufficient funding for adding value to products and services and enhance their competitiveness they in the global market. When considering the greater picture of SME promotion policy in the dimension of adopting technology in business, it could be seen that several government agencies are involved, such as the Digital Economy Promotion Agency (DEPA), the Bank of Thailand, National Innovation Agency (Public Organization), Electronic Transactions Development Agency (ETDA) and Office of SMEs Promotion (OSMEP). The challenge is the lack of a clear policy direction and goals for SME promotion during the digital age. This is especially true for the issue of digital transactions, which would enable SMEs to manage their finances efficiently and, most importantly, to access sources of funding essential for business development and continuity. Therefore, the relevant agencies must devise a common strategy by sharing a roadmap for SME development and having a designated focal point. For example, for promoting digital transactions literacy, the division of labor should be clearly assigned to specific agencies for each topic. At the same time, agencies should coordinate their activities, which could be built upon to continuously develop the program for each topic. Coordination of work plans among different agencies and creating a clear road map would help reduce redundancies among the various agencies so that the enabling factors for SME business growth could be developed effectively through the use of digital technology.

2) SMEs' business continuity could be promoted by the relevant government agencies. There should also be a policy to support and motivate these agencies, especially the ones responsible for digital transactions, to develop new technology and innovation to support SMEs' competitiveness and ability to access funding resources and efficiently manage their finances. Presently, there is still insufficient innovation to support SMEs' business operations. Especially during the COVID-19 pandemic, digital technology is a crucial element for SMEs' business continuity,

especially for increasing sales via digital platforms or other systems for back-office support. SMEs' digital transaction literacy is an important element for SMEs' business growth and survival in all situations. Therefore, the support provided to agencies responsible for promoting technology and innovation in digital transactions for SMEs is equally important.

3) All relevant agencies should pool their information on all issues about SME business development and distill the important points as well as the priority issues that need to be promoted each year. In the past year, during the COVID-19 pandemic, SMEs mostly suffered from income reduction. Therefore, the relevant agencies should promote or provide supportive measures related to funding, such as providing knowledge and developing various supportive mechanisms, so that SMEs can continue their business on their own in the future. The inter-agency information pool needs to be continuously administered and updated so that it can be used to promote and support SMEs' growth.

4) Digital transaction literacy and digital competence influence the impact of digital transactions on SME business operations during normal times and the pandemic. Furthermore, the process for driving the business sector to integrate digital transactions for the sake of SMEs' business continuity reveals that one problem for SME businesses in adopting technology, especially technology for data management and analysis, is that the level of digital technology literacy, including adaptation to technology like digital transactions, online platforms and data management system, is insufficient especially that of the operational staff. Therefore, public agencies should have a policy to promote digital literacy and competence to support businesses in their work and daily living in a society driven by technological changes.

Recommendations for action

1) There should be a sandbox project for developing various digital transaction technologies destined for SMEs. These include reforms and amendments to existing laws, rules, regulations, and incentives to facilitate and remove obstacles for SME businesses. Reliable small-sized firms or businesses that particularly need assistance during the COVID-19 pandemic could be selected to participate in the sandbox project designed to promote digital transactions in business operations. Agencies acting as mentors could provide advice and assistance for a limited period. There should be follow-up and evaluation on the results of SMEs' business operations, success/failure, problems/challenges, as well as risks to provide lessons learnt leading to the development of a master plan for promoting SMEs to adopt digital transactions for general business operations.

2) SME entrepreneurs should appreciate the importance of using digital technology in their businesses through marketing, advertising, or data storage and analysis to have a general picture of the entire business. In the beginning, SME entrepreneurs could start bringing digital technology to modify each step of internal business operations, such as using big data technology to evaluate customers' tastes and needs to advertise directly or using ready-made digital platforms to develop or provide

business solutions. For example, entrepreneurs could use online platforms to upgrade and access sale channels or publicize the company through new media, use digital technology for developing a stock management system/ complete back-office management, or use online social media platforms and up-to-date online stock management system that stores and delivers goods according to the needs of SMEs entrepreneurs. Improvements in financial management systems by introducing digital banking to assist in managing data on financial transactions, current accounts, transfers and sales would help SMEs better access funding sources, increase liquidity, and overcome the problem of limited access to credit. As such, the use of digital technology in the development and improvement of SMEs' business operations through effective data analysis, good back-office management, and targeted and direct publicity can expand potential target groups, as well as good financial management and liquidity, will lead to growth in business and adaptability in various situations.

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WYTYCZNE DOTYCZĄCE WPROWADZENIA SEKTORA MŚP W TRANSAKCJE CYFROWE DLA UTRZYMANIA PRZEDSIĘBIORSTW: STUDIUM PRZYPADKU WPŁYWU COVID- 19 NA PRZEDSIĘBIORSTWA MŚP W TAJLANDII

Streszczenie: Celem tego badania jest zbadanie poziomu umiejętności cyfrowych MŚP w zakresie cyfrowych transakcji finansowych oraz poziomu wpływu transakcji cyfrowych na transakcje biznesowe MŚP a także zbadanie wpływu umiejętności cyfrowych i kompetencji w zakresie transakcji cyfrowych na wpływ transakcji cyfrowych na działalność biznesową MŚP. Wykorzystując kwestionariusze i wywiady jako narzędzia, badanie wykazało, że ogólna umiejętność korzystania z technologii cyfrowych, kompetencje i możliwości są postrzegane jako na średnim poziomie. Wpływ transakcji cyfrowych na działalność gospodarczą MŚP jest wysoki, ogólny wpływ sytuacji pandemicznej COVID-19 na działalność gospodarczą przedsiębiorstwa MŚP jest na najwyższym poziomie. Ponadto badanie wykazało, że umiejętności cyfrowe, kompetencje, zdolności i znajomość transakcji cyfrowych determinują wpływ transakcji cyfrowych na działalność gospodarczą MŚP.

Łącznie mogą one prognozować 40,7% tego wpływu. Znajomość transakcji cyfrowych, kompetencje i zdolności cyfrowe determinują wpływ sytuacji pandemicznej COVID-19, łącznie mogą one prognozować 61,6% wpływu. W badaniu zaproponowano cztery sposoby zachęcania MŚP do przyjmowania transakcji cyfrowych w celu zapewnienia ciągłości działania: 1) promowanie umiejętności MŚP w zakresie cyfrowego zarządzania finansami 2) promowanie rozwoju innowacji cyfrowych w zakresie transakcji finansowych, w tym systemu wsparcia i aktualizacji 3) promowanie technologii analizy i zarządzania danymi 4) przegląd prawny agencji nadzorujących instytucje finansowe.

Słowa kluczowe: MŚP, transakcje cyfrowe, Covid-19, Business Transformation, Blockchain.

为企业生存而推动商业部门进入数字交易的指南：COVID-19 对泰国 中小企业业务影响的案例研究

摘要：本研究的目的是研究中小企业数字金融交易的数字素养水平和数字交易对中小企业业务交易的影响水平，并调查数字素养和数字交易能力对数字交易的影响。中小企业业务运营的数字交易。该研究采用问卷调查和访谈作为工具，发现总体数字素养、能力和能力被认为处于中等水平。数字交易对中小企业业务的影响很大，而 COVID-19 大流行情况对中小企业业务的总体影响处于最高水平。此外，研究发现数字素养、能力、能力和数字交易素养会影响数字交易对中小企业业务运营的影响。总之，他们可以预测 40.7% 的影响。数字交易素养、数字能力和能力会影响 COVID-19 大流行情况的影响。总之，他们可以预测 61.6% 的影响。该研究提出了四种鼓励中小企业采用数字交易以实现业务连续性的方法：1) 提升中小企业数字财务管理素养 2) 促进金融交易数字创新的发展，包括支持系统和更新 3) 促进数据分析和 4) 金融机构监管机构的法律改革

关键词：中小企业/数字交易/Covid-19/业务转型/区块链