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The Effect of COVID-19 on Restaurant Businesses and Their Response in Thailand

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Abstract

The COVID-19 pandemic has impacted the restaurant business adversely. The restaurant business is essential for Thailand's economy as it generates high income and a high employment rate. This study aimed to determine the relationships between restaurant businesses. Furthermore, it examined the problems encountered during COVID-19 and measures already implemented and planned. The research is intended to resolve these issues. We collected data from 136 people who worked in restaurants in Bangkok, Thailand, via telephone interviews. The data was analyzed by descriptive statistics and correspondence analysis using SPSS. The findings of this analysis indicate that all restaurants, irrespective of their size, face problems, though their planned and remedial actions are different. One finding was that medium restaurants face more financial problems and increased costs than others. They are countering this challenge through measures such as applying for loans and transitioning into a "non-restaurant" business. Nevertheless, typical medium restaurants have not engaged in extensive planning for the future. Based on a fact-finding survey, we considered appropriate short- and long-term measures suitable for micro, small and medium restaurants. In addition, our study's findings will help policymakers and practitioners identify strategies for responding to the COVID-19 outbreak and other future crises.

Keywords: MSMEs, Restaurants, Business Strategy, COVID-19, Correspondence Analysis

JEL Classification Code: M10, M21, M31

1. Introduction

The world has faced many crises in the past, including economic crashes, natural disasters, and epidemics. The Coronavirus Disease 2019 (COVID-19) outbreak has had severe worldwide economic impacts (Donthu & Gustafsson, 2020). Micro, small, and medium enterprises (MSMEs) have been the worst hit by the COVID-19 outbreak, as they often do not have adequate resources, especially in finance and management (Shafi et al., 2020).

Thailand is a developing country in Southeast Asia. MSMEs play a significant role in its economy (Chittithaworn et al., 2011). These account for 99.54 percent and 71.70 percent, respectively, of the total businesses and employment. Among MSMEs, those in the food and beverage services sector account for 10.68 percent of the total number and 7.79 percent of the employment in Thailand (OSMEP, 2021a). For this reason, we have selected the restaurant business for examination.

Many studies have been done concerning COVID-19's effects on the restaurant business. Bucak and Yiğit (2021) stated that the pandemic significantly impacted Turkey's food and beverage industry, losing approximately 205,000 jobs in 2020. Sales of restaurants in the United States declined by more than 80 percent, with layoffs of more than 8 million employees (Brizek et al., 2021). In addition, Song et al. (2021) also reported that, while restaurants in the United States are also affected financially, the larger ones, being more cash-rich, tend to be less susceptible to crises.

In Thailand, the contribution of the MSME restaurant business to the total Gross Domestic Product (GDP) shrank by 36.6 percent in 2020 (OSMEP, 2021b). MSMEs play a

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vital role in the economy. However, they are most threatened by the COVID-19 crisis due to their weak financial position (Bartik et al., 2020; Thorgren & Williams, 2020).

To date, we have not found any empirical studies that explore the effect of the COVID-19 outbreaks on MSME restaurant businesses in Thailand. Therefore, this research aims to determine the relationships between restaurants' businesses and their COVID-19-related problems and their planned and implemented remedial measures to counter these problems. Based on a fact-finding survey, we considered the appropriate short- and long-term measures for MSME restaurants. Our study also aims to assist policymakers and practitioners in identifying strategies for responding to the impacts of this outbreak and other future crises.

2. Literature Review

2.1. Restaurant Business in Thailand

Dining out is increasingly becoming common and popular because of changing lifestyles. (Sirichokchatchawan et al., 2021). Moreover, food is seen as serving more than the simple, basic human need to eat (Madeira et al., 2020).

The restaurant business in Thailand demonstrated a growing trend from 2014 to 2018, with the establishment of new restaurants increasing by 47.15 percent during this period (Department of Business Development, 2019). Especially Bangkok, the capital city of Thailand, accounts for the most significant number of restaurants, and their proportion in the total employment in the country, i.e., 17 and 25.13 percent, respectively (OSMEP, 2021e, 2021f). As a result, the restaurant business is an essential driver of the economy in Thailand (Charoenpanich, 2021).

2.2. Importance of MSMEs Business in Thailand

MSMEs contribute significantly to economic activity. As a result, they provide income and create employment. It is the backbone of many high-income and developing countries worldwide. Thailand's case is similar, i.e., it is a developing country whose economy is significantly driven by the MSME business (Sunthornpan & Hirata, 2021). In 2020, MSMEs constituted about 99.54 percent of Thailand's total number of businesses, accounting for 34.2 percent and 71.70 percent, respectively, of the country's GDP and employment (OSMEP, 2021a).

The sector with the highest employment rate was the food and beverage industry, accounting for 7.79 percent of the total employment; this sector also accounted for a significant number of businesses, i.e., 10.68 percent of all businesses in the country (OSMEP, 2021a).

The food and beverage business plays a vital role in the country's economy (Madeira et al., 2020) regarding the

number of businesses and employment generated at the local and community levels.

2.3. Impact of External Crises on MSME Restaurants

External environmental crises, both natural disasters and epidemics that occurred in the past, have severely affected global MSMEs.

In 2011, Thailand experienced a significant flood. More than 500,000 businesses were affected by the crisis, 90 percent of which are small and medium enterprises (SMEs). In addition, about 2.3 million workers lost their jobs due to the disaster (Auzzir et al., 2018). Additionally, among others, the Christchurch Earthquakes in 2010 and 2011, the Great East Earthquake and the tsunami in Japan in 2011, and Hurricane Harvey in 2017 also impacted SMEs (Eggers, 2020). Such disasters, even if not impacting small businesses directly, can affect them adversely through supply chain disruptions (Prasad et al., 2015).

In addition, there have been numerous outbreaks of epidemics worldwide, such as Swine flu, Bovine spongiform encephalopathy (BSE), Salmonella Infantis, and Avian flu; the last one resulted in a 16 percent drop in poultry consumption in Thailand (Kim et al., 2020). It is found that these crises have a significant impact on society and the economy, including MSMEs.

Even though our world has faced many crises earlier, the pandemic has been unprecedented primarily because of the enforcement of lockdowns and their devastating effect on the global economy (Madeira et al., 2020; Kim et al., 2020; Alonso-Almeida et al., 2018).

2.4. Impact of COVID-19 on Restaurant Business

Since 2016, the ratio of the contribution of MSMEs to total GDP has continued to increase. However, the COVID-19 situation in 2020 resulted in a 9.1 percent year-on-year (YoY) decline in this ratio, with MSMEs accounting for 34.2 percent of the GDP. In addition, the WB (2020) reported that the developing East Asia and Pacific regions, including Thailand, continue to face the enhanced risk of financial stress from the pandemic. As a result, the economy will deteriorate and slow down by 0.5–5 percent.

Key business sectors witnessed a significant contraction. Thailand's food and beverage industry contracted by 50.19 percent in 2020. It had the highest layoff rate and continues to be more severely affected than other businesses. Contributing factors ranged from consumer concerns about eating and dine-in measures to limiting sales timings (OSMEP, 2021c).

Small businesses are particularly vulnerable to disasters. This vulnerability is due to their financial fragility, limited resources, and inability to seek help, apart from lower

chances of accessing credit (Prasad et al., 2015; Samantha, 2018). Eggers (2020) stated that this business also has fewer resources, increasing its vulnerability to internal and external incidences, such as financial problems, employee resignations, and many competitors.

Several studies have shown that the COVID-19 pandemic affected MSMEs and restaurant businesses through causes ranging from financial problems, supply chain disruptions, reduced demand, a decline in operations, and other challenges. (Shafi et al., 2020; Brizek et al., 2021).

Madeira et al. (2020) stated that restaurants might take corrective measures for internal crises, such as poor management, service, and product quality, but external crises, such as economic, political, and health crises, are difficult for entrepreneurs to control.

Sardar et al. (2022) mentioned the perspective of restaurant business owners. Restaurants have been severely affected by various economic factors from the COVID-19 outbreak, such as declining demand and profit, but operating costs have risen, along with the loss of economic strength.

Neise et al. (2021) stated that businesses had to bear high costs before the pandemic, including a lack of sufficient capital reserves and difficulty accessing financial capital. Therefore, they will experience adverse consequences during the crisis.

2.5. Measures and Strategies to Recover Business

Although small businesses have a high chance of failure, substantial research shows the importance of survival strategies and building consumer confidence in restaurants (Sigala, 2020; Severson & Yaffe-Bellany, 2020; Kim et al., 2020).

During the Severe Acute Respiratory Syndrome (SARS) outbreak in Hong Kong in 2003, Alan et al. (2006) reported its severe impact on the restaurant business. Based on this examination, they offer four stages of crisis management: (i) identifying the crisis faced, (ii) identifying its type, (iii) assessing the extent of the damage, and (iv) assessing its type. Furthermore, they formulate strategies to fight the crisis, including cost-cutting and revenue-boosting, combined with various measures. Crisis management emphasizes formulating a plan for the restaurant's survival, with formal guidelines and procedures for managing and dealing with all crises, not only pandemic situations.

For COVID-19, Li et al. (2021) reported on the emergency response by the restaurant business in China, which includes the following:

- (1) Government and community support: rent and interest rate reduction and VAT exemption.
- (2) Management response: production line adjustment, cost saving, and labor sharing.
- (3) Marketing response: introducing take out/delivery/contactless transactions and sharing food safety pictures with customers.

They also reported recovery responses for the restaurant business, for example:

- (1) COVID-19 prevention: checking body temperature and continuing social distancing measures.
- (2) Customer service innovation: robot-aided restaurant, automated kitchen kiosk with mobile payment.
- (3) Collaboration with third parties: banks, food delivery platforms, and E-commerce giants.

In addition, Thorgren and Williams (2020) stated that the SME business in Sweden responded to the crisis through deferred investments, layoffs, and reduced labor costs. They also reported plans for future implementation, i.e., further layoffs, deferred investments, and ending contracts of hourly workers and consultants.

Kim et al. (2021) also mention solutions to restaurant crises, i.e., contactless service or reducing consumption risks, such as delivery and pick-up services. They can also shift to fast casual dining restaurants with a price that is easily accessible and convenient for roadside delivery.

Madeira et al. (2020) also reported that other than launching new services such as takeout and delivery, regular retention and attraction of new customers through innovative products and new services is promising. Strategies to accomplish this include investment promotion, such as advertising on social networks and in corporate marketing strategies.

Al-Mansour and Al-Ajmi (2020), Panjaitan et al. (2021), and Raies and Ben Mimoun (2021) all proposed that businesses should reform strategies to respond effectively to the impact of COVID-19. First, considering human resources, decision-makers must find a balance in employee retention, including informing employees about challenging situations to retain loyalty, laying off inefficient workers, and training innovative and adaptive employees for the new environment. This strategy can create resilience to the problems that may arise in the future and improve business efficiency in the short and the long term. Second, customer relationship management strategies (CRM) will be able to increase the efficiency of small businesses. Businesses may lose revenue by responding to marketing and sales activities to retain current customers rather than losing them in the long run. Finally, consider cooperating with other companies and helping society during the COVID-19 crisis.

2.6. Research Questions

Based on the research described above, exploring restaurants' problems is crucial. This exploration should include short-term responses and long-term measures after duly considering the factual findings from restaurant businesses. The investigation is based on the following research questions:

1. What are the problems MSME restaurants face in Bangkok, Thailand, due to COVID-19?
2. What measures are MSME restaurants in Bangkok, Thailand, currently implementing to counter the crisis?
3. What measures do MSME restaurants in Bangkok, Thailand, plan to implement in the future?

3. Research Methodology

3.1. Data Collection

We collected data from 136 people who worked in MSME restaurants in Bangkok, Thailand. We conducted interviews from February 22, 2021, to June 10, 2021, when the number of infections and deaths peaked (3rd wave) (WHO, 2022). The data was collected primarily from micro, small, and medium restaurants in Bangkok, the capital city of Thailand, and most restaurants are located here (OSMEP, 2021e, 2021f).

The data was collected through telephone interviews using a questionnaire. This method is suitable for collecting a large amount of data comprehensively and quickly and is more economical than face-to-face interviewing (Kelley et al., 2003). Our research principles include providing full disclosure of research objectives and obtaining informed consent so that study participants are fully informed, including its purpose, procedures, potential risks, and benefits. Participants are aware of their right to withdraw at any time. We maintain confidentiality, protect participants' privacy and personal information, and respect all respondents.

The questionnaire enquired about respondent and business attributes, issues faced during COVID-19, measures already taken to address this issue, and measures planned in the future for the issues. The questionnaire and consent form were evaluated and approved by two experts and three restaurant owners.

3.2. Research Participants

The majority of the 136 respondents consisted of 78 managers accounting for 57.35 percent, followed by 29 business owners, nine assistant managers, four directors, and 16 other positions, accounting for 21.32, 6.62, 2.94, and 11.76 percent, respectively. The respondents accounting for 81.57 percent of the total number, were business owners, directors, and managers, i.e., those with decision-making authority for the business.

Further, classifying businesses according to size, this study includes 47 micros, 46 small, and 43 medium restaurants, accounting for 34.56, 33.82, and 31.62 percent of the total.

3.3. Data Analysis

3.3.1. Descriptive Statistics

Descriptive statistics for data analysis is used to describe quantitative data and to communicate large amounts of data as simply as possible. In this study, we will use frequency measurements (frequency and percentage) by counting the number of occurrences in each variable (Mishra et al., 2019).

3.3.2. Correspondence Analysis

Correspondence analysis (CA) is a statistical method to explore and describe the relationship between two or more categorical variables (Beldona et al., 2005; Doey & Kurta, 2011). CA can explain the relationship between variables at the overall level and that between the levels of variables. In addition, CA is a dimensional reduction technique that converts table data into a graphical display that is easy to interpret and communicates research findings, shown in bio plots or perceptual maps (Sourial et al., 2010; Stemn et al., 2020). As CA is uncomplicated to display and interpret, a two-dimensional solution is retained in this study. We use simple correspondence analysis, which analyzes two group variables. The first variable is the relationship between MSME restaurants and the measures already implemented during the crisis. The second is the relationship between MSME restaurants and the measures they plan to implement.

4. Results

4.1. Problems that Restaurants Face during the COVID-19 Crisis

We investigate issues encountered by MSME restaurants during COVID-19. The results are presented in Figure 1. We found that more than 75 percent of the micro, small and medium restaurants participating in the study were affected by sales, profit, and demand decreases. All three size categories of restaurants were similarly affected by the issues mentioned above. We also found more evidence to confirm these problems, as the following responses show:

1. Reduction in sales
 "We accept fewer customers and limit dine-in cycles due to government policy."
 "We cannot sell alcohol, including limiting the store's business hours."
2. Reduction in profit
 "After deducting expenses, we found that our restaurants are not profitable."

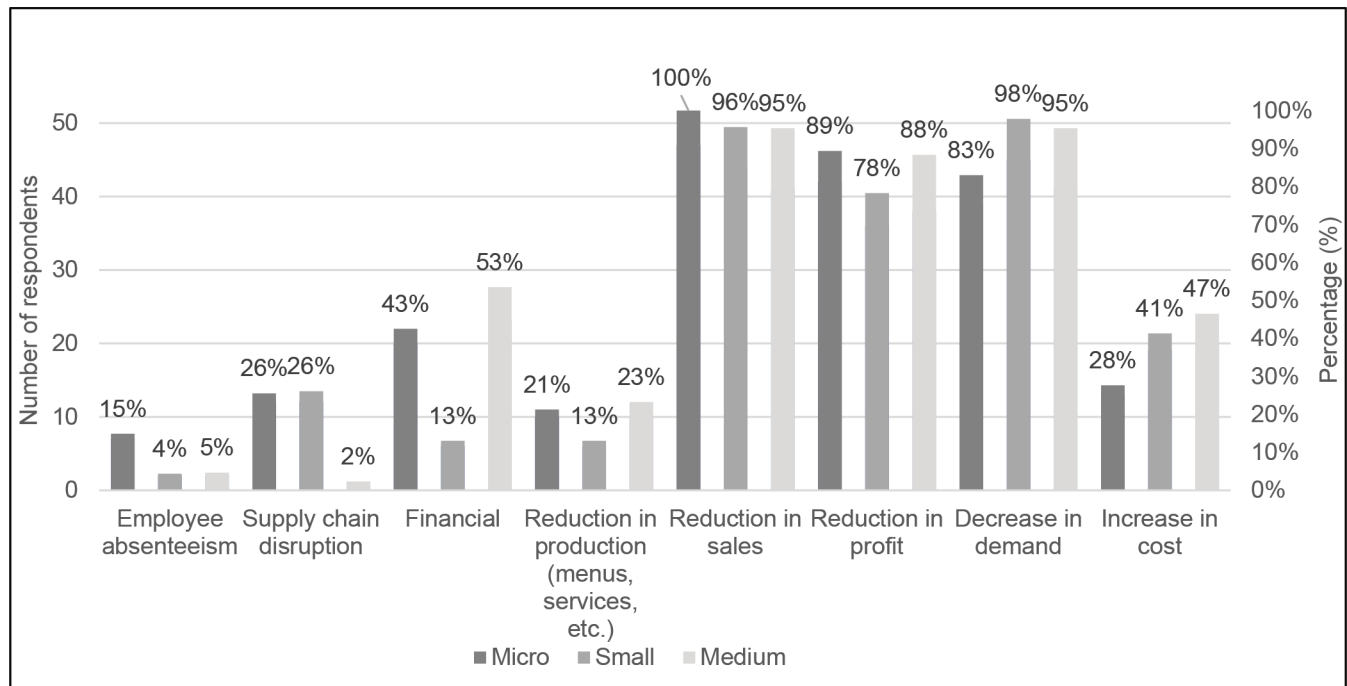


Figure 1: Problems that MSME Restaurants Faced

3. Decrease in demand
 “Customers are afraid of COVID-19. They don’t dare to leave the house.”
 “Customers order less due to concern about germs that can come from raw materials.”
 Interestingly, medium restaurant businesses face financial (53%) and cost increase (47%) problems to a greater degree than micro and small restaurants. We also present more evidence to confirm this problem as follows:
4. Financial problem
 “We are unable to pay for raw materials on time.”
 “Our business lacks liquidity. We must postpone payment to suppliers.”
5. Increase in cost
 “The price of raw materials has increased.”
 “We have been impacted by increased Gross Profit (GP) costs from the delivery platforms and packaging costs.”
 “We pay for alcohol gel and thermometer, which is an additional cost.”

The study indicates that the COVID-19 crisis has had a significant adverse effect on the restaurant business. Micro, small, and medium restaurants were significantly affected by decreased sales, profit, and demand. In addition, many of the

harmful effects of COVID-19 differed depending on the size of the restaurants.

The following section explores how MSME restaurants coped during the crisis.

4.2. Measures Already Implemented by MSME Restaurants

COVID-19 directly affects MSME restaurants. Therefore, showing how MSME restaurants implemented measures to cope with the crisis is essential.

We used correspondence analysis; therefore, it was necessary to test the statistically significant relationships between restaurants and countermeasures to take during the crisis. Table 1 summarizes the outcomes of the result.

Table 1 shows that the Chi-square value is 26.040, with a degree of freedom of 20, with a sig. (p -value) of 0.164. This finding indicates an independent relationship between the variable “MSME restaurants” and “measures are already taken.”

A perceptual map interprets the relationship between column and row variables based on the point distance. For example, it is implied that if these points are close to each other, they tend to be related. Also, it helps to determine the relationship between the level of column and row variables.

We found micro restaurants closer to the introduction of cashless payment and cost-saving measures, small

Table 1: Summary of Statistic Results of the Correspondence Analysis

Summary								
Dimension	Singular Value	Inertia	Chi Square	Sig.*	Proportion of Inertia		Confidence Singular Value	
					Accounted For	Cumulative	Standard Deviation	Correlation
								2
1	0.177	0.031			0.820	0.820	0.037	0.069
2	0.083	0.007			0.180	1.000	0.035	
Total		0.038	26.040	0.164 ^a	1.000	1.000		

^a20 degrees of freedom; *p-value < 0.05; Statistically significant.

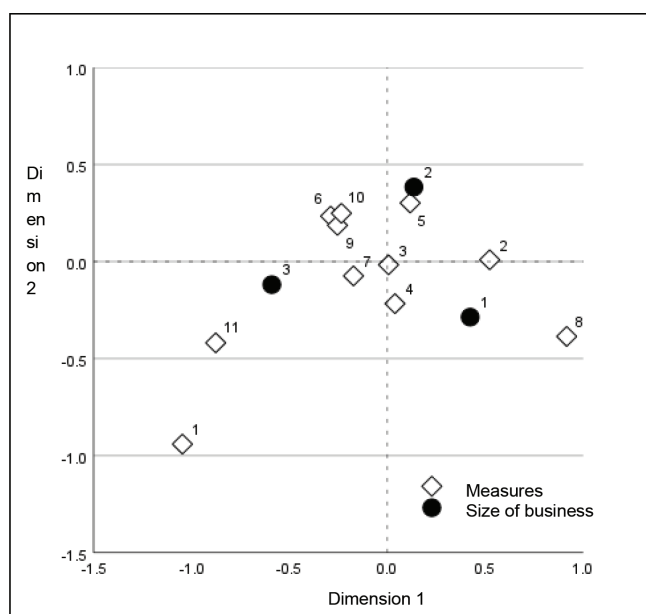


Figure 2: Perceptual Map of MSME Restaurants and Measures Already Taken During Crisis (Created with SPSS)

Note: Circle (1): Micro restaurants; (2): Small restaurants; and (3): Medium restaurants; Square (1): Loan application; (2): Introduction of cashless payment; (3): Increase sale channel - delivery platform; (4): Ordering via social platform technology; (5): Shortening business hours; (6): Shortening working hours; (7): Reduction in employee salary/Reduction of employees; (8): Cost savings; (9): Temporarily closed; (10): Transforming restaurants operations or business models; and (11): Transition to non-restaurants business.

restaurants closer to shortening business hours, and medium restaurants close to loan application and transition to non-restaurant business, as shown in Figure 2.

As indicated by the results in Section 4.1 above, we found that medium restaurants face financial problems and increase in cost more than other-sized restaurants.

In this part, we found some compelling evidence from testimonies to explain why medium restaurants are associated with loan applications and transitioning to non-restaurants business more than micro and small restaurants during the crisis as follows:

1. Loan application: “I apply for Overdraft Loans (OD) to enhance liquidity in my business.”
2. Transition to non-restaurants business: “We transition from the restaurant business to selling masks and epidemic prevention equipment.”

On the other hand, we also found testimony from restaurants that did not apply for loans during the crisis.

“I think debt can make running a business more difficult.”
 “I worry about interest and processing fees.”

“I received information that businesses can request a bank loan. Banks must have access to business databases. If the bank does not have a database - the business will not be approved. In addition, the business must have good credit with the bank. If you are a new client - it will be tough to get approved.”

“Our business loan was not approved because the restaurant business did not have the ability to pay, including a lot of rules/documents.”

This evidence shows that some restaurants do not apply for credit in times of crisis due to concerns about costs, borrowing rules, and bank credibility.

From these results, we discovered that MSME restaurants used many measures to survive this crisis, especially the medium restaurants facing financial problems. They solved immediate problems using many measures. However, our study indicated that they are applying for loans to enhance liquidity more than other restaurants.

4.3. Measures for MSME Restaurants to Implement in the Future

This study sought to investigate the relationship between MSME restaurants and the measures they plan to implement

Table 2: Summary of Statistical Results of the Correspondence Analysis

Summary								
Dimension	Singular Value	Inertia	Chi-Square	Sig.	Proportion of Inertia		Confidence Singular Value	
					Accounted For	Cumulative	Standard Deviation	Correlation
								2
1	0.478	0.228			0.746	0.746	0.065	0.086
2	0.279	0.078			0.254	1.000	0.080	
Total		0.306	47.415	<0.001 ^a	1.000	1.000		

^a18 degrees of freedom; **p*-value < 0.05; Statistically significant.

to counter the adverse effects of the COVID-19 crisis. Table 2 shows the summary of the statistical results. The Chi-square value is 47.415, with a degree of freedom of 18, with a sig. (*p*-value) of <0.001. The results indicate a dependent relationship between the variable “MSME restaurants” and “measures to implement in the future.”

In the perceptual map (Figure 3), we found micro restaurants closer to the plan of closing down and transitioning to non-restaurant business, small restaurants close to increasing sales channels - delivery platforms, and medium restaurants are more associated with ‘no measures. Moreover, many medium restaurants indicated that they will act “according to government policy.”

Moreover, it is interesting that medium-sized restaurants do not plan to apply for loans in the future. We found testimony to support this result as follows:

“Now, I think borrowing is increasing the burden. However, it must be repaid. Therefore, we will borrow money only when there is a lack of liquidity in the future.”

“Now, we bring profits from sales to circulate in the business first. I may borrow money in the future if liquidity is lacking.”

We compare measures that the MSMEs take during an ongoing crisis and those they plan to implement in the future, as shown in Figures 2 and 3. We found differences in current and future countermeasures for the three micro, small and medium restaurants, as summarized in Table 3.

5. Discussion

5.1. Problems that Restaurants Faced During the Crisis

This study sought to identify the problems that affected MSME restaurants in Bangkok, Thailand, during COVID-19. From the results, we found that more than 75 percent of the MSME restaurant business faced a reduction in sales, profit, and demand during COVID-19. Furthermore,

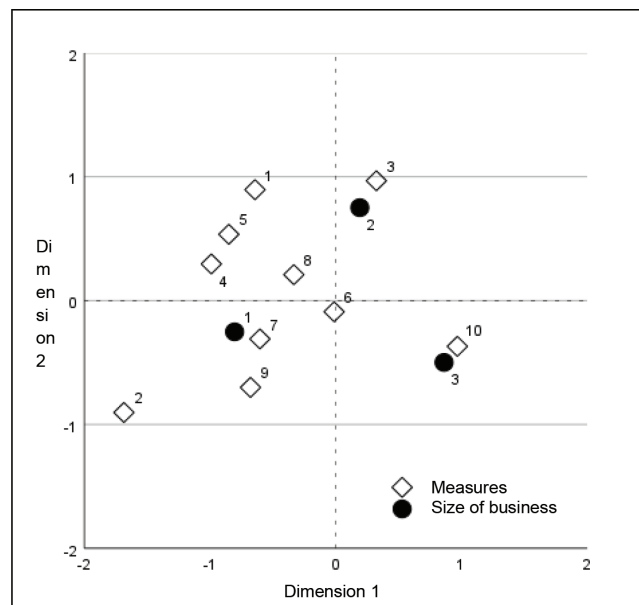


Figure 3: Perceptual Map of MSME Restaurants and Measures Already Taken During Crisis (Created with SPSS)

Note: Circle (1) = Micro restaurants, (2) = Small restaurants, and (3) = Medium restaurants Square (1) = Loan application, (2) = Introduction of cashless payment, (3) = Increase sale channel - delivery platform, (4) = Ordering via social platform technology, (5) = Reduction in employee salary/Reduction of employees, (6) = Cost savings, (7) = plan to close, (8) = Transforming restaurants operations or business models, (9) = Transition to non-restaurants business, and (10) = non-measure.

on categorizing the restaurants based on their size and comparing these effects, we found that financial problems (53 percent) and cost increases (47 percent) impacted medium restaurants more than micro (43 and 28 percent, respectively) and small (13 and 41 percent, respectively) restaurants, as Figure 1 shows. They mention financial

Table 3: Summary of Correspondence Analysis Result

Issues	Sized of Business		
	Micro Restaurants	Small Restaurants	Medium Restaurants
Measures already taken	<ul style="list-style-type: none"> • Introduction of cashless payment • Cost saving 	<ul style="list-style-type: none"> • Shortening business hours 	<ul style="list-style-type: none"> • Loan application • Transition to non-restaurants business
Measures to implement in the future	<ul style="list-style-type: none"> • Plan to close • Transition to non-restaurants business 	<ul style="list-style-type: none"> • Increase sale channel - delivery platform 	<ul style="list-style-type: none"> • Non-measure

problems, such as lack of liquidity and inability to pay for raw materials on time. Furthermore, they report increased costs. As raw materials have become more expensive, GP costs from the delivery platform increased. Thus, additional expenses for packaging and disinfectants have to be borne during the crisis (presented in Section 4.1).

Beraha and Đuričin (2020) studied the impact of COVID-19 on medium-sized enterprises in Serbia. They found that 45 percent of medium-sized enterprises were concerned about outstanding accounts receivable and lack of cash flow to cover operating expenses, and 34 percent were concerned about the lack of funds to run their business smoothly. COVID-19 also severely affected MSMEs in Pakistan. Shafi et al. (2020) state that 67.93 percent of the MSMEs in Pakistan are facing financial problems, followed by supply chain disruption (47.83 percent) and decreased demand (44.02 percent). As a result, MSMEs in Pakistan are more financially vulnerable than in Thailand and Serbia. These statistics show that the COVID-19 crisis has adversely impacted MSME businesses worldwide.

Some results are consistent with Alan et al. (2006) comparing this study with those on other diseases. They state that when SARS, an airborne respiratory disease like COVID-19, spread in Hong Kong, panic and disruption of people's daily activities occurred. Restaurant businesses in Hong Kong got severely damaged by the sudden and severe cash flow problems and had to bear additional costs to maintain cleanliness and hygiene.

In addition, Kim et al. (2020) state that other diseases that have spread widely around the world, such as Avian influenza, Swine flu (H1N1), Bovine spongiform encephalopathy (BSE), and *Salmonella infantis*, have also affected the restaurant industry. Food consumption in restaurants is substantially reduced due to the uncertainty and concerns surrounding food safety. It has a significant adverse impact on the financial performance of the restaurant business.

This study can help policymakers and practitioners understand and recognize the problems faced by MSMEs restaurants during the crisis and prepare for further responses.

5.2. Measures Already Taken during Crisis

The study answers questions about how MSME restaurants in Bangkok, Thailand, have responded to a crisis. The results show that micro restaurants have introduced cashless payment and taken cost-saving measures. In addition, small restaurants have shortened business hours, while medium restaurants are more inclined towards applying for loans and transitioning to non-restaurant businesses than other restaurants, as shown in Figure 2. According to the study, different business sizes (micro, small and medium restaurants) appear to adopt different remedial measures during a crisis.

An interesting finding in this study is that medium restaurants are most affected by financial problems (presented in section 4.1). Additionally, they are associated with measures like loan applications during the crisis (Figure 2). This finding is similar to Beraha and Đuričin's (2020) that medium-sized enterprises in Serbia require preferential short-term loans with lower interest rates or collateral.

Thailand will introduce a Soft Loan measure to enhance liquidity for businesses, especially micro and small enterprises. Financial institutions will lend to entrepreneurs interest-free for the first six months and, after that, at an interest rate of 2% per annum or less (OSMEP, 2021d). However, certain limitations have prevented some restaurants from applying or their loans not getting approved, such as concerns about operating and interest costs, requirements/rules, and documentation, including assessing the ability to repay during the crisis (presented in section 4.2). The result contrasts with Thorgren and Williams (2020). They stated that the SME business in Sweden mentioned that loan applications are not attractive as the loan interest rate is around 6%. Even if a policy allows delayed payment, entrepreneurs still find it difficult to repay because of inadequate income to cover expenses. They also choose to be conservative rather than take the risk of increasing their debt-to-equity ratio.

This study offers insights into remedial measures that different-sized MSME restaurants take during a crisis.

Our findings will help policymakers and practitioners understand the measures taken by different-sized restaurants. Furthermore, they will facilitate short-term planning or policy measures to help them precisely and efficiently.

5.3. Measures to Implement in the Future

We discovered an association between MSME restaurants and measures to take during the crisis. However, this finding is not sufficient because the epidemic crisis is ongoing. Therefore, we must answer a question concerning how MSME restaurants in Bangkok, Thailand, plan to implement future measures.

This study found that micro restaurants are associated with plans to close down and transition to non-restaurant businesses. In contrast, small restaurants increase sales channels - delivery platforms, and medium restaurants are associated with 'non-measures' more than micro and small restaurants, as Figure 3 shows. Furthermore, this study found that restaurants of different sizes plan to implement different measures in the future.

From the comparison between measures already taken and those to be implemented in the future (see Table 3), we found that medium restaurants are associated with loan applications. These restaurants prefer implementing no countermeasures in the future. Instead, they plan to operate the business depending on future government policy, as presented in Section 4.3.

Our results are slightly different from other studies. For example, Thorgren and Williams (2020) stated that SMEs in Sweden anticipate taking actions, including layoffs, deferred investments, ending contracts with hourly workers and consultants, exiting, negotiating contracts and terms, and reducing labor costs in the coming months.

However, it can be seen that both countries have planned measures for the future that include increasing sales, reducing costs, closing the business, and not taking any action. This choice depends on business decision-makers and government policy at that time.

The findings from this study will help restaurant operators and policymakers to plan for long-term measures for future crises because this study offers a deep dive into the measures that restaurants may implement in the future.

Limitations of this research include several factors. One is the sample size. The research was conducted with MSME of restaurants, which may limit the generalizability of the findings to the broader restaurant industry in Bangkok. Second, the timeframe is a possible issue. The research was conducted during a specific period, possibly limiting the ability to extend its conclusions to COVID-19's long-term effect on Bangkok's restaurant industry. Finally, external factors should be considered. Changes in government policies, consumer behavior, or the emergence of a new disease wave could have affected the research results.

6. Conclusion

Through this research, we have identified the following four findings:

The first is that more than 75 percent of the micro, small, and medium restaurants were similarly affected by decreased sales, profit, and demand during the COVID-19 crisis.

The second is that micro restaurants were associated with introducing cashless payments and cost-saving, among current measures being implemented. Moreover, they are more inclined toward closing down and transitioning to non-restaurant businesses than small and medium restaurants.

The third is that small restaurants responded by shortening business hours during the crisis. Furthermore, at the same time, they are more likely to increase sales channels - delivery platforms as a future measure than micro and medium restaurants.

Last, medium restaurants face financial problems and cost increases more than micro and small restaurants. They are associated with measures like loan applications and transition to non-restaurant businesses during the ongoing crisis. Nevertheless, coming to measures planned in the future, medium restaurants were more likely to have taken no steps than other-sized restaurants.

The strength of this research is that it provides a detailed understanding of the challenges faced by different-sized MSME restaurants during COVID-19 and the current and future countermeasures they plan to implement in response. This result can guide all restaurant operators in coping with problems and surviving a crisis and its aftermath. Policymakers benefit from understanding the characteristics of the problems and measures taken by different-sized restaurants. They can then formulate policies that genuinely support these businesses.

Moreover, this research contributed to our understanding of how COVID-19 affected Bangkok restaurants, how the industry responded, and how these aspects differ from other regions or countries. It also explored how government policies, regulations, and other external factors have shaped the pandemic response of MSME restaurants. Finally, it illuminates how these effects and responses will influence industry outcomes in the future.

However, this research was conducted during Thailand's third wave of severe COVID-19 outbreaks. This timing enabled impact assessments, countermeasures, and forecasts for possible solutions. Therefore, this research should be supplemented with long-term studies on the impact of the epidemic crisis and the current unusual situation.

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