Why Bangkokians use online food delivery services after COVID-19 restrictions have been lifted

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Abstract

Purpose – The growth of the internet has transformed digital infrastructure in Thailand over the past two decades, with the widespread use of e-commerce, digital money and online services becoming a daily norm for all ages. The COVID-19 restrictions, which limited in-person business operations, boosted demand for takeout and delivery services and fueled the expected steady growth of the online food delivery market in Thailand. The pandemic also resulted in a shift towards online ordering and delivery, reflecting changes in customer behavior. This study focuses on exploring the factors that have driven Bangkokians to use online food delivery services after the COVID-19 restrictions were lifted in June 2022.

Design/methodology/approach – Data were collected from 398 participants who had ordered food delivery services after the announcement.

Findings – The findings showed that perceived usefulness, time saving benefit and price saving benefit have a significant impact on the intention of customers to use online food delivery services, while food safety risk perception had no effect.

Practical implications – Bangkokians favor online food delivery services due to convenience and time-saving, indicating high demand post-pandemic. Businesses should invest in improving their platforms to meet evolving consumer behavior.

Originality/value – The result of this study offers valuable insights into the attitudes and behaviors of Bangkokians towards online food delivery services and could be beneficial for businesses in the industry to improve their services, enhance customer satisfaction as well as increase their competitiveness.

Keywords Online food delivery, Perceived usefulness, Time saving benefits, Price saving benefits, Food safety risk perception, Customer intention to use

Paper type Research paper

1. Introduction

Over the past 20 years, the growth of the internet has been phenomenal worldwide. According to Petrosyan (2022), the number of internet users has skyrocketed from approximately 1 billion in 2005 to a staggering 4.9 billion in 2021. Along with the internet users, the relevant tools and technologies have also been developed to drive the digital revolution. Not only is there a high-speed internet connection, but there is also technology for web development to promote and enhance the image of the products and services through the website. The visible detailed product information and attractive services made people change their consumer behavior (Mittal, 2013).

Like other countries, Thailand has also experienced a rapid change of digital infrastructure over the past decade. Since the internet in Thailand has become more accessible to its

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population, the number of internet penetration in the country has increased. The kingdom's internet accessibility has steadily increased year after year, rising from 64% of the population in 2017 to 76% in 2020, and forecast to 84% by 2026. While the number of internet users also has continually grown from about 44 million users in 2017 to almost 54 million users in 2020. Among Thai users, the most popular devices for accessing the internet are mobile phones, followed by laptops, and then desktops. The internet has become an integral part of people of all ages' lives (Statista Research Department, 2022a, b, c, d). In addition, concepts such as e-commerce, digital money, online banking, and trading are commonly known and utilized both domestically and globally (Nie and Amarayoun, 2018).

Another online market, such as, online food delivery in Thailand has been growing substantially over the past years. In 2017, the total value of the online food delivery market stood at 26 billion baht (Jitsoonthornchaikul, 2022). However, COVID-19 has greatly accelerated the value of the market up to 105 billion in 2021 (Statista, 2022a, b). The online food delivery market in Thailand is expected to climb steadily as food delivery application service providers have been promoting promotions throughout the year (Kasikorn Research Center, 2021). According to Statista in 2022a, b, the market volume is expected to hit USD 6.58 billion by 2027.

In the past few years, the customer demand for online food delivery services has been increasing tremendously. Due to the global pandemic, the Thai government implemented strict measures, including temporarily shutting down or restricting operations of businesses. Restaurants were only allowed to provide takeout or delivery services. Many people have had to adjust their behavior to work from home instead of going to their offices to avoid infecting the virus. Nevertheless, food consumption is still essential wherever they are. As a consequence, many people have changed their shopping habits, including how they purchase their meals. The online food delivery service businesses have grown rapidly and gained more attention. In 2020, there was a significant increase in the number of restaurants, couriers, and customers joining delivery platforms in Thailand and other countries, according to the Economic Intelligence Center of Siam Commercial Bank (2021). Additionally, the Bank of Thailand (2020) reported that there was a more than threefold increase in the use of Google searches for e-commerce, parcel delivery, and online food delivery between January 2019 and January 2020.

With the advancements in technology, fast service has become more accessible. In addition, the superior capabilities of smartphones allow for quick food delivery and a diverse range of food options to be delivered directly to consumers' doorsteps, including the behavior of consumers (Jitsoonthornchaikul, 2022). Even though, the growing evidence of COVID-19 vaccines' efficacy in reducing disease severity (Onwan *et al.*, 2022) and the Thai government also lifted all COVID-19 restrictions nationwide in June 2022 (Tourism Authority of Thailand, 2022), these two factors may accurately change customer behavior after COVID-19 pandemic (Dsouza and Sharma, 2020).

Many studies have investigated the factors that impact customers' intention to use online food delivery services, both pre-pandemic and during the COVID-19 outbreak. However, this study focuses specifically on the factors affecting the use of online food delivery services among Bangkokians after the Thai government lifted all COVID-19 measures in June 2022. The results of this research can provide valuable insights for businesses in the online food delivery industry and food-ordering application platforms on how to promote usage among consumers in the post-pandemic era.

2. Literature review

Many studies have investigated the factors that influence customer behavior and attitudes towards online food delivery. For instance, a study by Yeo *et al.* (2017) concluded that convenience and hedonic motivation, as well as price and time saving preferences, influence

consumers' attitudes and behaviors towards online food delivery services. Moreover, Ray *et al.* (2019) conducted a study to comprehend the different factors that affect the utilization of online food delivery services. In addition, Lau and Ng (2019) found that Malaysians' behavioral intentions towards using online food delivery services are positively influenced by time-saving orientation, convenience motivation, and privacy and security. Similar to some researchers in Thailand, Inthong *et al.* (2022) found that customers' attitudes toward online food delivery affected their behavioral intentions. Hong *et al.* (2021) also conducted two studies to examine this relationship, focusing on six predictors of online food delivery usage intention: perceived usefulness, perceived ease of use, price saving benefit, time saving benefit, food safety risk perception, and trust. They found that all predictors except food safety risk perception impacted online food delivery usage intention. In the second study, the researchers added two more variables, perceived severity and vulnerability during the pandemic, but found that these had no effect on customers' willingness to use online food delivery.

Despite the growing body of research surrounding online food delivery services, studies that examine the impact of the COVID-19 pandemic are still limited. The existing research focuses on the marketing mix and customer satisfaction of these services, particularly as they relate to the use of online food delivery applications (Hwang and Kim, 2019). It remains to be determined if the COVID-19 pandemic has had an impact on customer behavior and decision-making regarding online food delivery services (Laato *et al.*, 2020).

2.1 Independent variables

2.1.1 Perceived usefulness (PU). Gentry and Calantone (2002) emphasize that the concept of perceived usefulness refers to a customer's belief that a technology will improve their shopping experience and efficiency. Additionally, the Technology Acceptance Model (TAM) has been utilized in research on online food delivery. The TAM suggests that perceived usefulness and perceived ease of use play crucial roles in the acceptance of new technology (Davis *et al.*, 1989). Perceived usefulness is defined as "the prospective user's subjective probability that using a specific application system will increase their job performance in an organizational context." When it comes to online food delivery services, perceived usefulness refers to the extent to which individuals trust that using online food delivery services to order meals through technology adoption such as mobile phone applications would be useful (Hong *et al.*, 2021).

In this study, perceived usefulness refers to the perceived usefulness of using an online food delivery service as a means of obtaining meals, after the lifting of the nationwide COVID-19 restrictions in June 2022. It reflects individuals' beliefs about how effectively and efficiently the online delivery service can meet their meal needs.

2.1.2 Time saving benefit (TSB). The convenience of online shopping has made it a popular choice for many consumers, as it offers time saving benefits, eliminates the need for physical trips to retail stores, and allows for efficient checkout processes (Chiu *et al.*, 2014). The value of time is particularly important for individuals with higher incomes, who are likely to face opportunity costs and appreciate the time-saving aspect of online shopping (Punj, 2012). In today's fast-paced world, many people are too busy to dine out or wait for food service at restaurants. For those people, online food delivery services are another alternative option to bring their meals directly to them (Euromonitor, 2015).

In addition, online food delivery also provides customers with the convenience of stored payment options and previous order details for a smooth checkout experience. This ease of use and purchasing can contribute to customer loyalty and enhance the overall appeal of online food delivery services (Chiu *et al.*, 2014). Novita and Husna (2020) also noted that customers can avoid traveling time to restaurants and wait time in lines with the help of online food delivery services.

2.1.3 Price saving benefit (PSB). According to Nagle *et al.* (2011), price is the amount of money that must be paid in exchange for a product or service. The price saving benefit goes beyond simply looking at monetary savings, but also considers avoiding any additional expenses incurred when purchasing a product or using a service (Escobar-Rodríguez and Carvajal-Trujillo, 2013). In the food industry, consumers prioritize finding the best value and making decisions based on getting the most benefit for the lowest acceptable cost (Ollila, 2011). Online consumers have the advantage of comparing prices across different sites and platforms. The firm that offers the lower price is likely to be viewed as the most beneficial resource (Chiu *et al.*, 2014). In the case of online food delivery services, customers can easily compare prices and promotions. According to Kaur *et al.* (2021), price-saving promotions are often effective marketing strategies. Some online food delivery companies charge customers additional fees such as delivery fees, service fees, taxes, or even optional fees like gratuities (Lichtenstein, 2020). To attract new customers and boost orders from both new and existing customers, these companies often offer promotions that cover the fees or provide discounts on the total amount (Hong *et al.*, 2021).

2.1.4 Food safety risk perception (FSRP). Perceived risk, especially in regards to food safety risk perception, can significantly influence customers' purchasing decisions (Nardi *et al.*, 2020). To give an example, some customers who have higher food safety risk perception (FSRP) have a higher chance to be cautious on selecting food products and services, including higher willingness to purchase a premium price for safer products and services (Sharma *et al.*, 2012). Moreover, individuals who prioritize on FSPR are more likely to compare products in person when purchasing groceries or food in order to assess the freshness of the items (Kitsikoglou *et al.*, 2014). As a consequence, online food delivery services are challenged to keep food safety standards including hygiene. The challenges related to online food delivery services include handling packaging and using appropriate food containers during transportation (Maimaiti *et al.*, 2018).

2.2 Dependent variable

2.2.1 Customer intention to use (CIU). Researchers have examined various factors that affect Customer Intention to Use (Yeo *et al.*, 2017; Hong *et al.*, 2021). In this study, the CIU is defined as an individual's favorable experience with online food delivery services, prompting them to express interest in reusing these services following the announcement of the lifting of the nationwide COVID-19 restrictions in June 2022.

3. Research framework

3.1 Theoretical and conceptual framework

Several models have been proposed to explain the factors that influence online food delivery services. Yeo *et al.* (2017) introduced an integrative theoretical framework, which was based on Anderson and Srinivasan (2003) contingency framework. The purpose of Yeo *et al.* (2017) study is to explore the relationship between several factors in online food delivery services. These factors comprise prior experience with online food purchase, hedonic motivation, convenience motivation, time-saving orientation, price-saving orientation, attitude toward online food delivery services (AODS), post-usage usefulness, and behavioral intention toward online food delivery services (BIOFDS). The study found that all factors in the model were interconnected except for the link between prior online purchase experience and post-usefulness.

Next, considered in this context is a study by Aryani *et al.* (2022) which analyzed the factors affecting consumers' behavioral intentions to use Foodpanda, a well-known food delivery app in Malaysia. The researchers carried out an online survey among 100

participants to gain an understanding of how factors such as cost, quality of information, and the practicality of the Foodpanda app influence consumers' willingness to use the food delivery service. The results indicated a significant impact of these factors on consumers' behavior. Since one of the factors, perceived usefulness plays important roles in consumer behavior intention, the author decided to choose "perceived usefulness" as one of the factors in this study and selected consumer behavior intention as "customer intention to use" as a dependent variable for the conceptual framework.

Based on the theoretical models discussed, a conceptual model was developed. The model incorporated key variables to examine the factors influencing customers' willingness to reuse online food delivery services after the lifting of nationwide COVID-19 restrictions in June 2022. The conceptual framework of this study can be visualized in Figure 1 below.

3.2 Research hypothesis

Four hypotheses have been developed to compare the difference between dependent variables and independent variables. The hypotheses are:

Ho1. There is no significant effect of perceived usefulness on customer intention to use online food delivery services after COVID-19 restrictions have been lifted.

Ha1. There is significant effect of perceived usefulness on customer intention to use online food delivery services after COVID-19 restrictions have been lifted.

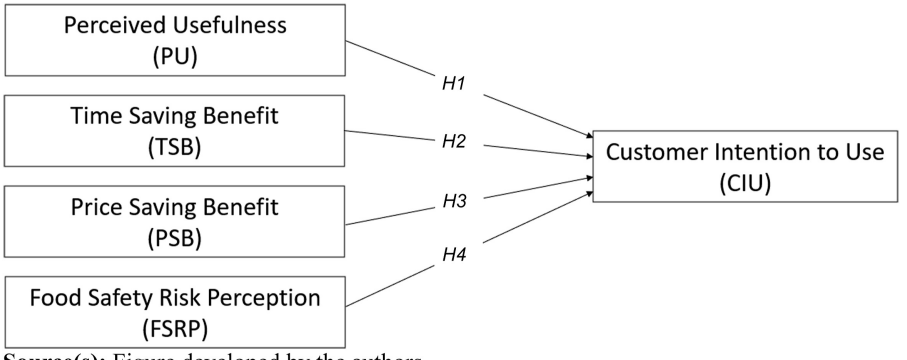
Ho2. There is no significant effect of time saving benefit on customer intention to use online food delivery services after COVID-19 restrictions have been lifted.

Ha2. There is significant effect of time saving benefit on customer intention to use online food delivery services after COVID-19 restrictions have been lifted.

Ho3. There is no significant effect of price saving benefit on customer intention to use online food delivery services after COVID-19 restrictions have been lifted.

Ha3. There is significant effect of price saving benefit on customer intention to use online food delivery services after COVID-19 restrictions have been lifted.

Ho4. There is no significant effect of food safety risk perception on customer intention to use online food delivery services after COVID-19 restrictions have been lifted.



Source(s): Figure developed by the authors

Figure 1.
Conceptual framework of this study

Ha4. There is significant effect of food safety risk perception on customer intention to use online food delivery services after COVID-19 restrictions have been lifted.

4. Research methodology

This quantitative study aims to use descriptive statistics, Cronbach's alpha, and multiple linear regression to examine the factors that drive Bangkok residents to continue using online food delivery services after the lifting of COVID-19 measures in June 2022. To collect data for this study, both primary and secondary sources were used. Primary data was collected through a survey using Google forms and distributed to individuals residing in Bangkok who had experience ordering food delivery services online at least once after June 2022. The secondary sources including journal articles and papers were utilized in the development of the conceptual framework, hypothesis, sample size calculation, data analysis, as well as conclusion.

4.1 Sampling and data collection

In this study, the population of focus is Thai nationals residing in Bangkok who have utilized online food delivery services at least once following the removal of nationwide COVID-19 restrictions by the Thai government in June 2022.

Bangkok's population increased from 1,360,000 in 1950 to 10,899,698 in 2022, according to the World PopulationReview (2023). In this study, the Krejcie and Morgan (1970) sample size determination table is utilized to estimate the appropriate sample size. The researcher obtained 425 responses, but 27 respondents were excluded as they had not used online food delivery services after the lifting of COVID-19 measures. The study therefore selected 398 respondents from Bangkok, who had used online food delivery services at least once after the lifting of COVID-19 restrictions in June 2022, based on the estimated population of 10.9 million people in the city.

In this study, questionnaires were used as a tool to collect information from respondents and examine the relationships between the variables. Due to time limitations, the researcher utilized a non-probability sampling technique to gather the samples. The questionnaires were created using Google Forms. A total of 25 questions were sent by the researcher through the online network. The first part is for screening purposes. The second part is checking the frequency of ordering online food delivery, including the amount of money that the respondent has spent each time. The third part consists of 15 questions that are related to measuring five variables. In this part, the survey used a 5-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5). The final part of the questionnaire included questions about respondents' demographic information. The questionnaire can be seen in Table A1.

4.2 Measures

The researcher used free software called Jamovi to perform the test run, including the measurement. A pilot test with 30 respondents was collected and tested to identify any misunderstandings before distributing it to the target group. Cronbach's alpha was utilized to assess the reliability of each variable. After running a pilot test, the outcome showed that the Cronbach's alpha for the three items of perceived usefulness is 0.842, the 3 items of time saving benefit are 0.771, the 3 items of price saving benefit is 0.797, the 3 items of food safety risk perception are 0.909, and the 3 items of customer intention to use are 0.846. According to Pallant (2001), Alpha Cronbach that has a value above 0.6 is considered a high reliability and acceptable index. Therefore, the pilot test was reliable enough to be used and distributed to collect data from respondents.

This study used descriptive statistics to provide a summary of the participants' personal information. This technique provides an overview of the demographic information of the participants, including their age, gender, education level, income, and occupation, among others. This study also employs two inferential statistical methods to analyze the data: multiple linear regression and Pearson's r (correlation).

5. Results

5.1 Profile of the sample

The study analyzed data from 398 participants out of 425 total respondents. The majority of the participants were male (64.3%), aged 20–35 years old (49.5%), held a Bachelor's Degree (63.3%), were employed as a company worker (46.2%), earned 20,001–50,000 Baht per month (42.5%), ordered food delivery online 1–3 times a week (74.6%), and spent 100–400 Baht per order (81.9%). Detailed profiles of respondents can be found in Table 1.

5.2 Hypothesis testing

The study used linear regression to examine the impact of perceived usefulness, time saving benefit, cost saving benefit, and perception of food safety risks on the customers' intention to use online food delivery services. Multiple linear regression calculates the R-square value,

Characteristic	Category	Frequency	%
Gender	Male	256	64.3
	Female	142	35.7
Age	20–35	197	49.5
	36–45	139	34.9
	46–60	58	14.6
	60 and above	4	1.0
Marriage status	Single	220	55.3
	Married	172	43.2
	Widowed	3	0.8
	Divorced	3	0.8
Highest education	Below bachelor's	26	6.5
	Bachelor's	252	63.3
	Master's	120	30.2
Occupation	Student	26	6.5
	Government employee	45	11.3
	Company employee	184	46.2
	Business owner	50	12.6
	Other	93	23.4
Income	Below 20,000	68	17.1
	20,001–50,000	169	42.5
	50,001–80,000	84	21.1
	80,001–100,000	36	9.0
	Over 100,000	41	10.3
Ordering frequency	1–3 times	297	74.6
	4–6 times	68	17.1
	7–9 times	20	5.0
	More than 9 times	13	3.3
Spending	Below 100	21	5.3
	100–400	326	81.9
	400–700	43	10.8
	701–1,000	8	2.0

Source(s): Authors' own calculation using JAMOVI software

Table 1. Sample characteristics (n = 398)

which represents the proportion of the dependent variable explained by the independent variable. The researcher also used the variance inflation factor (VIF) to identify moderate correlations among independent variables. The value of variance inflation factor (VIF) can be as high as "10," which is acceptable and classified as moderate multicollinearity. Moreover, R-Squared (R^2) is a statistical metric that measures how much of the variation in a dependent variable can be explained by the independent variable(s) in a regression model, and will also be used for the testing.

Multiple linear regression was used to see if perceived usefulness, time saving benefit, price saving benefit, and food safety risk perception, had a significantly predicted customer intention to use online food delivery. The result shows that the significant level of all hypotheses perceived usefulness (<0.001), time saving benefit (<0.001), and price saving benefit (0.004) was less than 0.05. Thus, the null hypotheses are rejected. However, the results indicated that food safety risk perception does not significantly impact customer intention to use, as the significance level (0.233) was higher than 0.05. This suggests that the null hypothesis cannot be rejected, meaning that food safety risk perception has no significant effect on customer intention to use. Moreover, R-square was 0.280 at 95% of confidence level indicating that the independent variables (perceived usefulness, time saving benefit, price saving benefit, and food safety risk perception) can justify dependent variables (customer intention to use) by 28% approximately.

In addition, by examine the individual contributions for each predictor, the results showed that perceived usefulness ($B = 0.4689$, $p < 0.05$), time saving benefit ($B = 0.2250$, $p < 0.05$), and price saving benefit ($B = 0.1046$, $p < 0.05$) were positively significant to customer intention to use online food delivery (Table 2).

The results of hypotheses 1, 2 and 3 showed that the perceived usefulness (H_1), time saving benefit (H_2), price saving benefit (H_3) used to identify influences on customer intention to use are not overlapped. There was no issue of multicollinearity among the independent variables, and the VIF values were all less than 10: perceived usefulness = 1.58, time saving benefit = 1.61, price saving benefit = 1.07 and food safety risk perception = 1.13 (Table 3).

6. Discussion and conclusion

6.1 Findings, discussion and conclusion

This research employed a quantitative approach. The focus was on Thai residents in Bangkok who ordered food delivery online after the Thai government lifted COVID-19 restrictions nationwide. Studies hypothesis testing revealed that three variables, perceived usefulness, time saving benefit, and price saving benefit, have a significant influence on customers' intention to use online food delivery after the Thai government lifted COVID-19 restrictions. However, the results showed that customers' food safety risk perception had no impact on their intention to use online food delivery services.

Independent variable	B	SE B	β	*t*	*p*	VIF
Perceived usefulness	0.4689	0.0699	0.3611	6.71	<0.001	1.58
Time saving benefit	0.2250	0.0688	0.2015	3.71	<0.001	1.61
Price saving benefit	0.1046	0.0360	0.1288	2.91	0.004	1.07
Food safety risk perception	0.0458	0.0384	0.0544	1.19	0.233	1.13

Note(s): $R = 0.530$, $R^2 = 0.280$, dependent variable = customer intention to reuse
Source(s): Authors' own calculation using JAMOVI software

Table 2. Multiple linear regression analysis of hypothesis 1, 2, 3, 4

Item	Hypotheses	Beta (β)	VIF	*p*-values	Test results
Ho1	There is no significant effect of perceived usefulness on customer intention to use online food delivery services after the announcement	0.3611	1.58	0.001 < 0.05	Reject Ho1
Ho2	There is no significant effect of time saving benefit on customer intention to use online food delivery services after the announcement	0.2015	1.61	0.001 < 0.05	Reject Ho2
Ho3	There is no significant effect of price saving benefit on customer intention to use online food delivery services after the announcement	0.1288	1.07	0.004 < 0.05	Reject Ho3
Ho4	There is no significant effect of food safety risk perception on customer intention to use online food delivery services after the announcement	0.0544	1.13	0.233 > 0.05	No Reject Ho4

Source(s): Authors' own calculation using JAMOVI software

Table 3. Summary of hypothesis testing result

6.1.1 Perceived usefulness and customer intention to use. The findings of this study suggest that perceived usefulness has a significant and positive impact on customers' intention to use online food delivery services. The significance value of 0.001, which is less than 0.05, supports the relationship between perceived usefulness and customers' intention to use online food delivery. This is in line with previous studies, such as Hong *et al.* (2021) and Aryani *et al.* (2022), that have found perceived value to be a key factor in determining customer intention to use online food delivery services.

6.1.2 Time saving benefit and customer intention to use. The findings of this study indicate that the time saving benefit has a significant and positive impact on a customer's intention to use online food delivery services. The significance value of the relationship between time saving benefit and customer intention is 0.001, which is less than 0.05, showing a strong influence. Previous research by Yeo *et al.* (2017), Lau and NG (2019), Novita and Husna (2020), and Hong *et al.* (2021) also highlight the significance of time saving benefits in consumer attitudes and behavior towards online food delivery services, particularly during the pandemic.

6.1.3 Price saving benefit and customer intention to use. The findings of this study suggest that the price saving benefit has a significant and positive effect on customer intention to use online food delivery services. The statistical significance of this relationship was determined to be 0.004, which is less than 0.05, indicating a significant impact of price saving benefit on customer intention. Previous research, including studies by Yeo *et al.* (2017), Novita and Husna (2020), Hong *et al.* (2021), and Aryani *et al.* (2022), also supports the positive association between price saving benefit and customer intention to use food delivery services.

6.1.4 Food safety risk perception and customer intention to use. The results of the study revealed that there was no significant relationship between food safety risk perception and customer intention to use online food delivery services. The significance value of the relationship between these two variables was 0.233, which is greater than 0.05, indicating that food safety risk perception did not have a significant impact on customer intention to use these services. This result contradicts previous research by Nardi *et al.* (2020), who found a negative impact of food safety risk perception on consumer behavior. However, it aligns with the findings of Hong *et al.* (2021), who also concluded that food safety risk perception had no significant impact on consumer willingness to purchase food.

In conclusion, the results of this study highlight the key factors that impact customer intention to use online food delivery services. By understanding the importance of perceived

usefulness, time saving benefit, price saving benefit, and food safety risk perception, online food delivery service providers can tailor their offerings and marketing strategies to better meet the needs and expectations of their customers.

6.2 Recommendations

The conclusions of the study highlight the critical role played by various elements in determining the customer's intention to use online food delivery services. In order to foster customer loyalty and increase the likelihood of repeat purchases, companies operating in this industry must place a premium on building positive relationships with their customers. One effective way to achieve and meet the influencing factors: perceived usefulness and time saving benefit by enhancing the user experience of their app or website, by making it simple for customers to find what they want, complete transactions efficiently, and have access to the service whenever they require it. In addition, the system should offer transparency by providing information about previous orders, cancellations, and other sales data to both customers and restaurant owners. Moreover, businesses should also be mindful of the security of their customers' personal information to ensure that it is not leaked or misused, which will increase the perception of the usefulness of their service.

Furthermore, customer loyalty plays a significant role in the customer's repurchase intention, hence companies should work towards maintaining a good relationship with their customers by focusing on price saving benefits. To remain competitive in the market, it is crucial for food delivery service companies to offer competitive prices to their customers. By doing so, they can attract and retain customers who are looking to save money on their food purchases.

6.3 Practical implications

The research found that convenience and time-saving were the primary reasons driving people to continue using these services. This implies that even after the pandemic, the demand for online food delivery is likely to remain high, as it has become an ingrained habit for many Bangkokians. Businesses should adapt and invest in their online delivery platforms to meet the ongoing demand and cater to the changing consumer behavior.

6.4 Limitation

This study had several limitations. First, it focused exclusively on four factors (perceived usefulness, time saving advantage, cost saving advantage, and food safety risk perception) that affect customers' willingness to use online food delivery services in Bangkok. Due to time constraints, it was not possible to explore the impact of other potential factors such as the contagious nature of COVID. Secondly, the sample size in this study was limited to 398 respondents, and the majority of the data was collected from individuals aged between 20–35 years old, which may not accurately reflect the entire population of Bangkok. Finally, the study was conducted only in the capital city of Thailand and its context is limited to Bangkok residents.

6.5 Future study

To gain a more comprehensive understanding, future research needs to examine the impact of additional relevant factors on customer intention to use online food delivery services. Also, to increase the generalizability and credibility of the results, it is important to consider a larger and more diverse sample size in future research. This study was limited to Thai residents in Bangkok, and future studies should consider including foreign residents in the city. This can provide a more comprehensive understanding as cultural differences,

technology acceptance, and other factors may play a role in the results. To test the validity and reliability of the findings, further research can expand the study to other cities in Thailand and even other countries. Lastly, the factors affecting a customer's intention to use online food delivery services may vary based on the type of service, making it important to investigate in future research.

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(The Appendix follows overleaf)

Appendix

Table A1.
The value of reliability analysis of each item and variable in this study (n = 398)

Items	Reference	Cronbach's
Perceived usefulness (PU)	Hong *et al.* (2021)	0.668
PU1: I feel that using an online food delivery service makes my life easier		
PU2: I feel that using an online food delivery service is a convenient way to order and receive my meals		
PU3: Overall, I feel that using an online food delivery service is worth the money		
Time saving benefit (TSB)	Yeo *et al.* (2017)	0.707
TSB1: I believe the purchasing process of the online food delivery services is easy		
TSB2: I believe that I can save time by using online food delivery services when purchasing food		
TSB3: It is important for me that purchase of food is done as quickly as possible using online food delivery services		
Price saving benefit (PSB)	Yeo *et al.* (2017)	0.780
PSB1: I feel that I can save money by using prices of different online food delivery services		
PSB2: I like to search for cheap deals on different online food delivery platforms before ordering food		
PSB3: Online food delivery retailers offer better value for my money		
Food safety risk perception (FSRP)	Hong *et al.* (2021)	0.901
FSRP1: I feel that it is likely for online food delivery customers to get food poisoning because of the way food is delivered through an online food delivery service		
FSRP2: I feel that contamination of food by being delivered by an online food delivery service is a serious food safety problem		
FSRP3: I feel that food delivered by an online food delivery service is likely to have germs or other microorganisms that could make customers sick		
Customer intention to use (CIU)	Yeo *et al.* (2017)	0.807
CIU1: I plan to use an online food delivery service in the future		
CIU2: I will try to use an online food delivery service if I have a chance		
CIU3: I will recommend online food delivery services to other people		
Source(s): Compiled and modified by the authors		

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