

Factors of Self-Checkout Counter towards Customer Usage Intention in Malaysia Drugstore

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Abstract

Self-Checkout Counter is implemented to make it easier to make payment transactions. In Malaysia, Self-Checkout Counter technology is beginning to grow and become a concern because it can provide benefits to consumers in many ways. It is evident from the available literature that research related to Self-Checkout Counter prioritizes technical, organizational and implementation aspects while limited attention is given to understanding the usage aspects and user satisfaction. There have lack of study regarding of Self-Checkout Counter implementation at Drugstore especially at developing country such as Malaysia. There have lot of study discuss about the e-wallet application. RFID, Bingo Box, Touch N Go but there have limited research discuss about what are the factors that will improve Self-Checkout Counter usage as mainly for the customer usage intention in Malaysia. Therefore, this study aims to examine the factors and customer usage intention of Self-Checkout Counter by empirically testing the constructs related to the Diffusion of Innovation model. The models developed include constructs such as Compatibility, Ease of Use, Trialability, Perceived Trust and Usage Intention. A survey based on a questionnaire was used to collect data from 150 respondents consisting of students and random people. This research uses simple random sampling as probability sampling in which samples are selected at random. The data obtained were analysed using the Statistical Package from the Social Sciences (SPSS). The results of this study indicate that all relevant constructs have shown a significant relationship to the intention of using Self-Checkout Counter technology. As a result, this research can benefit students, communities and governments to develop better financial systems for consumers.

Keywords: Self—Checkout Counter, IS Success Model, Compatibility, Ease Of Use, Trialability, Perceives Trust, Usage Intention

Introduction

Economic growth refers to the increase in a country's capacity to produce goods and services over time, measured in nominal or real terms adjusted for inflation. It focuses on long-term economic productivity potential. Economic development is crucial for rapid economic transformation in developing or less developed countries towards achieving stable income levels (Shaukat et al., 2019). Currently, self-checkout technology simplifies payment processes for customers in specific settings compared to traditional counter payments. It allows customers to complete transactions independently without needing staff assistance. Self-checkouts, also known as automated checkouts (ACOs) or assisted checkouts (SCOs), enable customers to scan items and manage their purchases themselves. This technology is increasingly popular in supermarkets, where staff are available to assist customers if needed. Checkout-free stores offer a different self-service experience, eliminating waiting times by tracking purchases and automatically sending bills to customers' phones.

Self-service technologies (SSTs), including self-checkouts, have been introduced in supermarkets, expanding opportunities for grocery stores beyond traditional checkout methods. The Technology Acceptance Model was employed in recent research to evaluate the adoption of self-checkout systems among various consumer categories, identifying factors that influence their acceptance of smart grocery shopping technologies (Thomas-Francois and Somogyi, 2022). The study found that different consumer segments exhibit varying levels of acceptance towards self-checkout, influenced by their preferences for shopping methods and convenience. Overall, consumers demonstrate a general willingness to adopt smart grocery shopping practices, with their behavioral intentions shaped largely by their attitudes towards shopping methods and convenience.

The self-checkout counter facilitates public transactions without direct interaction with store staff. Users simply follow provided guidelines and operate the machine, making it user-friendly and efficient compared to traditional cash registers that often involve long queues. This technology allows consumers to scan and bag their purchases independently, enhancing efficiency and the overall shopping experience. Its popularity has grown globally, including in Malaysia, driven by these benefits. A study investigated the relationship between service quality, customer satisfaction, and reuse intentions among visitors to Malaysian general stores. Using a structured survey with a seven-point Likert scale, data was collected from 394 self-checkout users. Findings suggest that integrating current technology into self-checkout systems enhances grocery store operations, offering convenience and speed. However, challenges such as item recognition issues and potential job displacement for cashiers exist. The study underscores the increasing practicality and consumer preference for self-checkout, urging merchants to make informed decisions as this technology becomes more mainstream (Rajaraman, 2018).

Moreover, the research identifies a gap in studies on self-checkout systems in Malaysian drugstores. It aims to explore factors like compatibility, ease of use, trialability, and perceived trust influencing customer intention to adopt self-checkout technology. Using the Information System Success Model and secondary sources, the study analyzes customer usage intentions to uncover elements crucial for enhancing user satisfaction with self-checkout technology (Cebeci et al., 2022).

Literature Review and Hypothesis Development

Definition of Self-Checkout Counter

Self-checkouts (SCOs) are machines that allow customers to handle their own transactions without needing standard staffed checkouts, also known as ACOs or self-service checkouts. Customers scan item barcodes themselves before completing their transactions, without assistance from employees. These self-service checkouts are primarily found in grocery stores, though they are also present in convenience and department stores. Most self-service checkouts are supervised by at least one staff member who assists customers with transactions, corrects prices, or provides other services. Currently, about 90% of supermarkets globally are equipped with self-checkout stations. However, these systems do not provide customers with product information while they shop or monitor theft, leading to losses in supermarkets and dissatisfaction among customers, respectively. Customers often experience long waits in lines to scan their products' barcodes, making the checkout process tedious. Self-checkout technologies are defined as platforms that enable customers to independently conduct transactions without direct service personnel. Among businesses, particularly supermarket chains, the use of self-checkout counters has garnered significant interest. For instance, in 2007, the British supermarket Tesco introduced self-checkout stations to its American operations, Fresh and Easy (Smith and Sparks, 2009).

According to Smith and Sparks (2009), self-checkout counters have gained increasing popularity in recent years due to their ability to reduce labor costs and enhance customer convenience. They point out several advantages of self-checkout counters over traditional ones, including faster checkout times, reduced wait times, and improved customer satisfaction. Self-checkout counters empower customers to take more control over the checkout process, allowing them to complete their purchases efficiently and promptly. However, Smith and Sparks (2009) also acknowledge that self-checkout counters come with their own set of challenges. For instance, the technology behind self-checkout systems can be complex, requiring both customers and employees to undergo significant training. Moreover, these systems may be susceptible to theft and misuse, necessitating increased security measures to mitigate these risks.

Self-service kiosks in Malaysia are automated tools that enable customers to interact directly with businesses and conduct transactions independently. These kiosks are employed in diverse settings, including purchasing rail or bus tickets, ordering food in restaurants, and checking in at hotels and airports. The automation system within these kiosks facilitates quick transactions, eliminating lengthy waits and manual processing, thereby enhancing efficiency and reducing human contact. The primary objective of self-service kiosks is to enhance customer engagement by providing a fast and straightforward transaction process. Typically, they offer features such as various payment options, check-in assistance, branding or advertising displays, and inventory management. Many kiosks utilize NFC technology to provide secure payment options, ensuring seamless transactions for customers purchasing digital services. Moreover, they streamline the check-in process for hotels and airlines, significantly saving time compared to traditional methods. Kiosks also serve as effective platforms for promotions and advertisements, enabling organizations to achieve their branding and promotional objectives efficiently. Given their widespread usage and high foot traffic, kiosks contribute significantly to service automation.

Self-checkout Technology at Checkout Counter

The deployment of highly integrated technologies is essential for an automated self-checkout system. Technology encompasses knowledge, materials, machinery, equipment, and operational procedures that enable organizations to convert inputs into outputs. The development of new technologies is influenced by external factors such as demographic shifts, social changes, lifestyles, and economic trends. Investing in cutting-edge technology has the potential to enhance productivity significantly. For instance, the Malaysian manufacturing industry has experienced substantial productivity gains due to investments in flexible manufacturing technology. Continuous advancements in checkout technology are ongoing. For example, the introduction of electric scanners at checkout counters is expected to improve current checkout processes significantly. According to a review of literature, the success of self-service technology hinges on two criteria: reliability and benefits. Personal competence, perceived risk, comparative advantages, and preferences for personal interaction all influence the adoption and usage of self-service technology.

Retailers have been utilizing price scanning technology for over two decades. The implementation of scanners at checkout counters has reduced the skill level required for operating them. This standardization has enabled hypermarkets to employ unskilled personnel who can be trained quickly. Consequently, customers can be taught to use self-service checkouts independently, reducing reliance on service providers. Access to self-service checkouts is likely to encourage customers to shop independently. However, substantial capital investment is necessary to install and maintain self-service technology. Therefore, hypermarket retailers can achieve profitability by reducing labor costs while increasing market share. If a hypermarket can provide a fast checkout experience for customers, there may be no immediate need to upgrade the checkout system.

Self-checkout Procedure

The capability of a self-checkout kiosk is inherently limited by its architecture and programming, which dictate the actions users can perform. For the purpose of this analysis, the kiosk's functions are categorized into greeting, scanning, bagging, paying, and exiting. These actions vary in complexity, from straightforward to highly sophisticated. Initially, the self-checkout process begins with greeting the customer, typically initiated by pressing a touchscreen button. Modern self-checkout machines are equipped with bilingual capabilities, allowing non-English speakers to select their preferred language. Upon pressing the button, a friendly voice, often female, guides the customer to scan their first item.

Simultaneously, the self-checkout performs its most complex tasks. After scanning the first item, the customer is prompted to bag it. The UPC information from each scan is linked to the self-checkout system, providing details on the item's price and approximate weight for bagging. Before the advent of self-checkout lanes, human cashiers visually verified that customers paid for all their groceries. This verification step is now handled differently: the system compares the stored weight data of scanned items with the weight measured on a scale beneath the bagging area. If a customer scans an item but doesn't bag it, the system prompts them to do so. Should the weight of an item in the bag differ from its scanned weight, the system alerts the customer that an incorrect item may be in the bagging area. Visual and auditory cues accompany these alerts, notifying both the customer and nearby staff without directly accusing the customer of any wrongdoing.

After scanning each item, the system prompts the user to choose between paying or continuing to scan more items. If the customer opts to pay, the system prompts them to scan any coupons using their UPCs and then select a payment method. The device accepts notes and coins, and for cash payments, it dispenses change. Credit card transactions are notably quicker, requiring just one swipe. Removing bags from the scales before payment triggers an additional error message. The voice instructs the customer to pack their items and depart once the receipt has printed, typically concluding with gratitude and an invitation to return. At this point, the device also alerts the user to any unclaimed change.

Types of Self-Checkout

Self-checkout counters have become increasingly popular, offering convenience and reducing lines at traditional checkouts. There are several types, each with unique advantages and disadvantages:

- **Standalone Self-Checkout Counters:** These independent units are not connected to a central system, making them smaller and suitable for areas where traditional checkouts are impractical. They are ideal for small businesses and less expensive than other types.
- **Wall-Mounted Self-Checkout Counters:** Mounted on walls and connected to a central system, these counters provide more space for bagging and are more secure. They are more expensive and suitable for larger retail stores needing multiple self-checkout stations.
- **Conveyor Belt Self-Checkout Counters:** Featuring a built-in conveyor belt, these counters move items to a bagging area, providing more space and efficiency. They are ideal for large retail stores.
- **Mobile Self-Checkout Counters:** Compact and portable, these are ideal for small retail stores and pop-up shops. They offer the convenience of self-service checkout at a lower cost.

Retailers should consider their specific needs and customer types when selecting a self-checkout counter, with each type offering unique benefits and features.

Benefits of Self-Checkout Adoption

Quicker Checkout

Self-checkout counters have revolutionized the shopping experience by offering customers the convenience of self-service and significantly reducing wait times. This is particularly advantageous for shoppers looking to expedite their visits to the store. One key reason behind their efficiency is that customers can scan and bag their own items, eliminating the need to queue up at a cashier. This keeps traditional checkout counters available for other customers, thereby reducing congestion. The technology employed in self-checkouts, such as high-speed scanners and intuitive touchscreen interfaces, also contributes significantly by making transactions swift and straightforward, further enhancing the checkout experience.

Labor Cost Reduction

Another key benefit of self-checkout counters is the reduction in labor costs. With customers handling their own checkout process, there is less need for additional cashiers. This allows store staff to focus on other important tasks such as restocking shelves and assisting

customers, thereby enhancing the overall shopping experience. Moreover, self-checkout systems are user-friendly and require minimal training, enabling retailers to save on training and support costs. By minimizing errors and expediting transactions, self-checkouts increase efficiency, leading to further cost savings for retailers. By offering a safer, quicker, and more cost-effective checkout option, self-checkout systems deliver significant benefits for both customers and retailers alike.

Factors of Self-Checkout counter Towards customer usage intention

Compatibility

According to Moore et al (1991) definition in his book "The Theory of Reduction and Its Implications for Computation" published in 1991, compatibility is described as the capability of two or more systems to function together effectively, enabling them to exchange information, resources, and services without significant interference. This definition underscores the critical role of compatibility in facilitating smooth interactions among different systems, allowing them to collaborate in a manner that supports their intended purposes and operations. Moore asserts that compatibility plays a pivotal role in the design and development of intricate systems, such as computer networks, software systems, and digital devices. He emphasizes that compatibility is indispensable for ensuring efficient communication between diverse systems, facilitating seamless information exchange, resource sharing, and effective task execution. For both technology designers and users, compatibility remains a crucial consideration.

For designers, ensuring compatibility is essential to enable seamless integration and interoperability among various systems. Meanwhile, for users, compatibility ensures that the systems they utilize can perform necessary functions effectively. Moore's definition thus highlights the significance of compatibility in optimizing the operation of complex technological systems. In conclusion, Moore's definition of compatibility underscores its vital role in enabling the effective functioning and interaction of complex systems. Whether one is a designer or a user of technology systems, understanding and prioritizing compatibility is essential to ensure systems perform reliably and efficiently.

H1: Compatibility positively influences self-checkout counter user intention.

Ease of Use

The concept of ease of use refers to the extent to which individuals perceive a technology or innovation to be relatively effortless in terms of mental and physical effort (Davis, 1989). Numerous studies have explored ease of use in the context of technology adoption. For instance, Ozturk et al (2016) identified simplicity of use, compatibility, and convenience as strong predictors of customer loyalty to mobile hotel booking applications. According to Alalwan et al (2016) paper "Ease of Use: A Theoretical Review," published in 2016, ease of use is defined as "the degree to which a technology or system is easy to learn, understand, and operate for its intended users." This definition underscores the importance of ease of use in ensuring that users can quickly and effectively learn to use a technology or system. Alalwan emphasizes that ease of use significantly influences the success of technology products and services by impacting user interaction and utilization of the system. He points out that ease of use is influenced by various factors, including the design of the user interface, the clarity and consistency of information, and the availability of supportive tools

and resources. Alalwan argues that technology companies must prioritize ease of use to enhance user satisfaction, encourage adoption of their products and services, and promote customer retention and loyalty.

H2: Ease of use positively influences self-checkout counter user intention.

Trialability

Trialability is defined as the extent to which potential customers can test a new technology or product before deciding to adopt it (Moore et al., 1991). This definition underscores trialability's significance in influencing the adoption likelihood of new technology products and services. It allows potential customers to assess whether the product or service meets their needs and expectations, and whether they feel comfortable using it. According to Johnson et al (2018), trialability plays a crucial role in new technology adoption by offering opportunities for potential customers to test and evaluate products and services. This can be achieved through methods such as product demos, free trials, or limited-time offers. Johnson also mentions that trialability is influenced by various factors including the complexity of the technology, the availability of support and resources, and the user-friendliness of the technology. Sugarhood et al (2014) further supports this perspective by emphasizing that increasing trialability enhances the likelihood of adoption. Providing potential customers with accessible opportunities to experience the technology firsthand can positively impact their decision-making process.

H3: Trialability positively influences self-checkout counter user intention.

Perceived Trust

This study addresses the call from Beldad et al (2010) for "greater, and particularly more systematic, research focus on the antecedents of trust in electronic services." Trust in businesses is pivotal for user engagement in online transactions involving second parties, as it promotes participation, whereas a lack of trust can deter transactions, especially in online economic exchanges (Ha & Stoel, 2009). Recent advancements in understanding user behavior in business contexts have heightened interest in trust and its determinants in the digital environment. Online trust is widely recognized as a critical success factor for digital businesses, services, and activities (Beldad et al., 2010). Additionally, Bryce and Fraser (2014) underscore the significance of trust in communication interactions. Studies indicate that perceived risks associated with internet transactions and relationships built on trust in the online environment significantly influence decision-making and behavioral intentions (Benson et al., 2015).

H4: Perceived trust positively influences self-checkout counter user intention.

Research Framework

This theoretical framework examines each factor—compatibility, ease of use, trialability, and perceived trust—regarding the use of self-checkout counters. Additionally, it explores the relationships between the use of self-checkout counters and usage intention, as well as the impact of self-checkout counters on compatibility, ease of use, trialability, and perceived trust. In summary, the proposed framework in this study provides the public and readers with deeper insights into the relationships between these factors and the intention to use self-checkout (Figure 1).

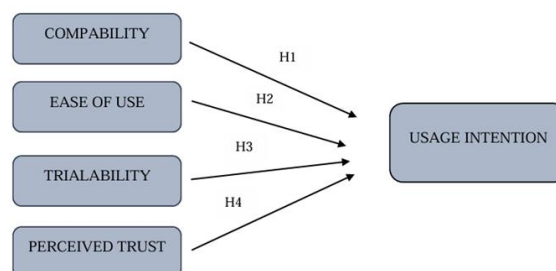


Figure 1 Theoretical Framework of the Research.

Methodolog

This study employed a quantitative research approach using an online questionnaire survey with 200 respondents. A pilot test was conducted among 30 users of self-checkout counters to assess the validity of the survey questionnaire and gather feedback on its structure. Based on the pilot test results, the researcher could modify the questionnaire if necessary to ensure its relevance and effectiveness for the research. This process aimed to achieve validity and dependability in the study. The questionnaire was structured into Sections A, B, and C. Section A included questions about personal information. Section B focused on respondents' views on each variable in the research. Section C addressed the dependent variable, which is customer usage intention at Malaysian drugstores. Developing this questionnaire was crucial to address all research questions and objectives effectively, and it was informed by previous studies

The study utilized measurement scales previously validated in existing literature. Responses to the questions were recorded using a Likert scale, allowing respondents to select the most appropriate option for each issue. The scale ranged from 1 (strongly disagree) to 5 (strongly agree). The collected data were processed using SPSS version 25, which involved descriptive statistics, reliability and validity analysis, Pearson correlation, and multiple regression tests to address the study's objectives.

Table 1 presents the demographic information of survey participants. The majority of respondents were male, constituting 62.7% (n=94), while females accounted for 37.3% (n=56) of the total 150 respondents. Among the respondents, 57.3% (n=86) were aged 21-25 years, making it the largest age group. The second largest group was aged 26-30 years, comprising 25.3% (n=38), followed by those aged 20 years and below at 7.3% (n=11). Respondents aged 31-35 years accounted for 6% (n=9), and those aged 36-40 years were the smallest group at 4% (n=6). Ethnically, 67% (n=102) of respondents were Malay, 20% (n=30) were Chinese, 8% (n=12) were Indian, and 4% (n=6) belonged to other ethnicities. The highest educational attainment among respondents was a bachelor's degree, with 76%

(n=114), followed by those with STPM/Matriculation/Diploma at 17% (n=26), and the lowest educational level was secondary school, at 7% (n=10). Regarding employment status, the majority of respondents were students, comprising 60.7% (n=91), followed by private sector workers at 19.3% (n=29), government employees at 12% (n=18), and self-employed individuals at 8% (n=12). In terms of self-checkout counter usage frequency, 42.7% (n=64) of respondents used it once every two weeks, 8% (n=12) used it once a week, and 3.3% (n=5) used it several times a week.

Table 1

Respondents' Background

Background	Categories	Frequency	Percentage (%)
Gender	Male	94	62.7
	Female	56	37.3
Age	20 and below	11	7.3
	21-25	86	57.3
	26-30	38	25.3
	31-35	9	6
	36-40	6	4
Race	Malay	102	68
	Chinese	30	20
	Indian	12	8
	Others	6	4
Educational level	Secondary School	10	6.7
	STPM/Matriculation/Diploma	26	17.3
	Bachelor's degree	114	76
Occupation	Student	91	60.7
	Private Sector	29	19.3
	Public Sector	18	12
	Self employed	12	8
Frequency usage	Several times a week	5	3.3
	Once a week	12	8
	Once every 2 weeks	64	42.7
	Once a month	69	46

Reliability Analysis and Validity Test

Reliability analysis is assessed using Cronbach's Alpha. Table 2 displays Cronbach's Alpha values for all variables ranging from 0.874 to 0.906, which are significantly higher than 0.70. This demonstrates that the overall alpha coefficient for each subscale is excellent. Specifically, the alpha values for compatibility ($\alpha = 0.874$), perceived ease of use ($\alpha = 0.893$), trialability ($\alpha = 0.890$), perceived trust ($\alpha = 0.899$), and usage intention ($\alpha = 0.906$) are indicated in the table. According to Malhotra (2012), reliability in this research is measured using Cronbach Alpha, where a value ≤ 0.60 is considered unreliable, and a value ≥ 0.70 is highly acceptable. Therefore, the results of this survey indicate high reliability. Overall, the reliability analysis of this study is highly satisfactory.

Table 2

Reliability analysis of each variable

Variable	Number of Items	Cronbach's Alpha
Compatibility (C)	4	0.874
Ease of Use (PEU)	4	0.893
Trialability (TR)	4	0.890
Perceived Trust (PT)	4	0.899
Usage Intention (UI)	4	0.906

In general, the data presented in table 3 indicates noteworthy and favorable correlations between usage intention and various factors: compatibility ($r=0.851$, $p<0.01$), ease of use ($r=0.879$, $p<0.01$), trialability ($r=0.896$, $p<0.01$), and perceive trust ($r=0.913$, $p<0.01$).

Table 3

Pearson correlation for variable of study.

	C	PEU	TR	PT	UI
C	1	.867**	.870**	.839**	.851**
PEU	.867**	1	.894**	.866**	.879**
TR	.870**	.894**	1	.911**	.896**
PT	.839**	.866**	.911**	1	.913**
UI	.851**	.879**	.896**	.913**	1

** . Correlation is significant at the 0.01 level (2-tailed).

C= Compatibility, PEU =Ease of Use, TR = Trialability, PT = Perceive Trust, and UI=Usage Intention

The model summary for factors influencing customer usage intention is presented in Table 4. The coefficient of determination, R Square, indicates that the four independent variables collectively account for 87.4% ($R^2 = 0.874$) of the total variance in usage intention affected by Compatibility, Ease of Use, Trialability, and Perceived Trust. The regression model detailed in the table examines how Compatibility, Ease of Use, Trialability, and Perceived Trust influence customer usage intention. The standardized coefficients reveal that Ease of Use ($p < 0.05$, $\beta = 0.212$), Trialability ($p < 0.05$, $\beta = 0.171$), and Perceived Trust ($p < 0.05$, $\beta = 0.469$) are all significantly related to customer usage intention. However, the variable Compatibility ($p > 0.05$, $\beta = 0.124$) is found to be insignificant in relation to customer usage intention.

Table 4

Regression for Customer Intention determine.

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	.148	.125		1.183	.239
Compatibility (C)	.125	.067	.124	1.884	.062
Ease of Use (PEU)	.208	.072	.212	2.887	.005
Trialability (TR)	.172	.087	.171	1.976	.050
Perceived Trust (PT)	.466	.075	.469	6.221	.000

a. Dependent Variable: user satisfaction.

R = 0.935. R square = 0.874. Adjusted R = 0.870. F = 250.825

Discussion

The study investigates the factors influencing customer usage intention of self-checkout services at drugstores and explores the causal relationships among the constructs using a proposed research framework. It acknowledges the relationship between Compatibility (C), Ease of Use (PEU), Trialability (TR), Perceived Trust (PT), and Usage Intention (UI). According to Tojib and Tsarenko (2012), perceived ease of use reflects the ease with which a specific technology (e.g., new market technology) is perceived to be advantageous, relating to the effortlessness and convenience of using it. Previous research, such as that by Porter and Donthu (2006), has focused on two main approaches when conceptualizing antecedents of perceived utility and perceived ease of use. One approach examines psychological or personal characteristics as direct predictors or moderators of perceived usefulness, as explored by Gao et al (2013) in their study on innovativeness and personal attachment influencing perceived usefulness and attitude toward mobile marketing. The other approach looks at technological features like ubiquity as predictors of usefulness and ease of use (Tojib and Tsarenko, 2012).

Trialability allows customers to use the self-checkout counter on a trial basis, which positively impacts usage intention by familiarizing individuals with the technology before committing to long-term usage. This approach also helps alleviate concerns regarding complexity Zhang et al (2015), thus significantly influencing the usage intention of the Self-Checkout Counter. Based on the findings from Fang et al (2014), commercial trust in a system refers to the consumer's expectation that the system will perform as expected, encompassing factors such as shared information trust, confidentiality trust, and integrity trust. Trust is considered essential for engagement in e-commerce and adoption of mobile payments. Therefore, H2, H3, and H4 hypotheses are accepted.

Among all variables, H1 is rejected, indicating that menu informativeness is the only variable that has no significant relation to usage intention. According to Tojib and Tsarenko (2012), the term "compatibility" refers to the ability of mobile devices to enable consumers to access services and apps anywhere, whenever they need them. Meuter et al (2005) emphasizes that compatibility has been widely recognized as an important factor across various studies, ranging from Internet banking to mobile messaging. This clearly demonstrates that compatibility has a lesser influence on the usage intention of self-checkout counter systems, especially among customers using them in Malaysian drugstores. Thus, the items related to "user friendliness" have the highest mean among all compatibility items.

Conclusions

This study discusses the findings on usage intention with Self-Checkout Counter using the Diffusion of Innovation theory. The findings conclude that the constructs in the model, namely compatibility, ease of use, trialability, and perceived trust, significantly influence the intention to use Self-Checkout Counters. The method used in this study addresses the research questions and achieves the study objectives through analyses such as descriptive analysis, Pearson correlation analysis, reliability analysis, inferential analysis, and hypothesis testing. The discussion revealed that the perceived trust construct has shown a significant relationship with the usage intention of Self-Checkout Counters. Most respondents agreed that they use Self-Checkout Counters for payment transactions and are highly satisfied with the system due to its seamless transactions. However, continuous quality improvement is necessary to enhance the service and ensure that the technology delivers benefits to the community and the country.

Significant Implications of the Research

The findings of this study have successfully examined the dimensions in the Diffusion of Innovation Model. The constructs investigated include compatibility, ease of use, trialability, and perceived trust. Based on the results, only one independent variable shows a negative relationship, while the others demonstrate a significant positive relationship with usage intention. Therefore, three out of the four proposed alternative hypotheses are accepted in this study. The discussion and results of this study draw on research conducted by Rogers (2003), who used the Diffusion of Innovation Model to assess the usage intention of Self-Checkout Counters in other retail payment contexts. This study contributes to expanding the literature on Self-Checkout Counters in Malaysia, as the system is still emerging and lacks comprehensive research.

The valuable insights gained from this study can assist companies like Watson in developing and enhancing the quality of Self-Checkout Counter technology to improve the payment system. This improvement aims to increase user satisfaction through existing Self-Checkout Counter technology. Additionally, these findings provide benefits to institutions, especially Watson, that utilize the Self-Checkout Counter service. Enhancing user satisfaction helps in maintaining shorter average wait times. Moreover, the faster checkout process facilitated by self-service kiosks is advantageous. It enables customers to collect their purchases with minimal close, personal interactions, thereby contributing to everyone's safety.

Additionally, this study aims to shift Malaysia's face-to-face payment system towards greater reliance on Self-Checkout Counters. This initiative is crucial for our country's advancement as a developed nation in the realm of technology. Moreover, Self-Checkout Counters can mitigate the spread of diseases, particularly amidst the COVID-19 pandemic, and offer substantial benefits during endemic phases by preemptively preventing the spread of infectious diseases in the future. Other advantages include expedited checkouts, enhanced privacy, greater control over purchases, and reduced interaction with cashiers. Many shoppers find self-checking out their own items ideal, especially when purchasing a few items or when pressed for time. According to the study findings, Self-Checkout Counters have effectively fulfilled usage intentions, as all predictors—compatibility, ease of use, trialability, and perceived trust—demonstrate significant influence.

In Malaysia, there remains a lack of awareness regarding electronic transactions such as the Self-Checkout Counter. Therefore, this study aims to examine the usage intention of the Self-Checkout Counter using the Diffusion of Innovation theory. The primary goal is to assess Malaysians' knowledge and utilization of the Self-Checkout Counter. The study findings highlight that perceived trust emerges as the most significant factor influencing the successful implementation of the Self-Checkout Counter. These findings can also assist the government in developing technologies that benefit society.

Ethical Considerations

This study is voluntarily participation and the respondents agreed to take part in the study. Information gathered during this study is confidential.

Conflict of Interest

The authors declare that they have no conflict of interest.

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