

The challenges of operating a seafood business during a new emerging phase of COVID-19 pandemic: A case study of fresh-food markets in Ladprao district

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ABSTRACT

Thailand's second phase of COVID-19 pandemic emerged from Mahachai seafood market which is the biggest wholesale seafood market. This cluster led to high numbers of transmission and impact on customers' behavior. People were afraid of going to fresh-food markets and consuming seafood products and that has significantly impacted the seafood business in many areas. Ladprao district is an area that has a large population with several fresh-food markets. The researchers aimed to investigate the challenges that seafood sellers in the fresh-food market of Ladprao district faced during the second phase of COVID-19 pandemic as well as how they manage the challenges. The researchers applied both in-depth interview and observation techniques to collect qualitative data. Ten key informants with more than four years of experience in operating seafood businesses in Ladprao participated in this study. Also, the crisis management conceptual model was used to identify 4 aspects of challenges including management, logistics, human, and building-related factors. The results showed that the sellers encountered many challenges in management, lower revenue resulting from sales drop and higher expenditure, loss of customers, fear of consuming seafood, leftover products, and shorter opening hours. Challenges in other aspects involve price drop, delay shipping, higher transportation cost, and temporary lack of suppliers. To manage the challenges, the seafood sellers had to bring back customers' confidence by issuing COVID-free certificate and following COVID-19 prevention measures, joining the government's half-half co-payment program to boost sales, adding more online channels, and focusing more on the pre-order to manage stock effectively.

Keywords: Challenges, COVID-19, Crisis management, Seafood business

1. INTRODUCTION

Thailand's new emerging phase of the COVID-19 pandemic emerged promptly at the end of 2020 from the Mahachai Market (Koaysomboon, 2020). The Mahachai seafood market located in Samut Sakhon province was considered to be the origin of the virus spread, which then expanded to other provinces.

Normally, Samut Sakorn's seafood industry makes about 400 million baht per day, but after the pandemic, the economy lost around 1 billion baht per day from the shutdown (Thairakulpanich, 2020). There was a widespread impact from the pandemic which caused 4,000 cases. People who were infected by COVID-19 mostly worked in the market. They were sellers, customers, and alien workers. Consequently, people feared coming to the market which led to a sales drop, and many shops had to be closed down. People had doubts about whether it was safe to consume seafood products, which negatively affected seafood sellers and restaurants, accounting for 3.4 million people in Thailand's seafood industry (Lekfuangfu et al., 2020). People did the grocery shopping and visited these stores less frequently. Most of the small-scale sellers in the fresh-food market who lived hand-to-mouth and had low to middle income had to deal with the abrupt decline of demand of from customers. As a result, a huge amount of seafood became rotten, causing seafood sellers to lose their income while they had to pay for rent, which contributed to levels of debt (Redman, 2020).

Many research studies have been conducted to investigate the effects of the COVID-19 pandemic on different areas such as commercial fishery workers in the U.S. (Sorensen et al., 2020, pp. 388-391), food supply chains in China (OECD, 2020), and changes of customers' purchasing behavior after lockdown (Laguna et al., 2020). However, little has been reported specifically about seafood sellers in the fresh market. This research aims to fill in the gap by bringing to light the challenges that sellers in the fresh market faced during the second phase of the COVID-19 pandemic and how they handled these challenges in order to survive during the crisis. This study was guided by the following research questions: (1) What challenges did the seafood entrepreneurs in the Ladprao area face during the second phase of the COVID-19 pandemic? (2) How did the seafood entrepreneurs in the Ladprao area manage these challenges?

2. LITERATURE REVIEW

2.1 The Covid-19 situation in the Mahachai fresh market

In late December 2020, the new wave of COVID-19 emerged from the Mahachai market, which is one of the largest seafood markets in Thailand that distributes seafood products nationally. More than 16,499 people were infected by COVID-19, including those associated with the market such as sellers, buyers, delivery men, and most prominently migrant workers (World today news, 2021).

2.2 The conceptual model of crisis management

This research is related to the crisis management model by Mahmoudzadeh and Sanandaji (2015, pp. 141-146). This model was developed to help highlight challenges that businesses encounter and how they solved these unexpected problems. For problems to be deemed business challenges, they must meet four factors: human, logistics, management, and building-related factors. Each of these factors focuses on different aspects affecting the company's operation as follows:

- Management: This factor is commonly used in the form of business and strategic planning to mitigate problems. Also, crisis management training is applicable for preparing for future crises.

- Human: This factor is related to employees' well-being and performance, and the way to manage and improve an employee's working performance during a crisis.
- Logistic: This factor involves transportation and accessibility between a business and its suppliers.
- Building-related factors: These include facilities such as buildings, the surrounding environment and parking lots.

2.3 The Impact of the Pandemic on Thai Commercial Fishery Workers

Thai fisheries also suffered from the COVID-19 pandemic. The middlemen and seafood sellers in the fresh food market either offered lower prices or stopped purchasing seafood from Thai local fisheries. Due to COVID-19 preventive measures, the opening hours of the market were restricted. The fisheries could not access the market as usual and could not sell all the products, which produced waste due to leftover seafood products. Therefore, their income dramatically decreased and did not meet the overall cost of fishing. Some of them turned to alternative solutions: turning unsold seafood into dried products. Fortunately, the fisheries received financial assistance from the local government. The Ministry of Agriculture and Cooperatives helped local fisheries by giving out a total of 15,000 baht or 5,000 baht for 3 consecutive months if they met all the requirements (Charnrachakij et al., 2020).

2.4 The case study of Xinfadi market, China

Xinfadi outbreak is similar to Mahachai fresh-food market. In detail, China locked down the Xinfadi market which is the largest wholesale food market in Beijing after the Covid-19 virus was found in a salmon chopping board. Consequently, supermarkets stopped selling salmon, and people were scared of consuming it. This outbreak affected the whole supply chain and seafood industry in China, starting from wholesale markets to supermarkets and restaurants. According to Global Times, Yang Zhanqiu who is the deputy director of the pathogen biology department at Wuhan University said that seafood including salmon could not carry the virus. However, other things such as packaging and transportation materials can be contaminated by the COVID-19 virus (Globaltimes, 2020). During the pandemic, the seafood industry had to pay close attention to fluctuating customer demands. The supply chain should be adaptive to current situations to encourage smooth and complete food distribution (OECD, 2020).

2.5 The consumer's purchasing behavior of perishable products

Seafood is considered a time-sensitive product, and it requires time and human resources for operating. An overbuying from panicked customers and limitation of transportation from lockdown can lead to changes in customer's buying behavior. During the lockdown, a significant change in the frequency of shopping took place with 76.5% going shopping only once a week (Laguna et al., 2020). The consumers chose to buy food and ingredients that had a long shelf-life and was enclosed in a package. The products purchased more frequently included pasta, pulses, oil, and frozen vegetables. In contrast, fish and seafood were purchased in less quantity during the pandemic because of its short shelf-life and relatively high price (Laguna et al., 2020).

2.6 Review of the previous study

The first relevant research is about the impact of the Avian Influenza Epidemic on Beautiful bird farms by Phulek (2010). The result found that the participants were affected the most in financial management and government policy. Firstly, the participants had to bare high management costs because the beautiful bird farm required skillful workers to take care of particular birds. Secondly, when the infected poultry was identified elsewhere, the Government would destroy the other poultry within 5 kilometers no matter what condition they were in. The compensation of 40 baht, per dead poultry, was paid to the poultry owners for the loss. However, the amount of compensation was equal to the price of a common quail which is not worth the value of a beautiful bird at all. Moreover, there is research from Sukpong and Sricharoenkij (2012) about factors in operating seafood businesses. The findings illustrate that distribution channels, prices, marketing promotions, and products are factors involved in running a seafood business. The challenges that the entrepreneurs faced are the damages that occurred during transportation, fluctuating market prices due to the unpredictable number of seafood supply, and the need for more labor or migrant workers.

Although crisis management and the seafood industry have been the subject of various research papers, there is no study particularly about operating seafood business during Covid-19 in Thailand which is a new economic emerging crisis. Therefore, this study would be specific and beneficial in solving the challenges of operating a Thai seafood business during the new Covid-19 phase.

3. RESEARCH METHODOLOGY

3.1 Participants

The participants were 10 entrepreneurs, 6 females and 4 males, who owned seafood businesses in fresh-food markets of Ladprao district. All of the 10 key informants were purposively selected from four fresh-food markets in the area. They were seafood retail stores whose most customers were local people and restaurants. All participants have operated their seafood businesses for more than three years; therefore, they were experienced and able to compare the situations before and after the COVID-19 pandemic.

Half of the interviewees were from Amornpan 9 Morning Market, 2 from Supnimitr, 1 each from Chat Sakorn Market, Pooyai-Auan Market, and Bua Pattana. Their businesses have operated ranging from 4 to 30 years. Most interviewees (70%) were in a family business so they worked with family members while the rest hired workers with different nationalities including Thai, Myanmar, and Laos. Their monthly incomes were between 60,000 to 200,000 baht.

3.2 Research Instruments

The researchers applied two qualitative data collection methods which are semi-structured interview and observation in this study. The participants were asked 20 questions. A few questions were improvised during the interview. The questions about business overview and handling business in crises were adapted and developed from those utilized in studies by Chanrachakit et al. (2020), and

Tangtaweewipat et al. (2006, pp. 336-338). Some questions were developed from the crisis management model by Mahmoudzadeh and Sanandaji (2015, pp. 141-146) which focused on four main factors including management, human, logistics, and building-related factors. Each interview took approximately 25 to 30 minutes. The researchers also conducted observations to gather information about fresh-food markets' environment and the COVID-19 measures.

3.3 Setting

This study was conducted in Ladprao district, Bangkok. Ten seafood businesses were selected from the four biggest local fresh-food markets which were Bua Pattana Market, Chat Sakorn Wanghin Market, Amornpan 9 Morning Market, and Sup-Nimit Market. All of these selected markets were similar in terms of area and environment. There were approximately 60 to 100 stalls in each market and served approximately 1,000 customers a day.

3.4 Data collection and Analysis

The interviews and observations were conducted in March and April 2021. The crisis management model by Mahmoudzadeh and Sanandaji (2015, pp. 141-146) was utilized as a framework to analyze the qualitative data. All of the interview responses were reviewed and segmented into conceptual categories. The related data were grouped. After the theme of finding from the interview was discovered, the results from both interview and observation were analyzed and summarized to address the research questions.

4. RESULTS AND DISCUSSIONS

The result part is organized according to the order of the research questions.

4.1 Research question 1: What challenges did the seafood entrepreneurs in Ladprao area face during the emerging phase of the COVID-19 pandemic?

The findings concerning the challenges that the seafood entrepreneurs in Ladprao area were facing are divided into 4 parts: management factor, logistics factor, human factors, and building-related factors.

4.1.1 Management factor

The opening hours of the business were limited due to the COVID-19 measures. The seafood section of Amornpan 9 Morning Market and Supanimit Market were forced to close down for 14 days whereas the seafood shops in other markets could operate the business as usual with more additional preventive measures. However, the seafood sellers' revenue tremendously decreased since shoppers were afraid of the spreading of the disease, especially after they heard the Mahachai seafood market cluster. Customers were not confident in food safety as they were worried that the virus could be transmitted through seafood.

Also, at the beginning of the pandemic, customers were afraid of consuming seafood products. Half of the sellers stocked seafood products more than customer demand which led to 20%-30% waste of the total amount of the products. Sellers were not able to estimate the amount of seafood sold in a day because of customers' unpredictable and fluctuated demand.

Every participant mentioned a drop in income approximately of 30-60% while still bearing more expenditure. They also had extra expenditure for the COVID-19 tests in order to comply with the market's policy. The more workers they had, the higher the expenditure would be. Some of them reported financial issues such as loan and credit card debt, and family expenses, which eventually caused bad debt. This could show that they had less liquidity and not enough circulating funds during the COVID-19 pandemic as can be seen in the following excerpts.

I have credit card debt, and a house mortgage that I intent to not pay. And I hope my sales can cover all these expenditures. (Interviewee No.01)

Every merchant at the market must have a COVID-free health certificate. We must pay for the tests out of our own pocket which costs 1500 baht per person. (Interviewee No.09)

4.1.2 Logistics factor

The COVID-19 pandemic has changed the way seafood sellers transport their goods. Sixty percent of the suppliers from whom the interviewees order the products decided not to deliver their goods directly to the stores in Ladprao fresh-food markets. As a result, most seafood sellers needed to go to the wholesale markets to pick up the products by their private vehicles. In addition, the COVID-19 prevention measures for people who wanted to enter the wholesale market were reinforced strictly. Consequently, the process of entering the wholesale market took longer time than usual; hence, the sellers had lesser time to prepare and open their stores in Ladprao. This caused the delay in their operation hours.

Moreover, 30% of the seafood sellers had to look for new suppliers right away after their main suppliers in Mahachai were forced to close down right after the infection was reported. If the sellers could not find the seafood products from new suppliers from other provinces, they would not be able to run their business.

A few sellers reported that they had suppliers from the southern part of Thailand such as Prachuap Khiri Khan and Chumphon. Normally, the suppliers would ship the seafood by bus. After the pandemic, the bus transportation did not operate on weekend to perform its routine cleaning. Also, a private shipping company raised its shipping fee. This finding clearly indicated that there was less delivery cycle from the southern region and that the cost of shipping was higher. The following excerpts come from two different sellers.

The transportation that we normally used has stopped their services on weekend because they need to have a big cleaning on Sunday. Normally, we have no holiday. (Interviewee No.7)

We had to order goods from the southern region instead. The delivery costs by Kerry express increased to 2,500 baht per trip. (Interviewee No.10)

4.1.3 Human factor

Although there was a concern about the Myanmar cluster that became a super-spreader in Samutsakorn province (Thaipbsworld, 2020). Surprisingly, none of the interviewees were worried about this. The majority of the seafood businesses were operated by family members. Those with foreign workers were not worried about their workers either because these workers had been working with them for a long time.

They also lived in the same neighborhood. It maybe because Ladprao district was not considered a high-risk area, and those foreign workers had no contact with the Samutsakorn cluster.

I have run the business for 20 years and have 6 employees from Laos. I don't have any problem with them because we have been working together for a long time. (Interviewee No.05)

4.1.4 Building-related factor

For the store, half of the interviewees do not let customers touch or choose the seafood product on their own. One of the shops even put a clear barrier to separate the product from customers. Some customers were frustrated, complained, and avoid buying at that time.

Our shop must have a transparent barrier to block customers from touching the products. We would pick up products for customers. Some customers were not satisfied and just walked way. (Interviewee No.03)

4.2 Research question 2: How did the seafood entrepreneurs in Ladprao area manage the challenges?

To manage the challenges from the COVID-19 pandemic, the entrepreneurs are doing the followings.

4.2.1 Management factor

To bring back customer trust, the entrepreneurs informed their customers the place where their product came from and reassured their customers that the products did not come from Mahachai seafood market. They also displayed the COVID-free certificate in front of the store, so the customers felt confident purchasing their products.

At the beginning of the second phase of the pandemic, two markets were forced to close down for 14 days. Interestingly, the results from the interviews illustrated that the entrepreneurs who were free from debt were not worried that much when their business could not operate, and they encountered income loss. In contrast, other entrepreneurs who had debt put more attempt to seek for new opportunities. For example, they delivered their products to customers' homes and created LINE groups in order to easily contact customers.

Our business stayed open in every phase of the Covid-19 pandemic. We created a group LINE and posted product images every day so that the customers can call and order online. When customers arrived, they just paid the bills and got their order without wasting time and minimize contact between people. (Interviewee No. 04)

To recover the sales, 80% of the entrepreneurs joined the government's half-half co-payment program to attract more customers. They revealed that they could gain more sales at the same amount as that before the pandemic. One of the interviewees reported that the sale before and after joining the program was not different.

We can still survive in the second phase of the pandemic because most of the customers use the 50-50 co-payment. I think that the sales will slow down within 1-2 months because the

program runs out. We must join a new co-payment program. Otherwise, we cannot make a sale at all. (Interviewee No.07)

To deal with the leftover products, 60% of sellers decided to sell the seafood product at a lower price. To adapt to the fluctuated customer demand, 90% of the sellers kept contact with their customers and bought the products based on the amount of customers' pre-orders. It is worth noting that most of the sellers did not want to sell the leftovers because they want to keep a high standard and quality of their products. Selling leftover products seems to affect their reputation and can reduce customers' loyalty. The following excerpts reflect their management strategies.

We sold the leftover products at a very low price. If we keep them overnight, the quality and the weight will get lower. (Interviewee No.07)

At the end, we did not have much leftover product because we bought the products according to the customers' pre orders. Our customers would tell us ahead of time when they would close their restaurant so we would not buy the seafood product. (Interviewee No.08)

4.2.3 Logistics factor

The majority of the sellers (80%) said that they contacted the suppliers to make an order and let them prepare their products in advance. They asked the suppliers to select the products that they usually purchased. Furthermore, the sellers would select the premium or seasonal seafood by themselves when they arrived at the wholesale markets. It seems like the seafood sellers preferred to spend as little time shopping in the wholesale market as possible. They probably had the idea that the wholesale market was riskier to get infected.

I want a variety of products so some parts I just call and order the suppliers. Then, I just go pick them up and select some premium seafood at their store (Interviewee No. 02)

4.2.2 Human factor

Each seafood business had a different way to manage their workers during the COVID-19 pandemic. The seafood family businesses mentioned that they had more days off during the pandemic because of fewer customers coming to fresh-food markets. Thus, they rescheduled for everyone in the family to take days off every other day. Some seafood business owners let their Myanmar workers stayed in their residence to ensure they were safe and had no contact with others. It is shown that the entrepreneur had to monitor the foreign workers and take more responsibility for their employees.

Every worker in my store must take a COVID test. I provided a rental house for them to live temporarily because the Myanmar workers normally rent a place to live. It is risky to let them stay there with many tenants. (Interviewee No.09)

4.2.4 Building-related factor

Each of the markets dealt with the COVID-19 situation differently. The majority (70%) of fresh-food markets in Ladprao district did not close down. However, the landlord would allow the entrepreneurs not to pay the rent if they preferred to close their business as a result of preventive measures. What all of the people in the markets had in common was that they keep hygiene in the place as their first priority.

The market owner does not collect the rent and COVID-19 measures of the market is good. The market is washed and has a big cleaning once a month. The market owner also asks for cooperation from the sellers to clean their areas. (Interviewee No.01)

The Government policy is very strict. The air must be ventilated and sanitized. Every seller in the fresh market must have a COVID-19-free medical result. (Interviewee No.02)

Furthermore, most of the fresh-food markets set a new policy that all seafood entrepreneurs and workers needed to have COVID-19 tests and show COVID-free health certificates when they operated their business.

From the observations, a few staffs were assigned to monitor at the entrance checkpoint during the peak hours such as from 7 to 9 A.M. and from 4 to 7 P.M. They monitored everyone coming into the markets to follow the preventive measures.

To summarize, the results showed that the second phase of COVID-19 pandemic caused difficulties to sellers in the fresh-food market in various aspects. Firstly, the sellers encountered lower income, price drop, delay shipping, higher transportation cost, and temporary lack of suppliers. Consequently, the seafood sellers handled these issues by regaining customers' trust with a COVID-free health certificate and strictly follow COVID-19 measures, joining the government's half-half co-payment program to boost sales, selling their products at a low price, adding new selling channels, and managing the stock using the pre-order strategy.

5. IMPLICATIONS

This study has shown the significant impact of COVID-19 pandemic on seafood sellers in the fresh-food market and pointed out the challenges that the seafood sellers encountered and how they managed those challenges. Seafood sellers can learn from this study by reviewing their weaknesses and seek for ways to deal with crises. For example, the store that keep in touch with the customers more frequently would have more possibilities to increase customer base and sales. Therefore, this research helps identify the way seafood sellers could adapt themselves to survive during the pandemic.

However, each seafood business could have different challenges and management in human and logistics factors. Entrepreneurs who want to apply the solutions that were reported in this research should consider their own business conditions such as number of employees, size of the business and location of the store. In this report, most of the informants were family business and had no employment issue. Thus, the way of managing employees in this report cannot be applied for the bigger size of business that tends to have a bigger number of employees. Also, entrepreneurs who have business in other districts might have different sources of suppliers. For example, the store that keep in touch with the customers more frequently would have more possibilities to increase customer base and sales. They should adapt themselves towards customers behavior by providing more selling channels as customers want to buy more on various online platforms like Facebook page. Therefore, this research helps identify the way seafood sellers could adapt themselves to survive during the pandemic.

6. SUGGESTIONS FOR FURTHER STUDIES

This research has limitations regarding time, study area, number of participants, and ongoing COVID-19 pandemic situation. The number of participants represented in this study was merely a part of seafood sellers. The location in this study is specifically focused on Ladprao district, Bangkok. Therefore, it is suggested that the future studies could be conducted with a wider range of population and in a bigger setting such as every district in Bangkok. These recommendations would help identify the overview of business challenges. Lastly, this research could be used as a guideline for business in other industries, including food and beverage, retail, hospitality, to help evaluate the impact of COVID-19 on businesses and then further develop a set of crisis management in the future.

REFERENCES

- Chanrachakit, I., Laongmanee, P., Lanmeen, J., Seuasi, T., Sornkliang, J., Tiaye, R., & Yasook, N. (2020). **How do local fishermen adapt to the impact of the COVID 19?**. Samut Prakan: Fisheries Development Center of Southeast Asia.
- Globaltimes. (2020). **Salmon is back in China**. Retrieved March 22, 2021 from <https://www.globaltimes.cn/page/202007/1196030.shtml>
- Koaysomboon, T. (2020). **Thailand is experiencing a “new-emerging phase” of COVID-19 outbreaks**. Retrieved March 15, 2021 from <https://www.timeout.com/bangkok/news/second-wave-covid19-122320>
- Laguna, L., Fiszman, S., Puerta, P., Chaya, C., & Tárrega, A. (2020). The impact of COVID-19 lockdown on food priorities. Results from a preliminary study using social media and an online survey with Spanish consumers. *Food Quality and Preference*, 2020, *86*, 104028.
- Lekfuangfu N., Piyapromdee S., Porapakkarm P., & Wasi N. (2020). **When COVID-19 shut down cities: impact on Thai labor in the supply-side aspect**. Retrieved March 16, 2021 from https://www.pier.or.th/wp-content/uploads/2020/04/aBRIDGEd_2020_007.pdf
- Mahmoudzadeh, A., & Sanandaji, P. (2015). The expression of crisis management strategic model with staff behavior approach, a case study of Tehran bus company. *International Journal of Health-System and Disaster Management*, 2015, 3 (3), 141-146.
- OECD. (2020). **Food supply chains and COVID-19: Impacts and policy lessons**. Retrieved March 23, 2021 from <https://www.oecd.org/coronavirus/policy-responses/food-supply-chains-and-covid-19-impacts-and-policy-lessons-71b57aea/>
- Phulek T. (2010). **The Effect of Measures Controls Avian Influenza to Business of Beautiful Birds Farm in Bangkok and Perimeter**. (Master's degree). Business Administration, Marketing, Dhonburi Rajabhat University.
- Redman, R. (2020). **How the coronavirus crisis is changing grocery shopping**. Retrieved March 29, 2021 from <https://www.supermarketnews.com/center-store/how-coronavirus-crisis-changing-grocery-shopping>.

- Sookpong Y., & Sricharoenkit P. (2012). **Factors in the Business and Trade of Fresh Seafood: A Case Study of Talay Thai Seafood Market, Samutsakorn.** (Bachelor's degree). General Business Management, Management Science faculty, Silpakorn University.
- Sorensen J, Echard J, Weil R. From Bad to Worse: The Impact of COVID-19 on Commercial Fisheries Workers. *Journal of Agromedicine*, 2020 (4), 388-391.
- Tangtaweewipat, S., Cheva-Isarakul, B., Tonsoa, N., Paipisai, T., & Suna, C. (2006). Impact of Avian Influenza Epidemic: Economic and Social Sectors. **The full story of Kasetsart University's 44th academic conference: Animal Science Program in Veterinary Medicine.** 2006 (44), 336-338.
- Thaitrakulpanich A. (2020). **Seafood vendors, restaurants hung out to dry by the Covid-19 second wave.** Retrieved March 23, 2021 from <https://www.khaosodenglish.com/news/business/2020/12/21/seafood-vendors-restaurants-hung-out-to-dry-by-virus-2nd-wave/>
- World today news. (2021). **Samut Sakhon found 50 more infected with a cumulative total of 16,499 people.** Retrieved March 17, 2021 from <https://www.world-today-news.com/samut-sakhon-found-50-more-infected-with-the-cumulative-total-of-16499-people/>