Exploring Customer Satisfaction With Self-Service Kiosk In Fast Food: A Study Among Uitm Permatang Pauh Students.

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Proposed citation:

Abstract

Self-service kiosks enable businesses to operate more quickly and cost-effectively while increasing productivity. Visitors can perform self-service tasks without waiting for professional assistance, allowing employees to work on tasks of excellent value to customers or benefit from face-to-face meetings. This study aims to measure customer satisfaction levels using self-service kiosks of fast-food restaurants. This study used a quantitative methodology and stratified random sampling technique. The sample size consisted of UiTM Cawangan Permatang Pauh students who had used self-service kiosks at fast food restaurants. The sample size was calculated using Raosoft.com, and the estimation was that the appropriate sample size for this population was 360 respondents. This research reveals a relationship between ease of use, speed of delivery, and perceived risk towards customer satisfaction among the young generation. This research also provides readers with extended knowledge about customer satisfaction that they can apply to their decision-making regarding repeating self-service kiosks at fast-food establishments. The result of this study will help fast-food restaurants identify possible surveys to utilize their services to become more popular and seek to meet client demand to optimize their revenue.

Keywords:

Customer satisfaction, ease of use, speed of delivery, perceived security risk, self-service kiosks, fast food, and Self-service technologies.

1 Introduction

A self-service kiosk is an interactive tablet or touchscreen computer that allows customers to access information or services without interacting directly with someone (Park & Lehto, 2021). According to Galdolage (2020), using self-service kiosks can improve business operations faster and more efficiently. In addition, it can reduce various costs. Customers may then perform various self-service tasks without requiring assistance from workers.

Self-service technologies (SST), such as automated teller machines (ATMs), online banking, mobile scanners, and ticket machines, have emerged as a distinct field of study, a competitive advantage for service providers, and an essential aspect of everyday life (Vakulenko,Oghazi & Hellström 2019). According to Lin and Hsieh (2011), demand for and interest in self-service technology are not based on the Internet. They will reach $31.75 billion worldwide by 2020 as people gain more experience and comfort with consumer technology. The use of self-service kiosks can improve business operations faster and more efficiently. In addition, it is also able to reduce various costs used (Scherer, Wünderlich, & Wangenheim, 2015). Then, customers can do various self-service activities independently without waiting for help from employees, including an interactive voice response system, internet-based services, interactive kiosks, mobile self-service, and individual healthcare devices (Meuter, Ostrom, Roundtree, & Bitner, 2000). With this service provider's benefit, it increased control over service delivery, service consistency, smooth demand fluctuations, lower wages, and expanded opportunities for delivery, and people could get a better experience, convenience, ease of use, increased customization, and reduced waiting time (Considine & Cormican, 2017).

This study aimed to determine how satisfied fast-food customers are with self-service kiosks. According to Galdolage (2020), self-service kiosks are helpful for clients and simple for food ordering services. Then, this study will examine customer satisfaction concerning the pace of paid-for fast food delivery services. The community frequently has conversations about this food delivery service. With proper usage, it could be more precise. Utilizing self-service kiosks is one of the many advantages that technological advancements will provide us. It has been a long time since this self-service kiosk has been operating. Additionally, this self-service kiosk can assist clients in expediting the food purchasing procedure (Khalufi & Shah, 2022)

However, some users are not adept at using this technology because they find it difficult to understand and there are too many steps to follow. Customers may need help to complete their orders if the user interface is challenging or the instructions could be more precise, which can increase waiting time and cause dissatisfaction (Joe, Kim & Zemke, 2022). Limited menu options lead to customer dissatisfaction if the kiosk does not offer the same menu items as the restaurant or if there are not many alternatives for customization. Abdul Hamid, Abdullah, and Seow (2021) stated that the problems highlighted are related to the self-service kiosk interface, menu selection, product

personalization, and payment system. If they try to learn to use it, it will be easy and save time when placing an order.

Based on a previous study, walk-in self-service kiosk usage will run into issues if too many customers place orders. It will take some time for them to make the dish that the consumer has requested. Customers are unhappy as a result and endure lengthy wait times. Additionally, customers may place items online and avoid lengthy wait times because their delivery is quicker than going directly to the store (Giousmpasoglou & Hua, 2020).

1.2 Research Objectives

RO1: To examine the relationship between ease of use of self-service kiosks and customer satisfaction when purchasing fast food among UiTM Permatang Pauh students.
RO2: To determine the relationship between the speed of fast-food delivery services and customer satisfaction among UiTM Permatang Pauh students.
RO3: To study the relationship between perceived security risk and customer satisfaction when buying fast food among UiTM Permatang Pauh students.

1.3 Research Questions

RQ1: What is the relationship between the ease of use of self-service kiosks and customer satisfaction when purchasing fast food among UiTM Permatang Pauh students?
RQ2: What is the relationship between the speed of food delivery services using self-service kiosks and customer satisfaction among UiTM Permatang Pauh students?
RQ3: What is the relationship between the perceived security risk of self-service kiosks and customer satisfaction among UiTM Permatang Pauh students?

1.4 Research Hypotheses

H1: There is a relationship between customer satisfaction and ease of use of self-service kiosks when purchasing fast food among UiTM Permatang Pauh students.
H2: There is a relationship between customer satisfaction and the speed of fast-food delivery services among UiTM Permatang Pauh students.
H3: There is a relationship between customer satisfaction and the perceived security risk among UiTM Permatang Pauh students.

2 Literature Review

2.1 Self-service kiosk

A self-service kiosk is a self-service technology (SST) frequently employed in many hospitality business sectors. Self-service check-in kiosks are widely employed in the hospitality and tourism industries. According to current trends, this kiosk is also used in restaurants (Shahril, Zulkafly, Ismail & Sharif, 2021). Customers have more control over their personalized orders because of self-service technology in the food business. Self-service kiosks encourage customers to place orders quickly without dealing with complex menus or fear of being scrutinized for their selections (Samengon et al., 2023). Over 50% of fast-food patrons concur that restaurant technology enhances the quality of their meals, and over a third prefer to eat in establishments with greater technology (Samengon, 2022; Walker & Johnson, 2006). According to Liu (2019), digital self-service kiosks are essential in many customer-oriented applications, like self-check-in at airports and self-ordering at fast food restaurants. Self-service kiosks are also widely employed for educational objectives, such as informing visitors about specific museum exhibitions. Additionally, virtual reality (VR) technology has been demonstrated to support learning experiences (Horst et. al, 2022). Understanding customer intentions regarding self-service kiosks is important because self-service technology (SST) has been increasingly incorporated into today's service sector (Park et. al, 2021). The fast food industry is aware of the importance of using technology to improve its services further, especially when the technological era advances. Self-service technology (SST) is increasingly integrated into the modern service sector. Therefore, it is essential to understand how customers will use self-service kiosks.

2.2 Ease of use

Nowadays, technology is snowballing worldwide and can make a country more advanced. Then, customers prioritize time savings and are likely sensitive to delivery speed. Customers are concerned about how long it takes to complete a transaction, thus, self-service solutions have been created to shorten the time required. Time may be saved in two ways: while waiting for service and during service encounters (Hong & Slevitch, 2018). The expansion of technology-based solutions for service delivery during the past ten years has been impressive. Service providers increasingly utilise technology to make their workers' jobs more accessible and motivate customers to execute services independently (Quinn, 1996; Zinn, 1993). There are several advantages for businesses in providing service delivery based on technology; in particular, encouraging customers to execute services on their own using technology can save the company a lot of money (Lee & Lee, 2020; Barrett, 1997; Blumberg, 1994). Modern technology is also an innovation in the business world. Users must adopt this new technology in self-service kiosks because it makes buying and ordering online easier. Users should use this technology carefully and well. It saves time, energy, and costs because users no longer have to go out to place orders. They must use the technology to order faster (Hong & Slevitch, 2018). Retailers who have used self-service technology (SST) are turning to this

self-service technology (SST) to increase productivity and service quality while reducing costs. We identify a process model to understand the antecedents and consequences of customers' use of SSTs in in-store retail settings. The model was validated using a combination of survey and observational data. Perceived usefulness, perceived ease of use, reliability, and enjoyment were critical keys to customer attitudes toward SST (Weijters, Rangarajan & Schillewaert, 2007).

2.3 Perceived security risk of self-service kiosk

The perceived risk results from a decision's importance and uncertainty regarding its outcomes and consequences. Perceived risk is defined by Nguyen and Huynh (2018) as a potential loss when pursuing objectives. According to Mandrik and Bao (2018), risk perception is a function of one's perception of the seriousness or significance of one's actions and the potential consequences of those actions. Perceived risk has been seen as a characteristic that affects the early phases of decision-making and is a central idea in research on consumer behavior Abdul Hamid et al., (2021). Customers are also worried about security risks in addition to perceived risks. Due to their security concerns, they hesitate to use this self-service kiosk. Based on Korauš, Dobrovič, Polák, and Backa (2019), Self-service kiosk usage needs to emphasize security considerations more strongly. Examples of problems are the confidentiality of account PINs, the security of using credit or debit cards, and other issues related to safety features. The use of self-service kiosks must resolve security concerns regarding their services. This is due to the need for more trust that frequent self-service kiosk users have in them. Some people fear using self-service kiosk services because they do not feel confident in their security (Le, Rao Hill & Troshani, 2022). Referring to Liu and Hung (2020), as a critical factor of service excellence, security has attracted more attention from service provider organizations that use SST to reach their customers where employees do not serve them directly. The term security means the process of protecting the transactions that take place in the technological environment. As a security control component, technical security refers to shielding resources and information with cryptography and firewalls and preventing access to software that helps prevent virus attacks and hacking attempts from the internet (Lee, Kim, & Ham, 2016).

2.4 Speed of Delivery

The impact of perceived transaction cost growth when customers habitually use the self-service kiosk can be positive or negative (Lee, 2015). Based on Lim, Lee, and Foo (2017), customers cannot form deep identification and emotional attachments with the service front-line staff due to a lack of human touch and face-to-face contact. As a human being is a buffer against potential undesirable consequences that can emerge during the encounter, it also increases the uncertainty of doing business with the company. The development of technology is so fast that it helps us to solve all matters and obstacles in a short period. At the same time, the public is more inclined to use services that save time (Hong & Slevitch, 2018). Self-service kiosk services are now widespread and widely used. With that, the concept of speed and efficiency becomes

the main issue. This is because customers are increasingly sensitive to the issue of speed in the service provided by self-service kiosks. Service processes that use modern technology have been introduced to reduce the time customers and employees require. Among the steps that can be applied in self-service kiosk time management is through two methods, namely, the waiting time for service and the time during the service meeting. In addition, Hong and Slevitch (2018) also stated that fast and efficient service delivery is an essential factor. Based on past research from Kaushik and Rahman (2017), customers are more likely to embrace SSTs that speed up service delivery since they highly value time savings. In terms of quality of service, adopting an SSK is also regarded as vital for business and leisure tourists due to the quick service delivery. Based on this writing, this study looks at whether the speed of delivery is an essential factor in the study, as stated before by previous researchers (Hong & Slevitch, 2018).

2.5 Customer Satisfaction

Customers are crucial to a company's success and growth in the market. Organizations that wish to succeed must supply their clients with valuable and distinctive terms that meet their demands. Satisfaction involves the shopping experience and the situation before and after the purchase environment (Biesok & Wyród-Wróbel, 2011). This study also defined customer satisfaction as consumers' response to consumption-related fulfillment or their evaluation of the product's and service's ability to provide a satisfying level of that fulfillment (Oliver, 2014). Rahman et al. (2019) defined customer satisfaction as the level of customer satisfaction with a product and service that a company has provided. The quality, value, and customer expectations of a product or food the company offers are also included in customer satisfaction. The data obtained by the company will be used to collect all the information provided by the customer. This data collection is carried out through survey methods and focus groups. It can help them determine how to increase the sales of the products provided. Additionally, this method can retain more customers and reveal critical insights into how customers relate to brands and how they will interact with them. Understanding and identifying customers' wants and expectations can be challenging in achieving customer happiness (Camilleri & Camilleri, 2018). To ensure that the demands and expectations of their customers can be met, Ograjensek and Gal (2019) asserted that the company should research what to measure and how to collect the data. The researchers opted to employ specific factors as dimensions, especially for revisiting and commending. Based on Ograjensek and Gal (2019), customer satisfaction, perceived service quality, customer experience, and engagement all refer to ideas that might influence how customers feel about goods or services.

2.6 Youth Generation with Technologies

Technology is causing a significant generational gap, with each generation distinct from the one before, mainly because of the industry's fast improvements. (Ruby Singh, 2023). The younger generation nowadays is sometimes called the "digital generation," as, depending on how they utilize it, current technology may either make them wiser or dumber. Modern technology makes the youth more productive and efficient in this field. It is also developing more rapidly nowadays (Ruby Singh, 2023). With the availability of technology, using self-service kiosks is no longer a problem for them. Self-service kiosks have also been widely used to help customers order food faster. These youth prefer to use self-service kiosk services when ordering their food. Based on Collins and Halverson (2018), modern technology devices have saved precious time by automating many manual tasks. For today's youth, going a day without using technology is impossible. With the help of technology, the young generation can discover many new things quickly. Technology has several advantages for today's youth, as it makes their lives easier and provides them with variety and pleasant distractions (McHaney, 2023). However, even though technology is a crucial source of information and entertainment, it distracts simultaneously, and each directly affects our youth development (Ruby Singh, 2023). Thus, this study focused on the young generation at the university level.

3 Methodology

3.1 Research Design

Research design is the method of selecting a solution to the problem of a research project. According to Sekaran and Bougie (2019), the research design is a plan for collecting, evaluating, and interpreting data related to the study issue. This study used a quantitative method to study customer satisfaction with self-service kiosks in fast-food restaurants, and questionnaires were distributed. Several sections of the questionnaire inquired about ease of use, speed of delivery, and perceived risk of self-service kiosks in fast-food restaurants. Answering this questionnaire requires less time to complete than completing the open-ended version. This study, which is a field experiment, aims to evaluate the cause-and-effect connection. It might be assumed that the investigation was carried out in an unplanned setting with minimal researcher intervention. This questionnaire determined respondents' views on issues and factors influencing customer satisfaction with self-service kiosks among UiTM Permatang Pauh students, who were chosen as a sample for this study.

3.2 Population and Sample

As stated before, the main goal of this study is to examine customer satisfaction with using self-service kiosks when buying fast food among students at UiTM Permatang Pauh. The respondents who provided data for this study are all UiTM Permatang Pauh students. The targeted respondents, selected using stratified random sampling techniques, were given a questionnaire. This questionnaire will see respondents' views

on issues and factors influencing customer satisfaction with self-service kiosks among UiTM Permatang Pauh students. For this study, the population respondents were 5543 students from UiTM Permatang Pauh. After using Raosoft.com, the calculated number of respondents needed was 360.

3.3 Research Instrument

The questionnaire formatted as a Google form with clear instructions and a polished appearance. Additionally, there will be spaces on the questionnaire where respondents can quickly check the circles from the Likert Scale that they prefer to use in place of a process or enter numbers, which can occasionally be confusing when there are many questions. Therefore, the questions are straightforward and clear, removing all confusion. This questionnaire is divided into 6 parts. The first part is about the demographics of the respondents. The next part is about the dependent and independent variables studied. 360 respondents will be selected through a stratified random sampling technique. This amount is enough to conduct this study and can prove customer satisfaction with self-service kiosks in fast food. The questionnaire consists of 6 sections: eligibility, demographics, ease of use, perceived security risk, speed of delivery, and customer satisfaction. The measurement was based on a Likert scale from 1 to 5: (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5=Strongly Disagree).

3.4 Data Collection

UiTM Permatang Pauh students have been selected to answer all of this study's questionnaires. Data collection using an online survey using Google Forms. The survey question was distributed using Telegram, WhatsApp, Facebook, and Email groups strictly restricted to only students at UiTM Permatang Pauh. The reason is to ensure the data is authentic from UiTM students, not outsiders. All the data that has been collected will be used to identify the factors that affect customer satisfaction with self-service kiosks. Questionnaires are used to collect data and information related to the study. A total of 360 respondents were taken through a stratified random sampling technique. This amount is enough to complete this study and prove customer satisfaction with self-service kiosks in fast food.

3.5 Pilot Test

A pilot test was conducted, and 30 respondents were chosen to answer the questionnaire. The respondents must fulfill the criteria set by the researcher: selected respondents for the questionnaire provided must be 18–30, UiTM Permatang Pauh students, and have experience using self-service kiosks in fast food and other places. It is essential to conduct a pilot test to measure the validity and reliability of each item used in the questionnaire. Furthermore, the reason for running the pilot test is to test whether the words and language used in this research are easy to understand.

Table 1: Cronbach Alpha Value of Pilot Test

Variables	Number of Items	Cronbach's Alpha
Ease of use	5	0.949
Speed of ordering	5	0.965
Perceived security risk	5	0.931
Customer satisfaction	5	0.907
Total	20	0.981
N=30		

Table 1 shows the initial reliability test of 30 respondents. The values shown are the results of Cronbach's Alpha for the four sections in the study. Most of the variables show a significant value, such as ease of use (0.949), speed of ordering (0.965), perceived security risk (0.931), and customer satisfaction (0.907).

4 Findings

4.1 Reliability Test

A reliability test was carried out to verify the authenticity of the questionnaires. Consequently, all the variables are valid for the analysis. The magnitude of Cronbach's Alpha is shown in the table below. The outcome of all variables is 0.965.

Table 2: Cronbach's Alpha

Variables	Number of Items	Cronbach's Alpha
Ease of use	5	0.889
Speed of ordering	5	0.912
Perceived security risk	5	0.943
Customer satisfaction	5	0.905
Total	20	0.965
N=30		

Cronbach's alpha values for independent and dependent variables were obtained through SPSS. On top of that, all the values in the measurement exceeded the minimum acceptability reliability coefficient value of 0.6. Therefore, no item was deleted.

4.2 Demographic Profile

Table 3: Frequency of Respondent

		Frequency	Percentage
Gender	Female	197	53.2
	Male	173	46.8
	Total	370	100.0
Faculty	FKA	55	14.9
	FKE	39	10.5
	FKK	83	22.4
	FKM	83	22.4
	FPHP	110	29.7
Level of Education	Degree	182	49.2
	Diploma	147	39.7
	Master	19	5.1
	Pre-Diploma	22	5.9
Frequency using the Service Kiosk per month	1-3 times	1	.3
	1-5 times/month	287	77.6
	6-10 times/month	81	21.9
	daily but not daily	1	.3

Table 3 indicates the involvement of the respondent's gender, faculty, level of education, and frequency of using self-service kiosks per month. Female respondents from recorded data (N=197) contributed 53.2%, while male respondents recorded 46.8% (N=173). This survey shows that females are likelier to answer this survey than male respondents. Then, as stated in the table, respondents from the FPHP faculty are the highest contributors, at 29.7% (N = 110) of 370 respondents, compared to the other respondents from different faculties. For Level of Education, degree students had the highest number of respondents for this survey, 49.2% (N = 183). They are more likely to use self-service kiosks at fast food. The highest frequency of monthly visits is from 287 respondents; 1-5 times/month recorded 77.6%. It can be concluded that the respondents often visit the self-service kiosk in fast food about 1-5 times/month.

4.3 Procedures of Analyses

The average rating given by respondents for each item is subjected to descriptive analysis to answer all study objectives and questions. The analysis has three distinct sections. The first section examines the relationship between customer satisfaction and the ease of use of self-service kiosks to make fast food purchases. The second section

determines the association between customer satisfaction and the speed of fast-food delivery services. Lastly, the connection between customer satisfaction and the perception of security risk when using self-service kiosks must be determined.

Table 4: Ease of Use

Section	Question	N	Mean	Std. Deviation
B1	I find it easy to use the self-service kiosk.	370	4.56	.697
B2	The instructions displayed at the kiosk are clear and understandable	370	4.42	.679
B3	Learning to use the self-service kiosk in a quick-service restaurant is easy.	370	4.48	.659
B4	I could easily become skilled at using the kiosk.	370	4.47	.667
B5	I find the self-service kiosks in fast food restaurants user-friendly.	370	4.48	.675
	Valid N	370		

Table 4 depicts a descriptive analysis of the ease of use of self-service kiosks when purchasing fast food. The study indicates that the highest mean score on Likert's Scale of 1 to 5 from that self-service kiosk is easy to use (M=4.56, SD .697, section B1). Respondents also agree that the instruction in the self-service kiosk is clear and understandable (M=4.42, SD .679, section B2). On the other hand, the respondents' points of view about whether they can learn the use of self-service kiosks in fast food is easy (M=4.48, SD .659, section B3). Besides, the respondent agrees that they can be skilled using self-service kiosks (M=4.47, SD .667, section B4). The last item shows the respondent agrees that the self-service kiosk in fast food is user friendly (M=4.48, SD .675, section B5).

Table 5: Speed Ordering

Section	Question	N	Mean	Std. Deviation
C1	Using the self-service kiosk will save my time.	370	4.67	.641
C2	The kiosk allows me to browse the menu conveniently.	370	4.49	.707
C3	The kiosk provides complete information, such as meal choices and prices.	370	4.50	.668
C4	Using SSK during peak hours can decrease long waiting or queueing hours.	370	4.52	.638
C5	Language barriers can be reduced between customers and staff by using SSK	370	4.49	.664
	Valid N	370		

The descriptive analysis in Table 5 displays those five questions regarding the speed of fast-food delivery services. The outcomes show that the highest mean respondent agrees that self-service kiosks will save time (M=4.67, SD .641, section C1). Respondents also agree that self-service kiosks provide complete information (M= 4.50, SD .668, section C3). Next is the respondent's agreement that the self-service kiosk decreases long waiting or queueing hours (M=4.52, SD .638, section C4). The lowest mean respondent agrees that using self-service kiosks in fast food can reduce language barriers. (M=4.49, SD. 664, section C5) and the self-service kiosk that allows us to browse the menu conveniently (M=4.49, SD .641, section C2).

Table 6: Perceived Security Risk

Section	Question	N	Mean	Std. Deviation
D1	I feel that it is safe for me to provide my credit card information when I use the kiosk	370	4.46	.754
D2	I feel safe when I make a payment using SSK.	370	4.46	.687
D3	I find it very easy to make the payment using SSK because it provides clear instructions that are understandable	370	4.47	.638
D4	I feel very secure when using the kiosk.	370	4.46	.671
D5	The security policy for credit card information on this system is clear.	370	4.46	.654
	Valid N	370		

Based on the result presented in Table 6, a descriptive analysis of perceived security risk during the use of self-service kiosks. The analysis revealed that the respondents agree that the SSK payment is easy because it provides clear instructions and the highest mean (M=4.47, SD .638, section D3). Meanwhile, the respondents also agree they feel safe giving information when using self-service kiosks (M=4.46, SD .754, section D1). The analysis also states that respondents agree they feel safe when making payments using SSK (M=4.46, SD.638, section D2). Next, the respondents also agreed that they felt secure using self-service kiosks (M=4.46, SD .671, section D4). Lastly, the respondent also agrees that the security policy for card information on SSK is clear (M=4.46, SD .654, section D5).

4.4 Regression Analysis

Three hypotheses were analyzed using regression analysis, which are as follows:

H1: There is a significant relationship between customer satisfaction and ease of use of self-service kiosks when purchasing fast-food among UiTM Permatang Pauh students.

H2: There is a significant relationship between customer satisfaction and the speed of fast-food delivery services among UiTM Permatang Pauh students.

H3: There is a significant relationship between customer satisfaction and perceived security risk when using self-service kiosks among UiTM Permatang Pauh students.

Table 7: Regression Analysis

Variables	Standardized Coefficients Beta (β)	R^2	Adj. R^2	R^2 Change	F-Change
Ease of use	.667	.445	.444	.445	295.529
Speed ordering	.738	.545	.544	.545	440.731
Security risk	*.768*	.590	.589	.590	529.324

Note: $*p < 0.05, **p < 0.01, ***p < 0.001$

The hypotheses were tested using regression analysis with the variables included. Mainly, this research aimed to determine if and to what extent ease of use, speed of ordering, and security risk affect consumer satisfaction. The findings demonstrate that 44.5% (R^2=.445, F-change=295.529, p<.000) of the variance in customer satisfaction is explained by the self-service kiosk's ease of use in the fast-food industry. The results showed that the ease of use greatly influenced consumer satisfaction. The speed of fast-food delivery service variables only successfully explains 54.5% (R2 =.545, F-change = 440.731, p<.000) of the variance in customer satisfaction, as shown in Table 8. Customer satisfaction was considerably and favourably influenced by the delivery service's speed. We can infer that the second hypothesis is accurate because consumers value quick delivery services. Then, according to the findings, 59.0% (R^2=.590, F-change=529.324, p<.000) of the variance in customer satisfaction could be attributed to perceived security risk. This hypothesis is supported because it can be inferred that customers' perceptions of security risk have considerably influenced their purchasing decisions.

4.5 Summary of Hypotheses

The hypothesis results are represented in Table 8, derived from earlier statistical analysis results.

Table 8: Summary of Hypotheses

Hypothesis	β	p-value	Results
H1: There is a significant relationship between customer satisfaction and ease of use of self-service kiosks when purchasing fast food among UiTM Permatang Pauh students.	*.667*	p < .000	Accepted
H2: There is a significant relationship between customer satisfaction and the speed of fast-food delivery services among UiTM Permatang Pauh students.	*.738*	p < .000	Accepted
H3: There is a significant relationship between customer satisfaction and perceived security risk when using self-service kiosks among UiTM Permatang Pauh students.	*.768*	p < .000	Accepted

5 Conclusion

As a result, self-service kiosks at fast-food restaurants influence customer satisfaction due to their ease of use, speed of delivery, and security risks of the self-service kiosks. All the hypotheses showed a significant relationship between self-service kiosks and customer satisfaction among UiTM Cawangan Permatang Pauh students. Most respondents agree that self-service kiosks in fast-food restaurants make it easy for them to place orders. Respondents prefer to use the self-service kiosk in fast food and believe it to be very useful to them; the self-service kiosk displayed clear instructions that are easy for the customer to understand and the respondent to use without any problems. Yet, most importantly, the self-service kiosk is user-friendly and enables customers to control their customized orders more effectively. Then, the self-service kiosks suit the user, who quickly becomes skilled at using the kiosk. The second analysis stated that the speed of fast-food delivery services also influences customer satisfaction. The speed of fast-food delivery services had a positive impact on customer satisfaction. The survey findings indicate that the speed of fast-food delivery services saves the customer's time when they purchase food using the self-service kiosk. Using self-service kiosks during peak hours can decrease long waiting or queueing hours. Customers may swiftly and effectively place their orders at these kiosks, reducing waiting times and raising general customer happiness. Ordering speed is the rate at which a customer's order is processed, filled, and delivered. It includes the time needed to place an order, verify payment, choose and package the items, and finish the delivery. Clients demand rapid and efficient delivery of their goods; therefore, order processing speed is crucial to avoid losing sales and aggravating clients. Customer satisfaction can be raised by

speeding up the ordering process, and businesses can become more competitive. Concerning the final research question, the findings indicate that perceived security risk significantly influences customers' satisfaction. Regression analysis has demonstrated that the hypothesis has a good linear relationship that is positively oriented**.** This survey demonstrates perceived security risks. It's crucial to remember that perceived and actual security dangers might vary. Organizations using self-service kiosks should address both actual and perceived security issues by establishing strong security measures, including encryption, secure authentication protocols, regular software upgrades, physical security controls, and transparent privacy policies. Explaining these security procedures to users can reduce their perceived security worries and increase system confidence.

This study produced several uncommon, noteworthy, and significant findings. However, certain restrictions, suggestions, and directions for the explanation need more research. Collecting enough data is a challenge in completing this project because it requires many respondents. In addition, the obtained data was interpreted using SPSS (Statistical Package for Social Sciences). We found utilizing the program to be rather tricky. Then, this study only concerns the youth generation and is focused on students at UiTM Permatang Pauh. In the future, it might concentrate on other populations and sample sizes to explore more information about this topic.

This research also provides readers with extended knowledge about customer satisfaction that they can apply to their decision-making regarding repeating self-service kiosks at fast-food establishments. The result of this study will help fast-food restaurants identify possible surveys to utilize their services to become more popular and seek to meet client demand to optimize their revenue.

From this study, researchers hope to help customers use self-service kiosks more widely and influence others to do so. A self-service kiosk can save time when ordering food at a fast-food restaurant. In addition, food stores or other stores can also use this kind of system in the future. It can save costs and speed up the buying and selling process. Self-service kiosks also make the organization look trendy and competitive.

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