Factors influencing local food entrepreneurs to become a partner with online food delivery application: Case study in Nakhon Si Thammarat, Thailand

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Abstract
This study aims to 1) investigate the factors influencing the decision to use food delivery services through the food delivery app among local restaurant operators in the Mueang District, Nakhon Si Thammarat Province, and 2) compare the factors affecting the decision to use food delivery services through the food delivery app among local restaurant operators in the Mueang District, Nakhon Si Thammarat Province. The population of this study includes restaurants that use food delivery services through the GrabFood and Foodpanda delivery apps. A questionnaire was used as a tool to collect data from a sample group of 182 individuals. Statistical analysis used in data analysis includes frequency, percentage, mean, standard deviation, one-way ANOVA, and multiple regression analysis.

The study found that the factors influencing the decision to use food delivery services through the food delivery app among local restaurant operators in the Mueang District, Nakhon Si Thammarat Province, were primarily related to social changes, marketing factors, perception, and acceptance of technology. These factors significantly influenced the decision to use food delivery services through the app.

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1. Introduction
The ride-hailing business has experienced significant growth, and food delivery services through applications are one of the formats within this industry. Food delivery services through apps distribute revenue to three main stakeholders: the app providers, delivery drivers, and restaurant operators. Restaurants benefit from app-based food delivery services in terms of advertising, cost reduction (e.g., not needing to hire additional delivery staff or invest in physical space), and expanding customer reach to attract new customers.

The restaurant business in Thailand continues to grow steadily, and app-based food delivery services contribute to this growth by meeting the convenience needs of consumers. Ordering food through apps has become widely known and used in Thailand. The prominent app-based food delivery service providers in Thailand are GrabFood and foodpanda. In the province of Nakhon Si Thammarat, foodpanda was the first app to offer food delivery services before other mentioned apps. Grab, known for its ride-hailing service (Grab Car), later introduced GrabFood as part of their app-based services for food delivery.

Nakhon Si Thammarat province has a diverse food culture that has been passed down for a long time. One well-known local dish is "Khanom Jeen," which is considered a staple food of the people in Nakhon Si Thammarat. It can be consumed for breakfast and lunch. Additionally, there are made-to-order dishes and local rice topped with curry, which have been traditional foods for a long time. The food in Nakhon Si Thammarat has also been influenced by Thai-Muslim cuisine, such as Roti and Thai-Muslim-style coffee, as well as Thai-Chinese cuisine, such as Dim Sum and Bak Kut Teh. These mentioned foods can be enjoyed throughout the province, especially in the Mueang District.
With the emergence of food delivery services through mobile applications, consumers now have more options for food consumption. Nowadays, consumers prefer to order food through mobile applications. In addition, during the end of the year 2019 (2562 BE), there was an outbreak of the COVID-19 virus, which had an impact on both the economy and the way of life worldwide. This led to changes in people's lifestyles. Restaurant owners, therefore, need to adapt in order to meet the demands of customers, which may result in increased income for the business owners.

From the aforementioned information, it can be seen that the food delivery service through mobile applications plays a crucial role for restaurant owners. Many restaurant owners have utilized food delivery services through mobile applications even before the New Normal era, and a large number of restaurants have partnered with these applications during the transition to the new normal. Therefore, the researcher is interested in studying the factors that influence the decision to use food delivery services through mobile applications for food transportation among restaurant owners in the Mueang District of Nakhon Si Thammarat province. The study will focus specifically on local restaurants, as local cuisine reflects the food security of a particular area and provides insights into the growth and prosperity of the local community. This study will be beneficial for restaurant owners or individuals interested in starting a food business, as it can provide valuable information for decision-making and strategic planning in marketing to meet the needs of consumers in the future. The objectives are 1. To study the factors influencing the decision to use food delivery services through mobile applications for food transportation among local restaurant owners in the Mueang District of Nakhon Si Thammarat province, and 2. To compare the factors influencing the decision to use food delivery services through mobile applications for food transportation among local restaurant owners in the Mueang District of Nakhon Si Thammarat province.

2. Literature Review

Theory of Social Change

Analyzing market trends and the overall business landscape by considering external factors beyond control, using a PEST analysis that includes political, economic, social, and technological variables. This also includes examining social changes resulting from the outbreak of a new epidemic, such as the COVID-19 pandemic, which has impacted both the economy and the lifestyles of people worldwide. These changes have implications for various businesses, requiring them to adapt to the evolving consumer demands.

Marketing Mix Theory

The marketing mix consists of tools that businesses utilize to meet the needs of their target market or customers. It includes Product, Price, Place, and Promotion (Kotler & Armstrong, 2012) (7). As the service industry has become more recognized and expanded, the traditional four elements of the marketing mix – product, price, place, and promotion – may not be sufficient. Therefore, three additional elements have been introduced: People, Process, and Physical Evidence. By correctly selecting and utilizing these marketing mix tools, customer satisfaction can be increased, which may influence future purchasing decisions. However, it is important to note that the impact of these marketing mix tools may vary for each individual consumer, as they have different factors influencing their purchasing decisions.

The concept of awareness and acceptance of technology

Awareness refers to the expression of knowledge and understanding of various subjects that are received through different sensory perceptions. It involves analyzing and interpreting various pieces of information and translating them into various forms of responses. The Technology Acceptance Model (TAM) (Davis, 1989) (3) aims to predict acceptance and the willingness to adopt technology in work settings. It begins with users becoming aware of the existence of technology and developing beliefs or perceptions about its ease of use, which influences their attitudes towards its usage. This, in turn, affects their intention to use the technology. Once there is an intention to use technology, actual usage occurs, and when technology is regularly and effectively used, it can be considered successful.

The concept of decision-making

Decision-making refers to the final outcome or conclusion of a rational thinking process in order to select the appropriate course of action that is suitable for a given situation. It involves perceiving the needs and seeking information in order to evaluate options for making a decision on using a particular service. This process occurs before the actual usage of the service. If consumers are satisfied with the product or service, it may result in repeat purchases in the long run. The "decision to use a service depends on the level of involvement or engagement with that service or product" (Kotler & Armstrong, 2012) (7).

Research hypotheses

1. Differences in demographic factors have an impact on the decision to use food delivery services through mobile applications among local restaurant operators in the Mueang District of Nakhon Si Thammarat Province.
2. Changes in social factors have an impact on the decision to use food delivery services through mobile applications among local restaurant operators in the Mueang District of Nakhon Si Thammarat Province.
3. Marketing mix factors have an impact on the decision to use food delivery services through mobile applications among local restaurant operators in the Mueang District of Nakhon Si Thammarat Province.
4. Perceptions and acceptance of technology (specifically related to food delivery applications) have an impact on the decision to use food delivery services through mobile applications among local restaurant operators in the Mueang District of Nakhon Si Thammarat Province.

3. Research Methodology

Population
- There are 74 local restaurants registered with Food panda.
- There are 77 local restaurants registered with Grab Food.
- There are 138 local restaurants registered with both Food panda and Grab Food.

Sample: The sample for the study will consist of:
- 47 local restaurants registered with Food panda.
- 49 local restaurants registered with Grab Food.
- 86 local restaurants registered with both Food panda and Grab Food.
Research Tools
Questionnaire: A questionnaire is used as a tool to collect data from a sample group of 182 individuals.
Statistical Analysis: The statistical methods used for data analysis include frequency, percentage, mean, standard deviation, one-way ANOVA (analysis of variance), and multiple regression analysis.

4. Results
In terms of demographic factors, it was found that the majority of the sample group falls within the age range of 31-40 years. The age of restaurant owners, whether they differ or not, did not significantly affect the decision to use food delivery services through mobile applications. The duration of business operation, whether different or not, also did not significantly influence the decision to use food delivery services through mobile applications. Regarding the type of restaurants, the decision to use food delivery services through mobile applications did not significantly differ based on whether the restaurants were mainly focused on made-to-order dishes or curry dishes. The sample group used both food delivery applications, namely Food panda and Grab Food. The results of the study showed statistically significant differences in the decision to use food delivery services between the two applications. Furthermore, the majority of the sample group had been using food delivery services for 1-3 years. The duration of service usage did not significantly impact the decision to use food delivery services through mobile applications. The most frequent orders through the applications were observed during the time period of 11:00 AM to 3:59 PM. Different time periods with the highest order frequency had a statistically significant influence on the decision to use food delivery services through mobile applications. Lastly, the sample group experienced an increase in monthly income after using food delivery services through mobile applications.

Summary of Factors Affecting the Decision to Use Food Delivery Apps for Local Restaurant Owners in Mueang District, Nakhon Si Thammarat Province:

Social Change Factors
The New Normal lifestyle and the use of food delivery apps as an intermediary platform have a significant impact on the decision to use food delivery services through mobile applications. The New Normal lifestyle has a greater influence on the decision compared to the use of the app itself, which increases awareness of local restaurants.

Non-Significant Social Change Factors
Government policies and measures and opportunities to expand the customer base do not significantly affect the decision to use food delivery services through mobile applications.

Marketing Mix Factors
The most influential factors affecting the decision to use food delivery services through mobile applications for local restaurant owners in Mueang District, Nakhon Si Thammarat Province are, in order of importance: process, distribution channels, marketing promotion, and price. Product-related factors, personnel, and physical characteristics do not significantly influence the decision to use food delivery services through mobile applications.

Perception and Acceptance of Technology Factors:
The perception and acceptance of technology, specifically related to food delivery apps, have a statistically significant impact on the decision to use food delivery services through mobile applications for local restaurant owners in Mueang District, Nakhon Si Thammarat Province.

Summary of Research Hypotheses Testing Results
Hypothesis 1: Different demographic factors have an impact on the decision to use food delivery services through mobile applications for local restaurant owners in Mueang District, Nakhon Si Thammarat Province. The testing results found that social change factors related to the New Normal lifestyle and the use of food delivery apps as an intermediary platform, which increases awareness of local restaurants, significantly influence the decision to use food delivery services through mobile applications. The statistical significance level was set at 0.05, and the results supported the hypothesis as stated.

Hypothesis 2: Social change factors have an impact on the decision to use food delivery services through mobile applications for local restaurant owners in Mueang District, Nakhon Si Thammarat Province. The testing results found that social change factors related to the New Normal lifestyle and the use of food delivery apps as an intermediary platform, which increases awareness of local restaurants, significantly influence the decision to use food delivery services through mobile applications. The statistical significance level was set at 0.05, and the results supported the hypothesis as stated.

Hypothesis 3: Marketing mix factors have an impact on the decision to use food delivery services through mobile applications for local restaurant owners in Mueang District, Nakhon Si Thammarat Province. The testing results found that factors related to the perception and acceptance of food delivery applications significantly influence the decision to use food delivery services through mobile applications for local restaurant owners. The statistical significance level was set at 0.05, and the results supported the hypothesis as stated.

Hypothesis 4: Perception and acceptance of technology (related to food delivery applications) have an impact on the decision to use food delivery services through mobile applications for local restaurant owners in Mueang District, Nakhon Si Thammarat Province. The testing results found that factors related to the perception and acceptance of food delivery applications significantly influence the decision to use food delivery services through mobile applications for local restaurant owners. The statistical significance level was set at 0.05, and the results supported the hypothesis as stated.

5. Discussion
Based on the study findings, it was found that the majority of the sample group falls within the age range of 31-40 years old and has been in business for less than 5 years. These local restaurant owners use both food delivery applications, namely Foodpanda and GrabFood, and have been using the food delivery application services for 1-3 years. The highest frequency of ordering through the applications was observed during the time period of 11:00 AM to 3:59 PM. Furthermore, their monthly income increased after using food delivery application services, indicating that these applications have a positive impact on the revenue of the restaurants. These findings are consistent with the study conducted by Das & Ghose (2019), which found that 50% of restaurants use two food delivery applications, and using such applications can significantly increase restaurant sales. The majority of the sample group also holds a high overall
opinion about societal changes, which influences their behavior in using food delivery applications. This aligns with the explanation provided by Apaphat Boonrod (2019) that consumer lifestyles and behaviors have significantly changed, and the introduction of technological and informational changes has played a major role. These changes have impacted various businesses, necessitating adjustments to align with the changing consumer needs. Moreover, the majority of the sample group holds a high opinion about marketing mix factors. Among the questionnaire respondents, the highest level of agreement was observed in terms of the product aspect. This corresponds to the study conducted by Suvadee Wisetsaya (2015), which found that factors such as product variety, accuracy and convenience of the service, and standardization and usability of the product influence the selection of services offered by commercial banks.

Overall, the findings suggest that food delivery applications have a positive impact on the revenue of local restaurants, and the perception and acceptance of technology significantly influence the decision to use these applications. Additionally, the sample group holds a positive opinion about societal changes and marketing mix factors, which further affect their behavior and decision-making in using food delivery applications.

The majority of the sample group demonstrates a high level of awareness and acceptance of food delivery application usage, indicating that the general public has become more proficient in using technology. One of the key factors in this is creating acceptance of technology, continuous communication, and generating continuous awareness of the food delivery applications. This aligns with the study conducted by Gupta (2019), which found that the increasing popularity and familiarity of online food delivery applications, along with the growing number of mobile phone users, help customers choose a convenient ordering system with affordable prices and assist businesses in managing operations.

The majority of the sample group makes the decision to use food delivery application services at the highest level. Among the questionnaire respondents, the highest level of agreement was observed regarding post-use behavior. The aspect with the highest level of agreement is the willingness to recommend the application to others, indicating that users are highly satisfied with using the food delivery application to the extent that they are willing to recommend it to others. This corresponds to the study conducted by Saitong Lerthiang (2017), which found that providing recommendations and post-service assistance in accounting work significantly impact the decision to choose accounting services for limited companies.

Overall, the findings suggest that the sample group has a high level of awareness and acceptance of using food delivery applications. They exhibit a high level of satisfaction with the application and are willing to recommend it to others, which aligns with the previous study’s findings.

6. Recommendations

Demographics: When making decisions to use food delivery applications, it is not only the individual factors that play a role but also the variations in app usage and the time of usage. Therefore, app providers should collect user behavior data to determine the preferred time periods for app usage. This information can be used to tailor appropriate promotions, increasing app usage during peak hours and motivating users to use the app during off-peak hours.

Social changes: The New Normal lifestyle, particularly during the COVID-19 pandemic, has significantly impacted consumer behavior. Consumers rely on food delivery apps as a medium to order food when they cannot go out themselves. This has increased awareness of local food establishments among app users. Therefore, local food businesses in the Nakhon Si Thammarat province should capitalize on this trend. App providers should establish continuous relationships with both local food businesses and consumers through regular communication and special services. This will help maintain a consistent motivation for using the app, even as people return to normalcy in their daily lives.

In terms of marketing factors, app service providers should maintain a reasonable payout timeframe for restaurants to retain existing users and may consider adjusting the payout timeframe to be faster in order to attract new users. In terms of distribution channels, the location of the app's office is crucial. App service providers should establish offices in areas that are easily accessible and convenient for restaurant owners, such as urban areas where public transportation is more accessible. Alternatively, temporary booths can be set up in crowded places such as shopping malls or markets to increase accessibility for restaurant owners.

In terms of marketing promotion, regular promotions with restaurants should be implemented, such as reducing commission fees, offering first-time user discounts, or featuring new restaurants on the front page of the food delivery app. Lastly, in terms of the service process, the delivery time is crucial. App service providers should consider various factors, such as dispatching drivers from locations where drivers can easily pick up food from restaurants or delivering food from the pick-up point to customers. Adequate numbers of delivery drivers should be available to cater to the estimated number of restaurants in the app, or promotions can be implemented to encourage more restaurants to participate, aiming to have a wide coverage of restaurants in all areas.

And finally, in terms of factors affecting awareness and acceptance of food delivery app usage, it is evident that when restaurant owners have knowledge and understanding of app usage and are willing to use food delivery app services, it influences their decision to use food delivery services through the app. Therefore, app service providers should improve their app to be user-friendly and continuously advertise, promote, and provide guidance on how to use the service to attract new restaurant owners and increase their interest in using the app. App service providers must also maintain a consistent app image to be memorable and set a standard for the app, making it easier to be recognized and appealing to attract new restaurant owners. Additionally, restaurant owners make decisions to use the app based on the percentage deducted from their expenses that they have to pay for the food delivery service. App service providers should be aware of their competitors' app information and may consider running promotions to reduce or waive the percentage deducted from the expenses that restaurant owners have to pay for the food delivery service periodically. This is to attract and retain restaurant owners to continue using the app. When existing restaurant owners are satisfied with the app's service, they will continue to use the app, and it will result in a continuous usage of the app. Suggestions for future research:

- It may be beneficial to study other areas where food
delivery app services are being provided to explore additional factors that influence the decision to use food delivery services through the app. In the future, there may be changes in app service providers, such as the companies offering the service or the number of service providers. Therefore, future research could focus on studying factors that have an impact on the decision to use food delivery services through the app among local restaurant owners continuously, aligning with the app service providers and the evolving consumer behavior.

- Additionally, it may be worth considering incorporating additional data collection tools, such as interviews, to gather more specific and comprehensive information. This would help in obtaining detailed and focused insights into the factors influencing the decision to use food delivery services through the app among local restaurant owners and the constantly changing consumer behavior.

References