

Research on the Factors Influencing the Use Intention of Takeout APP Based on Structural Equation Model

-- A Case Study of Grab, Thailand

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Abstract: In the context of the Internet economy, takeout APP has attracted the attention of many consumers because of its convenience, quickness, discounts and other characteristics. At present, more and more people are used to ordering, placing orders, paying and other operations through takeout apps. This new consumption mode has penetrated into all aspects of our daily life. Like Ramseook-Munhurrun and Nundlall (2013) added physical environmental quality as an important component of service quality based on Gronroos research in 1984. However, for the platform, information sharing between consumers and businesses can be achieved through takeout APP. Under this sharing mode, the platform can not only improve the service quality of businesses, reduce distribution costs and customers' shopping experience, but also enhance users' willingness to consume. Therefore, it is not only a marketing strategy for merchants to recommend takeout APP to consumers, but also a good platform for the development of the takeout industry. This study takes the Grab takeout APP in Thailand as an example, and uses the literature research method and questionnaire method to study the causes of its use intention. In the research process, the questionnaire survey method was used to collect data and analyze them, and then the structural equation model was used to verify the results of prediction; In the end, the results are displayed through data visualization analysis, hoping to bring some reference.

Keywords: Product factors, Thailand Grab takeout APP, Performance expectancy, Service quality.

1. Introduction

1.1. Research Background

In recent years, with the development of the Internet and the rapid development of the online meal delivery industry, it has become an important reason for the growth of catering consumption. The scale of the online meal delivery industry is also expanding, and the diversification of categories and scenarios has become the fundamental reason for improving the business income of the online meal delivery industry.

According to foreign media reports, the four express platforms Grab Hub, Door Dash, Post Mates and Uber Eats will witness explosive growth in 2020 due to the epidemic (Devita et al, 2021). According to MW data, Grab Hub has a market share of up to 50%, but the delivery cost of each order is as high as 10% - 40% (Subhani, 2022). In April 2020, Grab Hub was hit by the American antitrust class action lawsuit (Inthong et al, 2022). It is important that relevant stakeholders understand the factors that affect customers' continued use of FDA during the COVID-19 (Chotigo & Kadono, 2021).

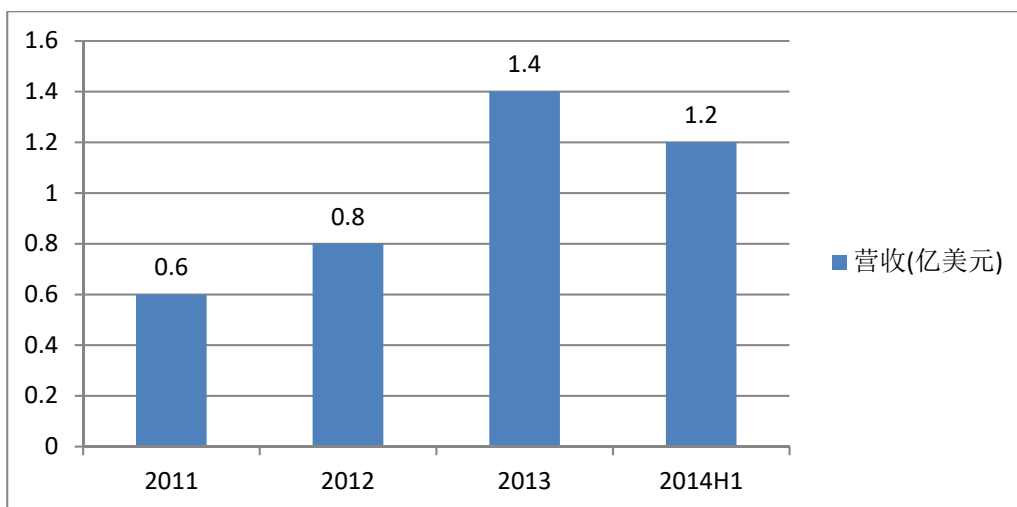


Figure 1. 2011-2014 Grab Revenue scale

Lee et al (2019) empirically tested the purpose and reason of using FDA. The research adopts mixed methods, including open-ended questions and questionnaires. They identified

eight different uses and satisfaction of using FDA, including customer experience, delivery experience, convenience, quality control, social pressure, ease of use, restaurant search

and listing. And according to Muangmee et al (2021), the main factor affecting customers' use of FDA is its expected performance. Although several studies have been conducted to investigate the behavioral intentions of using FDA, few studies have investigated this topic during the COVID-19 pandemic in Thailand. Therefore, this paper takes Grab take away APP as the research object, and tries to build a more real, objective, effective and complete mobile consumer influencing factor model in the field of online food distribution based on the Set Structural Equation Model (SEM).

1.2. Research problems

The market is constantly changing, opportunities and threats coexist (Lu et al, 2020). Whoever first finds new market gaps or market segmentation opportunities, finds market positions that have not been occupied and are valued by customers, selects clear target markets, and then assists effective differential marketing mix, can seize the opportunity to meet customer needs, ultimately improve the market competitiveness of their products, and improve their business performance. Therefore, how to improve the relationship between customer satisfaction, value-added service quality of take-out apps the basic service quality of take-out apps is very important.

2. Objective of the Study

In this study, user satisfaction refers to the comprehensive evaluation of users' satisfaction after using the mobile takeout APP to point out takeout. San and Dastane (2021) found that there is a correlation between customer satisfaction and customers' repeated purchase intention. Around the world, the rise and use of food distribution applications and platforms

have completely changed the way food suppliers and consumers interact.

1. Clarify that the basic service quality of Grab delivery applications has a positive impact on customer satisfaction.

2. Verify that the value-added service quality of Grab delivery application has a positive impact on customer satisfaction.

3. Confirm that transparency mechanisms have a positive impact on customer satisfaction.

4. Identify that customers' trust in Grab delivery application service providers may affect customer satisfaction.

3. Research Significance

From a theoretical point of view, the current research on intention to use mainly focuses on the definition, influencing factors and influencing mechanisms of intention to use. Previous studies have shown that consumers usually regard a product as a means to meet needs and solve problems rather than an end when using it, so businesses will not make more efforts to let consumers use the product.

From a practical point of view, the number of takeout APP platforms and businesses in Thailand is large and relatively mature, and the competition is fierce. Therefore, it is of great significance to study the influencing factors of takeout APP users' use intentions in Thailand to improve user experience and promote merchants to provide better services.

3.1. Theoretical framework

According to Rosário and Raimundo (2021), in the purchase behavior, customers also have great perceived risks to product quality, but have no high requirements for service quality. Therefore, the conceptual framework is as follows:

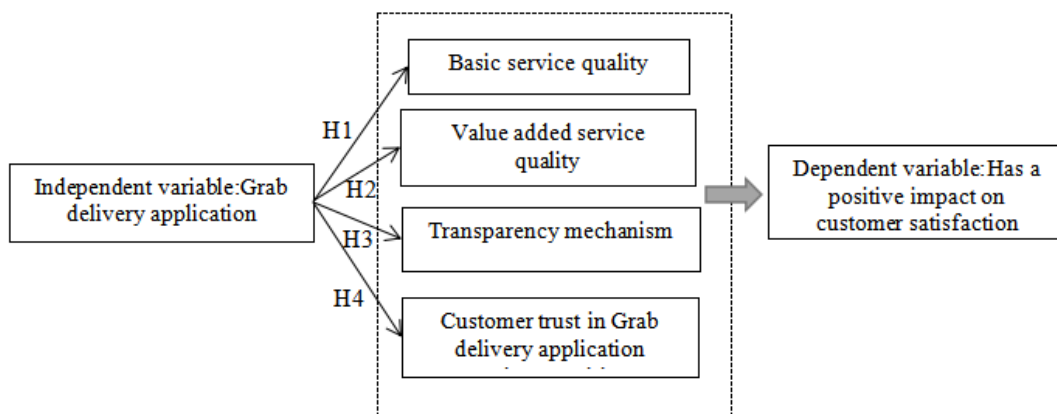


Figure 2. Technology road map

3.2. Hypotheses

H1: The basic service quality of grab takeout apps has a positive impact on customer satisfaction.

H2: The value-added service quality of the Grab takeout app has a positive impact on customer satisfaction.

H3: Transparency has a positive impact on customer satisfaction.

H4: Customer trust in Grab takeout app service providers has a positive impact on customer satisfaction.

4. Literatures Review

4.1. Service quality

Since the early 1980s, service quality has become the focus of research. Rabaa'i (2022) defined service quality as the degree to which service results can meet the preset ideal value, which verified that service quality includes service results and service delivery methods, both of which are indispensable, and pointed out that service quality consists of three parts: process quality, result quality and personnel quality. Wu (2021), a representative of the Nordic School, pointed out that service quality is mainly based on customer

perception, including two aspects: functional quality and technical quality; Functional quality refers to the perceived service level in the process of enjoying services. Jeong et al (2022) believed that at present, the majority of consumers are women, and online word of mouth will have a positive impact on the perceived usefulness and purchase intention of female consumers. Wang et al (2021) studied the influencing factors of whether consumers will consume online based on the current situation of online retail and found that when consumers have high trust in online shopping, their potential purchase intention will be affected.

4.2. Performance expectancy

Performance expectancy under the UTAUT model involves the user’s level of belief that the technology will improve performance in particular activities. The performance expectancy can therefore be used to determine the user’s likeliness to adopt new technology (Chaiyasoonthorn et al, 2019). Thus, using the performance expectancy concept to determine users’ acceptance intention to FDAs indicates greater intentions (Wei et al, 2021).

Based on the above literature review, this paper will focus on customer satisfaction as the main purpose, help Grab take away APP to conduct continuous interaction and dialogue in the business model innovation by means of improving the service quality.

5. Research Methodology

This study is mainly based on quantitative analysis, focuses on the practical problems of consumers in the consumption process of gram takeout APP. Making the questionnaire design

more reasonable also makes this study more practical (Limsarun et al, 2021). Then this article mainly adopts Empirical research method, Comparative analysis method and Quantitative research method.

5.1. Comparative analysis method

Facing the increasingly expanding customer group, takeout APP enterprises will also welcome new opportunities for change. With the development of economy, the online shopping demand of customers who choose online shopping presents a diversified development trend, and simple price advantage can no longer meet the growing online shopping demand of customers. After obtaining the overall data through questionnaire survey, conduct multi-stage random sampling, and conduct data reprocessing and comparative analysis.

5.2. Quantitative research method

Using quantitative research methods, through combing the value management theory, service quality theory and other related theories, this study summarized the relevant factors that affect the use of Grab takeout APP. At the same time, combined with the characteristics of mobile takeout APP (Bao & Zhu, 2021). The contributing factors are also divided into habits, subjective norms and switching costs on the basis of drawing on previous research results and combining the characteristics of mobile takeout APP itself and its users.

6. Finding and Conclusion

6.1. Finding

The relevant information about the basic service quality of the takeout APP is shown in the following table:

Figure 3. Basic service quality

Basic service quality	Send on time
	Customer service is flexible
	The takeaway package is good and no damaged
	Delivery is accurate
	No lost delivery (takeaway)
	Receipt reminder
	The receipt process is complete

Reliability analysis is an effective analytical method to detect whether the data are reliable and stable. The reliability coefficient of the total scale should be above 0.8 and 0.7 and 0.8 acceptable; the reliability coefficient of the subscale

should be above 0.7 and 0.6~0.7. acceptable (Limsarun et al, 2021). Cronbach alpha, if the coefficient is below 0.6, consider recompiling the questionnaire, the specific analysis is shown in Table Table 1 below.

Table 1. Reliability convergence

	Cronbach's Alpha	CR	AVE
Information quality	0.839	0.839	0.636
Mass of system	0.928	0.929	0.765
Quality of service	0.856	0.856	0.602
Perceived ease of use	0.81	0.816	0.598
Perceived usefulness	0.927	0.928	0.763
Trust	0.778	0.8	0.579
Degree of satisfaction	0.847	0.84	0.638
Consumption willingness	0.922	0.928	0.764

And validity analysis is an important part of the empirical analysis (Jiao et al, 2021). This study is based on the literature review shows the relationship between variables or

association construction, and according to the investigation is the result of the item wording, expression of further revised and perfect, the results are shown in the following table 2.

Table 2. KMO and Bartlett's Test

Sample a sufficient Kaiser-Meyer-Olkin metric.	0.887
The sphericity test of the Bartlett	Approximate chi square
	df
	Sig.
	8612.496
	124
	0.000

The sample size of this study is calculated according to the population size in Lamola et al (1973) formula. Next, In this paper, Pearson coefficient was used to study the correlation

between variables, and the value range was [-1, 1], generally represented by r letter. The results are shown in Table 3.

Table 3. Correlation analysis

		Product factors	Performance Expectancy	Effort Expectancy	Facilitating Condition	Social Influence	Using intention
Product factors	Pearson correlation	1	.339**	.329**	.336**	.369**	.316**
	Sig.	.000	.000	.000	.000	.000	.000
	Case number	519	519	519	519	519	519
Performance Expectancy	Pearson correlation	.339**	1	.403**	.382**	.333**	.325**
	Sig.	.000	.000	.000	.000	.000	.000
	Case number	519	519	519	519	519	519
Effort Expectancy	Pearson correlation	.329**	.403**	1	.368**	.344**	.302**
	Sig.	.000	.000	.000	.000	.000	.000
	Case number	519	519	519	519	519	519
Facilitating Condition	Pearson correlation	.336**	.382**	.368**	1	.288**	.297**
	Sig.	.000	.000	.000	.000	.000	.000
	Case number	519	519	519	519	519	519
Social Influence	Pearson correlation	.252**	.266**	.319**	.284**	1	.309**
	Sig.	.000	.000	.000	.000	.000	.000
	Case number	519	519	519	519	519	519
Using intention	Pearson correlation	.316**	.325**	.302**	.309**	.339**	1
	Sig.	.000	.000	.000	.000	.000	.000
	Case number	519	519	519	519	519	519

** . At 0.01 level , the correlation was significant.

As can be seen from the direct effect results of the model, all pathways in the model passed the significance test: The basic service quality of grab takeout app has a positive impact on customer satisfaction; The value-added service quality of grab takeout app has a positive impact on customer satisfaction; The transparency mechanism has a positive impact on customer satisfaction; Customer trust in grab takeout app service providers has a positive impact on customer satisfaction. It is found that the content of the hypothesis has a positive impact, so H1-H4 is valid.

6.2. Research conclusions

A large number of previous studies have confirmed that there is a close relationship between consumers' online shopping behavior and satisfaction, and consumers' use of online shopping is also related to satisfaction. Ramseook-

Munhurrun and Nundlall (2013) found in the research that the influencing factors of consumer satisfaction, mainly from the value dimensions of product value and service to meet the requirements of consumers, can improve consumer satisfaction. The main purpose of this study is to explore the impact of performance expectation, effort expectation, facilitation factors, social influence and perceived risk on willingness to use, and take performance expectation as a mediator variable. Literature research, hypothesis deduction and other methods were used to explore the relationship between performance expectation, effort expectation, facilitation factors, social influence and perceived risk on willingness to use, as well as whether performance expectation plays a mediating role. The hypothesis results are shown in the table below.

Table 4. Research hypothesis verification results statistics

Research hypothesis	
H1. Product factors will have a positive impact on Performance Expectancy.	acceptable
H2. Performance Expectancy will have a positive and direct impact on the intention to continue using it.	acceptable
H3. The lower Effort Expectancy is, the higher Performance Expectancy.	acceptable
H4. The lower the Effort Expectancy, the stronger the using intention.	unacceptable

Through data analysis, the results show that:

(1) Product factors will have a positive impact on Performance Expectancy, supporting the establishment of hypothesis H1. The results show that the user by Grab take-away APP to purchase products to be able to achieve their ideal or more than their own ideals, then the user will be satisfied, the user will may once again use the APP, it can be seen that Grab take-away APP users positive satisfaction degree for the product will improve its willingness to continue to use mobile take-away APP.

(2) Performance Expectancy will have a positive and direct impact on the intention to continue using it. Supports hypothesis H2. The results show that when users feel that using Grab takeout APP can truly solve the problem of ordering food, it has practical value, and has more positive comments and impressions, then users are likely to use the APP again. To sum up, Grab takeout users' performance expectations have a positive impact on their intention to use.

(3) The lower the Effort Expectancy, the higher the Performance Expectancy, the stronger the willingness to act. Support hypothesis H3 are not true. The results show that when users learn to order takeout by Grab and skillfully use it, they will have higher performance expectations and willingness to use it. At the same time, it will get certain benefits for itself, so as to have a positive influence on the continuous use behavior.

(4) The perceived Facilitating Condition will have a positive impact on Effort Expectancy. Supports hypothesis H4. The results show that when the user is in use, Grab the use of the APP can use mobile phone anytime, anywhere in the process of information acquisition and buying activities such as convenience, at the same time delivery abundance of the product and bring different occupation and the differences in needs and shopping experience, can be solved because of the emergency when possible inconvenience on questions such as benefits, This will increase users' willingness to use Grab again in the future. Therefore, it can be concluded that facilitation conditions will have a positive impact on effort expectation.

7. Recommendation

For businesses, only by improving the user experience, starting with the details of products or services, and making users feel the happiness and value in the consumption process, can they create continuous value for their brands. Zhu et al (2020) pointed that the level of service quality is aimed at the ability to meet customer needs, and also to help enterprises reduce service costs and gain more benefits. The core competitiveness of takeout businesses is to improve the user experience, so that consumers can enjoy the ultimate service and value-added products. Wang et al (2021) believe that the participation degree of consumers is linked to the service quality. Therefore, so it is suggested that the need to continuously improve the service quality is needed, strengthen the relationship with consumers and improve the participation degree of customers, so as to establish a good relationship with consumers and further increase the behavior of repurchasing.

After all, when dining in a physical store, customers can give feedback on the spot if they are dissatisfied. When ordering online, it becomes very difficult to track the quality of ordering. Lv et al (2021) found that habits have a significant impact on users' willingness to continue using. If the opinions

of takeout customers cannot be handled in a timely manner, the spread of bad reputation will lead to the loss of subsequent orders, so high-quality and efficient customer service is particularly important. In the context of seeking differentiated competition, the takeout industry has gradually shifted from an extensive price competition model to a more attentive user experience competition. After improving the basic points of customer satisfaction, consumers will be retained.

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