Consumer behavior towards e-wallet usage in the post-COVID-19 era in Saudi Arabia

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CHRONICLE	ABSTRACT
	Saudi Arabia's Vision 2030 seeks to transition towards a cashless society and increase non-cash transactions to 70% by 2025. The COVID-19 pandemic has further accelerated cashless activities in Saudi Arabia, with e-payments increasing by 75% in the past year. This study explores consumer behavior towards using e-wallets in the post-COVID-19 era by employing the extended Technology Acceptance Model (TAM). The results of an online survey conducted among 303 Saudi citizens were analyzed using SPSS. This study examines the correlation coefficients between the variables and conducts an ANOVA to determine the influence of all variables on consumer behavior towards e-wallets in Saudi Arabia post-COVID-19. The findings indicate that consumer behavior is positively influenced by perceived usefulness, perceived ease of use, lifestyle compatibility, and traceability, whereas cost does not significantly impact the use of e-wallets. Additionally, the results show that approximately 28.1% of the respondents used e-wallet services due to the pandemic. This study adds to the literature by expanding on previous work on the topic and providing detailed insights into the factors of e-wallet acceptability in Saudi Arabia.

1. Introduction

Saudi Arabia's Vision 2030 has established a significant objective of progressing towards a cashless economy and increasing non-cash transactions to 70% by 2025. The COVID-19 pandemic has considerably accelerated the implementation of cashless payment methods, with electronic transactions surging by 75% over the past year, whereas cash withdrawals from ATMs and other payment channels have decreased by 30% during the same period. To achieve the objectives of Vision 2030, strategic pillars are needed to develop a thriving financial services sector, such as building innovative financial infrastructure that connects and empowers service providers with simple, convenient, and secure financial services and payment infrastructure. This ultimately enhances the consumer experience through improved technological standards (Financial Sector Development Program, n.d.). With the official transition to the post-Covid-19 era in 2021, the cashless habits that emerged during the pandemic are anticipated to endure and advance, driven by expanding Small and Medium-sized Enterprises (SMEs), enhanced digital payment infrastructure, government backing, and increased spending from younger consumers, who have already shown a preference for minimal cash usage (Fintech Saudi, 2021). During the COVID-19 pandemic, e-wallet usage became widespread among small and medium-sized enterprises (SMEs), as they sought innovative ways to keep their businesses functioning despite the economic impact of lockdowns and closures. Many SMEs shifted their operations to the e-commerce market. Larger companies were already a part of this. To prioritize safety and health precautions and reduce physical interactions, SMEs have adopted e-wallets as a payment option, alongside other cash alternatives, to mitigate the risk of virus transmission. This shift towards e-wallets and other digital payment methods has continued even after the pandemic. E-payment solutions were first introduced in Saudi Arabia in 2015, marking the country's initial exposure to Fintech activities. Consumers swiftly adapt to e-wallets, also known as digital or mobile wallets, as an effective, easy, and quick e-payment solution (Alswaigh & Aloud, 2021).

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The existing literature on e-wallet adoption emphasizes the significance of digital wallets during COVID-19 pandemic and underscores the need to understand the elements that influence behavioral objective and boost usage of the system (Papadopoulos, Baltas, & Balta, 2020). Alyabes and Alsalloum, (2018) recommended considering variables such as perceived usefulness, anonymity, efficiency, convertibility, traceability, reliability, and applicability in the context of e-wallet usage. Additionally, it has been suggested by Aji, Berakon and Husin (2020) to explore moderating variables such as education background, income, and age, as consumers from these demographics may have varying receptivity towards financial technology or innovation adoption. Furthermore, Papadopoulos et al. (2020) highlighted the importance of observing consumers in the post-COVID-19 "new norm" phase, as it is crucial for SMEs to reshape their strategies and incorporate crisis scenarios and business continuity plans. However, maintaining virtual consumers can be challenging because providing poor service may result in irreversible damage to businesses. Therefore, this study aimed to investigate post-COVID-19 consumer behavior towards using e-wallet services in the context of Saudi Arabia. Specifically, it aims to address the research question: "To what extent are consumers willing to continue using electronic wallets after the COVID-19 pandemic?" The significance of this study is emphasized by a recent report that highlights the critical need for funding in the Saudi Arabian financial technology (Fintech) sector, particularly in e-wallet research (Fintech Saudi, 2021). It is crucial for technology providers to understand consumer needs and strive for improved customer experiences (Almuhammadi, 2020). Previous studies have examined the key factors influencing the attitude towards adoption of e-wallet services among Saudi citizens (Alswaigh & Aloud, 2021), and suggested that the COVID-19 pandemic may drive increased intention to use e-wallets (Aji et al., 2020; Papadopoulos et al., 2020). Therefore, this study aimed to investigate consumer behavior towards using e-wallets in the post-COVID-19 era in the context of Saudi Arabia. By understanding consumer behavior towards e-wallet adoption, this study builds upon earlier work on the topic (Aji et al., 2020; Alswaigh & Aloud, 2021; Papadopoulos et al., 2020), and provides valuable insights for SMEs and authorities to employ cost-effective techniques to expand e-wallet adoption.

The reminder of this paper is organized as follows. First, a comprehensive literature review is presented, summarizing and analyzing the existing research on the topic. Next, we introduced the methods employed in this study, including the overall research design, data sources, and analytical approaches. Subsequently, the findings obtained from the research are discussed, and their implications are interpreted. Finally, the main findings are summarized and their practical and decision-making implications are considered.

2. Literature review

E-wallets, as discussed by Karim et al. (2020), are software-driven platforms designed to securely store users' payment details and passwords for various payment methods and websites. By leveraging near-field communication technology (NFC), these e-wallets enable users to conveniently and expeditiously finalize transactions. Recent studies have highlighted the significant shift towards e-wallet adoption during the COVID-19 pandemic and discussed consumer behavior in this context (Aji et al., 2020; Alyabes & Alsalloum, 2018; Almuhammadi, 2020; Karim, Haque, Ulfy, Hossain, & Anis, 2020; Papadopoulos et al., 2020). Users have found e-wallet technology to be useful as it improves their performance and speeds up the payment process, which in turn impacts their attitude and intention towards adopting e-wallet services (Alswaigh & Aloud, 2021). The Technology Acceptance Model (TAM), as outlined by Davis (1989), is composed of two essential elements: perceived ease of use (PEOU) and perceived usefulness (PU). These elements play a critical role in shaping user attitudes, and in turn, have a considerable impact on users' behavioral intentions to adopt new technology. Research findings from a study that utilized the TAM to identify factors influencing the adoption of e-payment and e-wallet services in Saudi Arabia revealed that perceived usefulness, perceived ease of use, lifestyle compatibility, and facilitating conditions directly affecte user behavior in accepting mobile payments. Additionally, the study showed that approximately 26% of the participants started using e-wallet services in response to the COVID-19 pandemic (Alswaigh & Aloud, 2021). To enhance the comprehensiveness of the TAM model, previous research in the e-wallet adoption literature has incorporated additional variables. These studies found that perceived risk and perceived usefulness directly impact the intention to use e-wallets during the COVID-19 pandemic. Furthermore, it has been concluded that the influence of government support on intention to use e-wallets is fully mediated by perceived usefulness (Aji et al., 2020). Saudi Arabia has emerged as a significant player in the Fintech industry, with a notable increase in the utilization of online transactions in its business sector and the expectation of further growth in the future. The Saudi government has supported e-wallet innovation, particularly during the COVID-19 pandemic, by advocating cashless transactions to control the spread of the virus. Lockdown measures and social distancing protocols have limited consumers' options for e-payment in several ways (Fintech Saudi, 2021).

2.1 Perceived Usefulness

The term "perceived usefulness" refers to the extent to which an individual believes that using a specific information system will increase its efficiency (Davis, 1989). This concept is defined as a person's perception of how adopting a particular system will enhance their job performance. Perceived usefulness is a crucial element of the TAM framework and has a substantial impact on consumers' behavioral intentions (Davis, Bagozzi, & Warshaw, 1989). Numerous studies have consistently demonstrated that perceived usefulness positively influences consumer behavior towards using e-wallets (Alswaigh & Aloud, 2021; Lew et al., 2020). Based on these findings, the following hypothesis is proposed:

H₁: *Perceived Usefulness will positively influence consumer behavior towards using e-wallets in the post COVID-19 era in Saudi Arabia.*

2.2 Perceived Ease of Use

The extent to which a particular system is perceived as effortless to use is referred to as the perceived ease of use (Davis, 1989). Several studies have shown that technology is more likely to be adopted when it is perceived as simple and easy to use (Chawla & Joshi, 2019; Alswaigh & Aloud, 2021). Ameerbakhsh et al. (2021) found a link between consumers' perceptions of e-payments and self-efficacy, which is a crucial aspect influencing Saudi consumers' adoption of e-payments. Perceived ease of use has a positive and significant influence on consumer behavioral intention, indicating that the easier an e-wallet is to use, the more useful it can be (Chawla & Joshi, 2019; Karim et al. 2020; Lew et al., 2020). Based on these findings, the following hypothesis is proposed:

H₂: *Perceived ease of use will positively influence consumer behavior towards using e-wallets in the post COVID-19 era in Saudi Arabia.*

2.3 Cost

Cost has been a topic of discussion in studies related to e-payment adoption. According to Kim et al. (2010), there may be a cost associated with the adoption of e-payment methods, such as the time required to learn how to use the internet and new technology. However, other studies have suggested that users can enjoy the benefit of low costs when engaging in online transactions, as they typically only need to pay a small fee to their respective banks (Gerrard & Barton Cunningham, 2003; San- Martín, López-Catalán, & Ramón-Jerónimo, 2012; San-Martin & López-Catalán, 2013). In light of this, we propose the following hypothesis to determine whether cost benefits are a crucial factor shaping consumer behavior towards using e-wallets in the post-COVID-19 era:

H₃: *Cost will positively influence consumer behavior towards using e-wallets in the post COVID-19 era in Saudi Arabia.*

2.4 Traceability

According to Balaji and Balaji (2017), e-banking transactions are traceable, making it easier to monitor antimoney laundering and black money circulation in the country. This lowers the number of financial frauds and promotes economic growth. Moreover, providers must be able to demonstrate their e-wallet capability and quality to serve consumers. By doing so, traceability will build trust among consumers, which would increase their intention to use e-wallets. Therefore, we propose the following hypothesis:

H₄: *Traceability positively influences consumer behavior towards using e-wallets post COVID-19 in Saudi Arabia.*

2.5 Lifestyle compatibility

Lifestyle compatibility refers to the natural alignment of an individual's lifestyle choices and values with the use of computers, mobile devices, and other stakeholders (Chawla & Joshi, 2019). Research has shown that lifestyle compatibility has a significant impact on consumers' intention to use mobile wallets (Chawla & Joshi, 2019). Additionally, a recent study by Alswaigh and Aloud (2021) found that lifestyle compatibility is a useful predictor of attitudes towards adopting e-wallet services in Saudi Arabia. The COVID-19 pandemic has led to changes in shopping habits and daily lifestyles, causing users to adopt new technologies, such as e-wallet services. When users perceive that a product is compatible with their lifestyle and allows them to easily make online payments and transactions at any time and place, they are more likely to adopt e-wallet services. Based on this, we propose the following hypothesis:

H₅: *Lifestyle compatibility positively influences consumer behavior towards using e-wallets during the post COVID-19 era in Saudi Arabia.*
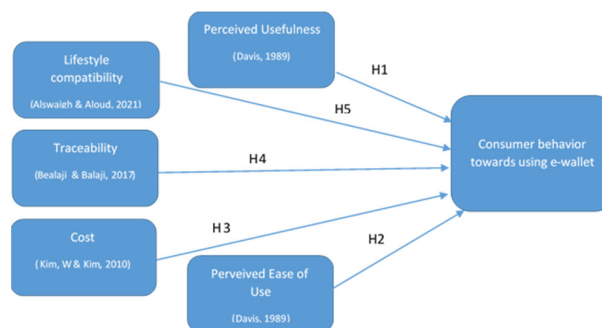
Fig. 1. The research model with hypotheses

3. Methodology

3.1. Survey development

This study employed a quantitative approach to analyze the data collected through a self-administered questionnaire. The questionnaire served as the primary data collection tool and consisted of two sections. Section A (Table 1) focused on gathering demographic information, such as gender, age, education level, monthly income, type of e-wallet used, and when respondents began using e-wallet services (before or after the COVID-19 pandemic). Section B includes a 5-point Likert scale measurement ranging from "strongly agree" (5) to "strongly disagree" (1) with 24 statements to assess five dimensions adapted from previous research. These dimensions were perceived usefulness, perceived ease of use, cost, traceability, lifestyle compatibility, and usage of e-wallets. The dimensions in section B are adapted from different studies, including perceived usefulness and perceived ease of use from Chawla and Joshi (2019), lifestyle compatibility from Alswaigh and Aloud (2021), and e-wallet usage from Karim et al. (2020).

3.2. Data collection

In this study, simple random sampling was employed to ensure that every individual in the population had a fair opportunity to be chosen. An online questionnaire was distributed to residents in central Saudi Arabia between January 30 and February 20, 2023. Given that the majority of the respondents were native Arabic speakers, they were given an Arabic version of the survey that had been validated by a professional translator to ensure correct responses. A total of 303 individuals participated in the survey. Table 1 reveals that 95% of the respondents are currently using e-wallets, while only 5% are not. Among 303 participants, 55.1% indicated that they preferred to use Apple Pay as their e-wallet, 33% referred to Mada Pay, and 11.9% chose STC Pay. Furthermore, 71.9 % of the respondents were already using an e-wallet before the COVID-19 pandemic, whereas 28.1 % started using it after the COVID-19 pandemic. It is worth noting that 87.8 % of the e-wallet users were female, while 12.2 % were male. Among the different age groups, respondents between the ages of 20-30 have the highest percentage of e-wallet use (43.6%), followed by those aged 40 -65, representing 30.7 % of the respondents. The 30-40 years age group accounted for 20.8%, while the lowest age group (15-20) had a usage of 5%. In terms of education, the majority of e-wallet users hold a bachelor's degree (65.3%), followed by 13.5% with a diploma, 11.6% with just a high school education, and 9.6% with a postgraduate degree. Lastly, the lowest percentage of e-wallet users are those who earn an average monthly income of 4.000 to 6.000 Saudi Riyals (SR), while the mid-earning group, who earned SR 6,000 to SR 10,000 represented 22.4%, and the upper earners accounted for 16.5%.

Table 1
Demographic data

Variables		Frequency	%
Do you use an e-wallet?	Yes	286	94.4
	No	17	5.6
	Total	303	100.0
What type of e-wallet are you currently using?	Apple Pay	167	55.1
	Mada Pay	100	33.0
	STC Pay	36	11.9
	Total	303	100.0
When did you start using the e-wallet?	Before COVID-19	218	71.9
	After COVID-19	85	28.1
	Total	303	100.0
Gender	Female	266	87.8
	Male	37	12.2
	Total	303	100.0
Age	15-20	15	5.0
	20-30	132	43.6
	30-40	63	20.8
	40-65	93	30.7
	Total	303	100.0
Education level	High school or less	35	11.6
	Diploma	41	13.5
	Bachelor's degree	198	65.3
	Postgraduate degree	29	9.6
	Total	303	100.0
Monthly income	Less than 4,000	112	37.0
	4,000-6,000	50	16.5
	6,000-10,000	68	22.4
	Above 10,000	73	24.1
	Total	303	100.0

3.3. Measurement model

The data collected in this study were analyzed using SPSS, which has been commonly used in previous research to analyze survey data, particularly in studies related to user acceptability of new technologies, such as TAM (Alyabes & Alsalloum, 2018; Alswaigh & Aloud, 2021). Table 2 presents the results of the reliability analysis for each variable using the proposed observed items. Cronbach's alpha, which is commonly used for Likert type scale measurements, was used to measure internal consistency reliability. The scale's reliability in its final form has been validated, indicating that it is suitable for the main sample and reliable for collecting the necessary data to address the research questions. The recommended threshold for Cronbach's alpha is above 0.70 (Lin & Huang, 2008) and the variables in this study met this criterion, indicating acceptable reliability.

Table 2
Reliability of the variables

Variables	Reliability Statistics	
	Cronbach's Alpha	No. of Items
Perceived Usefulness	0.768	4
Perceived Ease of Use	0.782	4
Cost	0.791	4
Traceability	0.787	4
Lifestyle compatibility	0.811	4
Usage of e-wallet	0.796	4

Table 3 demonstrates that the reliability of the measure is established, as indicated by Cronbach's α values exceeding 0.70 for all variables. Furthermore, discriminant validity is affirmed for all variables, as the square root of each variable's AVE surpasses the bivariate correlation. To ensure sufficient discriminant validity, the square root of each AVE value should exceed the off-diagonal elements in the respective row and column of the correlation table (Fornell & Larcker, 1981). These evaluations confirm the discriminant validity of the measures.

Table 3
Convergent and discriminant validity of the variables

	CR	AVE	MSV	MaxR(H)	Usefulness	Ease	Cost	Traceability	Lifestyle
Usefulness	0.742	0.593	0.317	0.781	**0.738**				
Ease	0.867	0.62	0.391	0.869	0.471	**0.788**			
Cost	0.843	0.574	0.391	0.849	0.321	0.625	**0.757**		
Traceability	0.921	0.795	0.329	0.928	0.538	0.495	0.574	**0.891**	
Lifestyle	0.917	0.784	0.386	0.916	0.519	0.573	0.539	0.587	**0.855**

The R-Squared tool is commonly used to measure the proportion of variance in a dependent variable that is explained by independent variables. In this study, the dependent variable was e-wallet usage, while the independent variables were perceived usefulness, perceived ease of use, traceability, cost, and life compatibility. The results revealed an R-squared value of 0.515, which is considered a good indicator. This value indicates that the dependent variable has changed as a result of the other variables and suggests that the independent variables made a significant contribution in explaining the variance in e-wallet usage. Table 4 presents the results.

Table 4
Model Summary

Model	R	R Squared	Adjusted R
1	.718[a]	.515	.508

Note: a denotes DV: Usage of e-wallet; b. Predictors: (constant), Lifestyle compatibility, Cost, Traceability, Perceived Ease of Use. Perceived Usefulness

Table 5 presents the correlation coefficients between the variables. There is a limited significant positive link between e-wallet usage and all predictors, with a value ranging from 0.429 to 0.586, indicating a moderate positive relationship. The results show that traceability and lifestyle compatibility have a substantial positive relationship, with a correlation coefficient of 0.893. This indicates how lifestyle compatibility influences individuals' concerns regarding privacy and security. On the other hand, perceived usefulness and cost had the least significant relationships among the variables. Perceived ease of use is also the least relevant to perceived usefulness. The correlation coefficient between perceived usefulness and traceability was 0.488, indicating a moderately positive relationship. Additionally, there was a limited significant link between perceived usefulness and lifestyle compatibility, with a value of 0.506. There was also a minor relationship between perceived ease of use and cost. Additionally, the correlations between perceived ease of use and traceability, as well as lifestyle compatibility, was remarkably similar. Although all correlations between the variables were significant and positive, their magnitude was moderate.

Table 5

Correlation matrix

Variables	Perceived Usefulness	Perceived Ease of Use	Cost	Traceability	Lifestyle compatibility	Usage of e-wallet
Perceived usefulness	1					
Perceived ease of use	.354**	1				
Cost	.353**	.415**	1			
Traceability	.488**	.432**	.471**	1		
Lifestyle compatibility	.506**	.457**	.504**	.893**	1	
Usage of e-wallet	.478**	.429**	.496**	.447**	.586**	1

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

F-statistics were used to analyze different sets of data and identify variability within and between samples. In the context of this study, ANOVA was conducted to determine if all the variables influenced consumer behavior towards using e-wallets in Saudi Arabia post COVID-19. As shown in Table 6, the obtained F value (79.090) was associated with a very low p-value (0.0000), indicating a high statistical significance. These results support the notion that a set of variables representing perceived usefulness, perceived ease of use, traceability, cost, and lifestyle compatibility can reliably predict the usage of e-wallets with high accuracy. Therefore, we can conclude that these variables are significant predictors of the actual usage of e-wallets in Saudi Arabia post COVID-19.

Table 6

Results of ANOVA

	SS	df	MS	F	Sig.
Regression	792.289	4	198.072	79.090	.000[b]
Residual	746.305	298	2.504		
Total	1538.594	302			

Note: a is DV: Usage of e-wallet; b is Predictors: (constant), Lifestyle compatibility, Cost, Traceability, Perceived Ease of Use, Perceived Usefulness.

4. Results and discussion

The primary objective of this study was to investigate consumer behavior towards the utilization of e-wallets in the post-COVID-19 era in Saudi Arabia. In Table 7, we conduct a simple regression analysis to assess the impact of independent variables on the dependent variable, and evaluate the hypothesized relationship between the variables. The dependent variable was the use of e-wallets, whereas the independent variables were Perceived usefulness, Perceived ease of use, Cost, Traceability, and Lifestyle compatibility. Based on the R^2 value, which indicates that 51.5% of the variances are explained, we found that the variables 'perceived ease of use', 'traceability', and 'lifestyle compatibility' are significantly associated with consumer behavior towards the use of e-wallets in the post-COVID-19 era. Therefore, Hypotheses 1, 2, 4, and 5 are accepted. However, the variable 'cost' was not significantly associated with consumer behavior towards the use of e-wallets in the post-COVID-19 era. As a result, Hypothesis 3 was not accepted.

Table 7

Multiple regression result of the independent variables.

Model			B	SE	T	P-Value
		(Constant)	4.275	.777	5.504	.000
	H1	Perceived Usefulness	.355	.053	6.572	.000
Consumer behavior towards	H2	Perceived Ease of Use	.324	.051	4.735	.000
using e-wallet post COVID-19 in	H2	Cost	.018	.043	.427	.669
Saudi Arabia	H4	Traceability	.148	.040	3.743	.000
	H5	Lifestyle Compatibility	.338	.071	4.764	.000
	F = 79.1, p < 0.001 and R2=0.515					

According to the findings of this study, perceived usefulness has a significant influence on consumer behavior regarding the use of e-wallets in the post-COVID-19 era, as evidenced by a regression coefficient (B) of .355 and a p-value of (.000), which supports Hypothesis 1. Similarly, perceived ease of use was found to have a significant impact on consumer behavior towards e-wallets, with a regression coefficient (B) of .324 and a p-value of (.000), thus supporting Hypothesis 2. These results are consistent with those of a previous research by Lew et al. (2020). Furthermore, Chawla and Joshi (2019) discovered that perceived usefulness was more significant than perceived ease of use, possibly because of their focus on a diverse group of well-informed students who were not concerned about the ease-of-use aspect. The respondents in our study found e-wallets straightforward to understand, learn, and use. This is supported by e-wallet providers, who have made efforts to simplify the channels and provide clear instructions on the payment process. Additionally, in Saudi Arabia, many e-wallet providers, including banks, have linked customer phone numbers to national IDs to facilitate transactions.

Surprisingly, our findings indicate that the cost associated with using e-wallets does not have a significant influence on consumer behavior towards the use of e-wallets in the post-COVID-19 era in Saudi Arabia, as evidenced by a regression coefficient (B) of .018 and a p-value of .669, which does not support hypothesis 2. This is in contrast to a study by

Chresentia and Suharto (2020), who found that cost and price value were the most significant factors influencing consumers' use of e-wallets. However, our results suggest that cost may not be a significant factor when considering the adoption of e-wallets, particularly if other factors, such as usefulness, ease of use, traceability, and lifestyle compatibility, are met. It is worth mentioning that the Saudi Central Bank, also known as SAMA, launched a system called SARIE, which allows consumers to send and receive low-value local transactions 24/7 for a nominal fee not exceeding one Saudi Riyal. This initiative by SAMA may have contributed to the lack of a significant influence of cost on consumer behavior towards e-wallet usage in Saudi Arabia, as reflected in our findings.

Our findings support the hypothesis that traceability has a significant effect on consumer behavior towards using e-wallets in the post-COVID-19 era, with a regression coefficient (B) of .148 and a p-value of 0.000, as suggested by Ameerbakhsh et al. (2021). Consumers in Saudi Arabia seem to value the ability to keep track of their transactions and receipts despite being less concerned about the cost of using e-wallets. This is in contrast to a study by Tella and Abdulmumin (2015), who found that traceability had the lowest significant contribution to the prediction of e-wallet satisfaction, and that users currently find it difficult to trace errors arising from using e-wallet systems. Additionally, our findings confirm and support the hypothesis that lifestyle compatibility has a significant effect on consumer behavior towards using e-wallets in the post-COVID-19 era, with a regression coefficient (B) of .338 and p-value of 0.000, as proposed by Alswaigh and Aloud (2021). This is consistent with the findings of Alswaigh and Aloud (2021) and Chawla and Joshi (2019). The COVID-19 pandemic has transformed consumers' purchasing habits and everyday routines, leading to the adoption of new technologies, such as e-wallet services. In the post-COVID-19 era, consumers in Saudi Arabia seem to prefer e-wallets compatible with their transformed lifestyles, where everything is accessible and convenient.

5. Conclusion and recommendations

This study aimed to investigate consumer behavior towards the utilization of e-wallets in the post-COVID-19 era in Saudi Arabia. To achieve this goal, the researchers employed the Technology Acceptance Model (TAM) proposed by Davis (1989), with e-wallet usage as the dependent variable and perceived usefulness, perceived ease of use, cost, traceability, and lifestyle compatibility as independent variables. A total of 303 participants completed the survey, and 28.1% of them had adopted e-wallets after the onset of the COVID-19 pandemic. The results of the study corroborated previous research, indicating that variables such as Perceived Usefulness, Perceived Ease of Use, Traceability, and Lifestyle Compatibility significantly impacted consumer behavior towards using e-wallets in the post-COVID-19 era. Conversely, cost does not prove to be a significant factor, suggesting that consumers prioritize other factors over cost. The findings of this study are pertinent for service providers, businesses, banks, and application developers to devise effective adoption strategies and to enhance the quality of their e-wallet services. However, it should be noted that this study only focused on the central region of Saudi Arabia, and future research could benefit from a larger sample size and diverse geographical locations to make the findings more generalizable.

The findings of this study have important implications for Saudi SMEs and the government in considering the use and adoption of e-wallet services to provide a quicker and more efficient payment system for users. The following key recommendations are suggested: (i) Fintech service providers in Saudi Arabia consider expanding their e-wallet services by using effective marketing techniques. The findings of this study show that the adoption rate of e-wallets is high among users in the sample, and the cost of the service does not significantly influence consumer behavior. Therefore, effective promotion of these services through marketing efforts can help the SMEs to attract more users and increase profitability. (ii) The use of Fintech services, including e-wallets, has increased in the post-COVID-19 era, as highlighted in the study. This presents a great opportunity for the government to invest in and expand e-wallet services across the country, including in rural and urban areas, to encourage users to adopt e-wallets for quick and easy payment transfer. The government can invite tech companies and investors to invest in this service, considering that the adoption rate of e-wallet is high in Saudi Arabia.

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