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CASHLESS PAYMENT HESITANCY AMONGST UNIVERSITY STUDENTS

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Abstract:

Electronic payments, also known as cashless transactions, offer numerous advantages over traditional cash transactions, such as eliminating the need for change, reducing the risk of theft, and enhancing convenience. Many retailers have embraced electronic payment methods, including QR pay, credit or debit cards, and e-wallets, as viable alternatives for customers. Despite the availability of these options, there remains a reluctance among university students and staff to fully adopt cashless payment methods. In addition, issues such as concerns over privacy and data security, a lack of trust in the reliability of digital payment platforms, and inadequate awareness of how these systems function contribute to this hesitation. Thus, this study aims to explore the underlying reasons for this hesitation. Findings reveal that attitudes, knowledge levels, and willingness to embrace cashless transactions are key factors influencing this hesitancy. Accordingly, it is crucial for university administrations to implement appropriate digital policies to facilitate the transition towards a fully cashless and digitally integrated campus environment.

Keywords:

E-Payment, E-Wallet, Digitalization, Digital Campus

Introduction

The evolution of electronic payment (e-payment) systems, driven by breakthroughs in information technology, has transformed financial transactions by facilitating the exchange of goods and services without the need for physical cash (Bhuiyan et al., 2024; Garrouch, 2022). These e-payment tools offer numerous managerial advantages for governments, organizations, and economies, reducing transaction costs for banking institutions and bolstering e-commerce, thereby enhancing trade on both local and global scales (Garrouch, 2022; Yokumah et al., 2017; Gholami et al., 2010). Additionally, e-payment serves to reduce the expenses associated with circulating money, leading to significant economic benefits (Yokumah et al., 2017).

Electronic payment involves the electronic transfer of monetary value between payers and payees via digital mechanisms, enabling remote access and management of bank accounts and transactions (Teoh et al., 2013). This encompasses various e-payment methods, including electronic checks, electronic cash, and online credit card payments, categorized based on transaction environments and payment methods (Akter et al., 2023; Gholami et al., 2010). While e-payment methods incur indirect costs for customers, such as debit card fees or money transfer fees, they offer significant benefits such as reduced cash-related risks and enhanced convenience, flexibility, universality, and accessibility (Gholami et al., 2010). Moreover, it enhances accessibility and convenience for various demographic groups, including students, housewives, and the elderly, who can easily conduct financial transactions using smartphones, tablets, or smartwatches, thereby promoting financial inclusion (Yakean, 2020).

However, despite these benefits, concerns and limitations persist regarding the use of online payment systems (Anjum and Chai, 2020). This is evident in the variety of options offered by most e-retailers to consumers, including cash on delivery and alternative electronic payment methods. Anjum and Chai (2020) identify barriers to e-payment adoption, such as the lack of technical knowledge about e-shopping and concerns about sharing credit card information. Security and privacy issues, such as data breaches and fraud, often deter people from adopting e-payment systems. Consequently, cash on delivery is often viewed as a safer option, particularly for e-shopping. Another issue is user resistance, like university students, may hesitate to embrace e-payments due to unfamiliarity or past negative experiences.

This study aims to explore the phenomenon of e-payment hesitancy among university students, focusing specifically on Universiti Teknologi MARA (UiTM) Kedah. University students, often considered digital natives, possess a unique predisposition towards technology adoption. Despite their familiarity with digital tools and platforms, students may still demonstrate reluctance towards e-payment systems, influenced by various factors. The first factor pertains to cashless lifestyle challenges. Transitioning to a cashless society poses challenges for students accustomed to traditional payment methods, affecting spending habits, budgeting practices, and financial management. Furthermore, student attitudes towards technology, trust in digital platforms, and prior e-payment experiences significantly impact their willingness to embrace e-payment solutions. Limited understanding of e-payment functionalities, security features, and transaction processes, coupled with inadequate awareness of e-payment benefits and risks, may impede adoption.

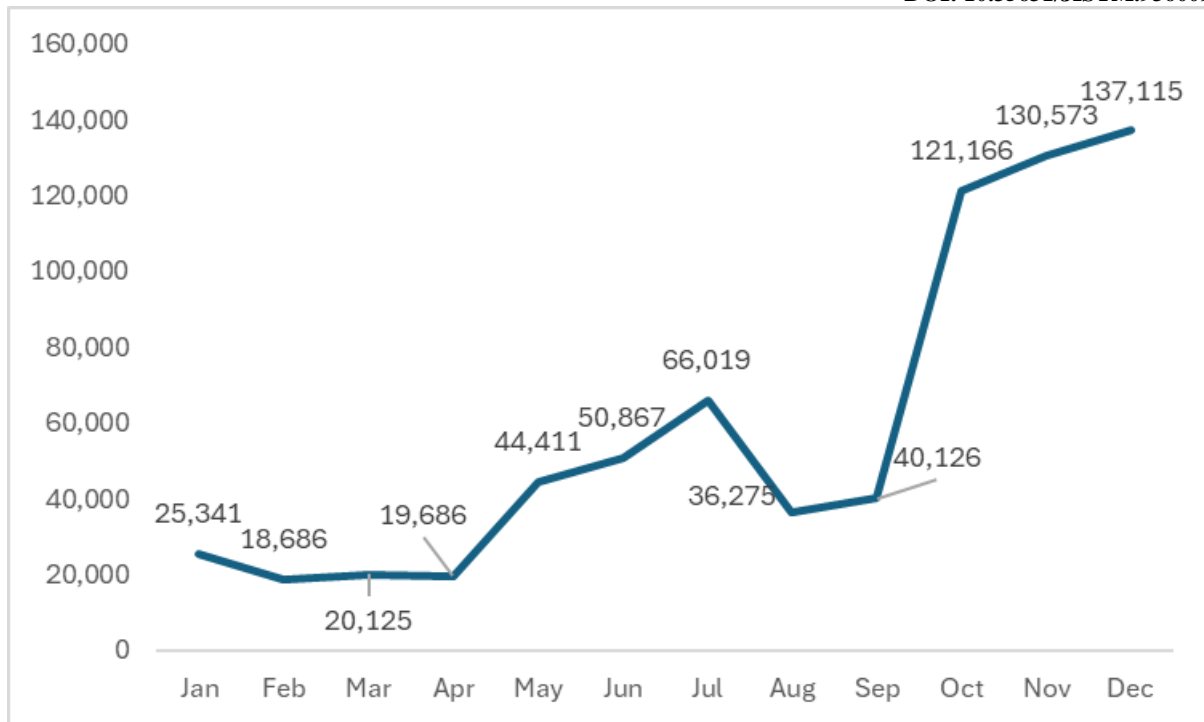


Figure 1: Total Cashless Transactions from January to December 2023

Figure 1 illustrates the number of cashless transactions from January to December 2023 with an increase of around 441% over one year. Cashless transactions moderated during semester breaks and holidays from March to April and August to September 2023. The sharp increase in cashless transactions from September to October 2023 was the result of cashless campaigns and mandatory requirements for vendors and sellers to provide cashless payment methods such as QR Pay, TnG, bank transfers, and others.

This research aims to provide insights for policymakers, financial institutions, and educational stakeholders to develop targeted interventions promoting e-payment literacy and addressing adoption barriers. Through a comprehensive examination, this study seeks to contribute to the academic discourse on e-payment adoption behavior and facilitate informed decision-making in the digital finance realm.

The subsequent sections of this paper will review relevant literature, outline the methodology, discuss findings, and enrich understanding of e-payment hesitancy among university students, fostering an environment conducive to embracing digital financial technologies.

Literature Review

E-payment systems have gained significant traction globally, yet their adoption among university students remains varied. Understanding the factors influencing e-payment hesitancy is crucial for enhancing financial inclusion and digital literacy among this demographic. Research has highlighted the importance of addressing e-payment hesitancy among university students due to its implications for financial inclusion and digital literacy (Solloum & Al-Emran, 2018). Factors such as perceived ease of use, usefulness, enjoyment, trust, motivation, and self-efficacy play significant roles in shaping students' attitudes and behaviors towards e-payment adoption (Rosli et al., 2023). Additionally, societal trends towards cashless transactions underscore the importance of exploring the reasons behind students' reluctance to

embrace electronic payment methods (Rahman et al., 2020). Therefore, a comprehensive understanding of the factors influencing e-payment hesitancy among university students is essential for designing effective interventions to promote financial inclusion and digital literacy within this demographic.

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E-payment hesitancy refers to the reluctance or delay in adopting electronic payment methods, despite their availability and convenience. Among university students, this hesitancy may stem from various factors, including knowledge gaps, attitudes towards e-payments, reasons for usage preferences, and societal trends towards cashless transactions. Research consistently shows that students' understanding of e-payment systems significantly influences their decisions regarding adoption (Shafei et al., 2020).

A profound understanding of how these systems operate, their benefits, and associated risks directly impacts students' willingness to embrace them as viable payment methods. Studies have identified knowledge gaps as a significant barrier to e-payment adoption among students (Vasudevan et al., 2023). Thus, initiatives aimed at enhancing students' awareness and understanding of e-payment technologies are crucial for nurturing a more positive attitude towards their adoption. To address this, educational interventions and awareness campaigns are pivotal. Educational interventions and awareness campaigns emerge as effective strategies to address e-payment hesitancy by carrying students' knowledge of e-payment systems (Cheong & Nasuredin, 2023). By providing comprehensive information about the functionality, security measures, and advantages of e-payment platforms, educational initiatives empower students to make informed decisions regarding their adoption. Moreover, raising awareness about the growing prevalence of e-payment methods and their integration into everyday transactions can help dispel misconceptions and alleviate concerns among students. Thus, investing in educational programs and awareness campaigns holds promise for mitigating e-payment hesitancy and facilitating greater acceptance among university students.

Investing in educational programs and awareness campaigns not only shows potential for reducing e-payment hesitancy, but also acknowledges the significant impact of attitudes towards e-payments on adoption behavior, encompassing perceptions of convenience, security, and trust (Kadir et al., 2022). Attitudes towards e-payments, including perceptions of convenience, security, and trust, significantly influence adoption behavior (Kadir et al., 2022). Positive attitudes towards the convenience and efficiency of digital transactions often

encourage acceptance and usage of e-payment systems among university students. Conversely, negative perceptions, such as concerns about the reliability and safety of electronic transactions, can lead to hesitancy [6]. Doubts about the security of personal and financial information transmitted during e-payments may deter students from embracing these technologies fully. Furthermore, trust in e-payment systems and service providers is a fundamental aspect of attitude formation (Salloum & Al-Emran, 2018). Students' confidence in the reliability and integrity of e-payment platforms influences their willingness to engage in digital transactions. Perceived risks associated with potential fraud or data breaches can erode trust and hinder adoption, emphasizing the importance of building robust security measures and increase trustworthiness in e-payment services.

Concurrently, students' motivations for embracing e-payment methods significantly influence their hesitancy towards these systems, highlighting the intricate interplay between perceived risks, security measures, and adoption behaviors in shaping attitudes towards e-payments. Research indicates that convenience is a significant driver influencing students' preferences for e-payment methods (Chelvarayan et al., 2022). The ease of conducting transactions without the need for physical cash or cards appeals to the digital-native generation, enhancing the attractiveness of e-payment platforms. Moreover, the allure of rewards and incentives associated with e-payment usage further incentivizes students to embrace cashless transactions (Balakrishnan & Lay Gan, 2023). Offers such as cashback, discounts, or loyalty points not only attract students but also contribute to habit formation and sustained usage of e-payment systems. Understanding the complicated reasons driving students' adoption of e-payment methods provides valuable insights into mitigating hesitancy and promoting widespread acceptance. By prioritizing convenience enhancements, providing appealing incentives, and capitalizing on peer influence, stakeholders can effectively tackle obstacles to adoption and cultivate a cashless ethos within university campuses.

This societal shift towards cashless transactions not only shapes the financial behaviors of university students but also mirrors larger patterns in the widespread adoption of digital payment mechanisms. Cultural norms exert significant influence on molding students' perspectives and inclinations regarding cashless transactions (Rahman et al., 2020). Societal acceptance and normalization of digital payments impact students' perceptions of convenience and security, contributing to their willingness to embrace cashless options. Moreover, government policies and technological advancements further mold the landscape within which university students engage with e-payment systems. Regulatory frameworks and initiatives aimed at promoting cashless economies can incentivize students to adopt digital payment methods (Ong & Chong, 2023). Concurrently, advancements in technology, including the proliferation of smartphones and the development of user-friendly payment apps, enhance accessibility and ease of use, facilitating students' transition towards cashless transactions.

Table 1 Presents A Summary Of Previous Studies On Cashless Payment Systems.

Author(s)	Year	Title	Findings
Solloum & Al-Emran	2018	E-payment hesitancy and its implications for financial inclusion and digital literacy	Addressing e-payment hesitancy is crucial for promoting financial inclusion and digital literacy.
Rosli et al.	2023	Factors shaping e-payment adoption: Ease of use,	Perceived ease of use, usefulness, trust, motivation, and self-efficacy significantly affect e-payment adoption.

		usefulness, enjoyment, trust, motivation, and self-efficacy	
Rahman et al.	2020	Exploring reasons for students' reluctance to embrace e-payment systems amid cashless trends	Students reluctance to use e-payment systems is influenced by societal trends towards cashless transactions.
Shafei et al.	2020	Influence of student understanding of e-payment systems on adoption decisions	Understanding of e-payment systems plays a critical role in influencing students' decisions to adopt them.
Vasudevan et al.	2023	Addressing knowledge gaps to increase e-payment adoption among students	Knowledge gaps are a significant barrier to e-payment adoption, suggesting the need for educational interventions.
Cheong & Nasuredin	2023	Educational interventions to address e-payment hesitancy through awareness campaigns	Educational campaigns are effective in increasing awareness and improving attitudes towards e-payment systems.
Kadir et al.	2022	Impact of attitudes toward convenience, security, and trust on e-payment adoption behavior	Students attitudes toward convenience, security, and trust heavily influence their e-payment adoption behavior.
Salloum & Al-Emran	2018	Trust in e-payment platforms as a fundamental factor in student adoption	Trust in e-payment platforms and providers is a key factor that impacts the willingness of students to adopt these systems.
Chelvarayan et al.	2022	Motivations and drivers of e-payment adoption among university students	Convenience is a major driver of e-payment adoption among university students.
Balakrishnan & Lay Gan	2023	Incentives and rewards as mechanisms to promote sustained e-payment usage	Rewards like cashback, discounts, and loyalty points encourage students to adopt and continue using e-payment systems.
Rahman et al.	2020	Cultural and societal trends influencing university students' adoption of cashless transactions	Cultural and societal trends, including peer influence, play a significant role in shaping students' attitudes toward cashless transactions.
Ong & Chong	2023	Government policies and technological advancements	Government policies and technological advancements enhance students' accessibility and adoption of e-payment methods.

In conclusion, e-payment hesitancy among university students is a manifold phenomenon influenced by knowledge, attitude, reasons for usage, and broader cashless trends. Addressing these factors through targeted interventions and policy initiatives is essential for promoting financial inclusion and digital literacy among this demographic.

Conceptual Framework

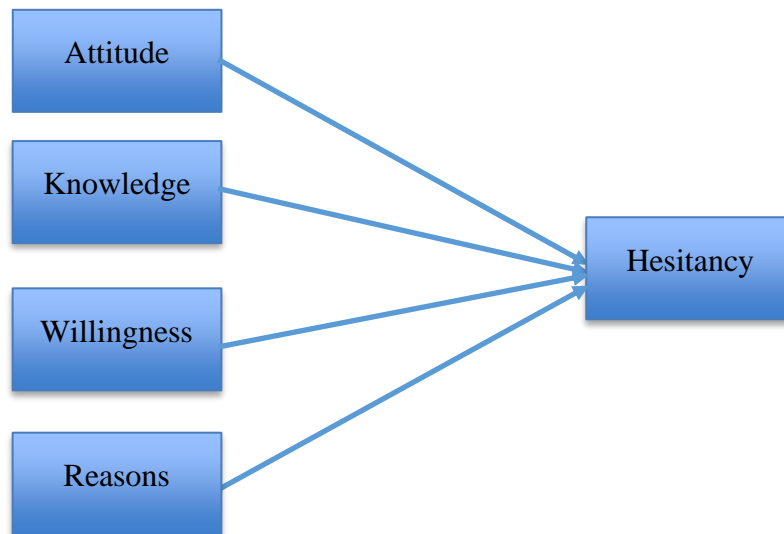


Figure 2: Conceptual Framework

Figure 2 shows the conceptual framework of this study. The independent variables (IVs) are attitude, knowledge, willingness, and reasons, while the dependent variable (DV) is hesitancy towards adopting e-payment systems. The independent variables represent the factors influencing university students' hesitancy in adopting e-payment systems. Attitude refers to the students' overall perceptions and feelings about e-payment systems. If students perceive these systems as secure, easy to use, and beneficial, they are more likely to adopt them. Positive attitudes foster adoption, whereas negative attitudes, often driven by perceived risks or inconvenience, contribute to hesitancy.

Variable of knowledge captures how familiar students are with e-payment systems, including their features, security, and operational aspects. A lack of knowledge or misinformation about how these systems work can significantly contribute to hesitancy, while well-informed students are more likely to adopt e-payment systems confidently. Willingness reflects the personal motivation and readiness of students to embrace this technology. It could be influenced by preferences for convenience, rewards, or peer influence. Low willingness, stemming from distrust or skepticism, results in higher hesitancy.

Consequently, the variable of reasons is students' underlying drivers or justifications for adopting or resisting e-payment systems. These reasons may include personal experiences, societal influences, or cultural norms. Understanding these reasons provides insight into the factors leading to hesitancy. Finally, the dependent variable, hesitancy, represents the reluctance or delay in adopting e-payment systems despite their availability and potential

benefits. The attitudes, knowledge, willingness, and reasons identified above influence the outcome.

Methodology

This study relies on the partial least squares structural equation modelling (PLS-SEM) to examine the intricate relationship between knowledge, reason for usage, attitude, willingness and digital hesitancy. PLS-SEM offers several advantages including its flexibility in handling non-normal data, small sample size and for exploratory studies. Based on Anderson and Gerbing (1988), PLS-SEM follows a two-step process where both the measurement and structural models were assessed.

Sample And Procedure

This research utilizes a quantitative approach, employing a survey questionnaire as its primary data collection method. The questionnaire underwent rigorous verification by three (3) internal experts to ensure its alignment with the research objectives and its comprehensibility to both students and staff, who represent diverse backgrounds and income levels. Given the potential impact of such diversity on the propensity to engage in cashless transactions, special attention was paid to the questionnaire's clarity and relevance. A pilot survey was subsequently conducted to assess the validity of the survey instruments. Thirty (30) samples were distributed, with 15 drawn from students and the remainder from staff. Additionally, interviews were conducted with 10 respondents to gather feedback aimed at refining the questionnaire and ensuring clarity of questions. The reliability of the survey instruments from the pilot study was assessed through Cronbach's alpha, yielding values exceeding 0.6 for all constructs tested, thus affirming their validity.

The sampling frame of this study is the users of e-payments in University Teknologi MARA (UiTM) Cawangan Kedah. The university housed 8889 students in 2023 but only 3888 live within the campus and the remaining live outside the campus. The total number of academic and non-academic staff is 526. The unit of analysis is the individual student and staff. The survey was conducted from 14 July 2023 to 20 November 2023 at UiTM Cawangan Kedah. The questionnaires were developed using the literature review and whether the construct are formative or reflective was examined using the confirmatory tetrad analysis (CTA). Validation of the questionnaires was undertaken via expert interviews with twelve (12) experts involved in digital payment. The questionnaires were distributed via QR code at the kiosk, dining halls, and other locations that require monetary transactions. Our main challenge is the reluctance of the respondents to answer the questionnaires which reflects their reluctance in using cashless payments.

To assuage this problem, the students were requested to answer the questionnaires during class. The total valid sample used in the analysis is 701 from students and staff. The valid sample collected from students is 601 or approximately 15.5% of the total student population living on the campus. The sample collected covers all of the major faculties or colleges with 13% from the College of Computing, Informatics and Media, 13% from the Faculty of Accountancy, 27% from the Faculty of Business Management, 12% from the Faculty of Information Management, 9% from the College of Creative Arts and 9% from the Faculty of Administrative Science and Policy Studies. In terms of gender, the male respondents constitute 48% whilst female respondents account for 52% of the total sample. The sample captures three major levels with respondents doing their degree at 47%, 43% studying at the diploma level, 6% postgraduate

and the remaining either taking professional courses or pre-diploma programs. The valid sample collected from staff is 100 or approximately 19% of the total staff population. 53% of respondents from the staff are female whilst the remaining 47% are males. Approximately 48% of the respondents are academicians and 53% are non-academicians from various departments such as the Rector's Office, Administration Department, Bursary, Facility Department, Library, Infostructure Department, and the Auxiliary Police.

Measures

Factors contributing to the use of cashless payment hesitancy are tested by controlling for the effect of attitude, knowledge, willingness, and reasons for using cashless payment. All constructs use the same response format which is the 5-point Likert's Scale ranging from strongly disagree (1), disagree (2), neutral (3), agree (4) to strongly agree (5). The constructs were adapted and consolidated to help explain the hesitancy phenomenon amongst students and staff at the university. Attitude towards e-payment is adapted from Rahman et al. (2020), knowledge from Balakrishnan and Lay Gan (2023), willingness from Chelvarayan et al. (2022) and reasons from Ong and Chong (2023).

Findings

For the measurement model, internal consistency was assessed using Cronbach's alpha and composite reliability. Table 2 illustrates the Cronbach's alpha and composite reliability values for all constructs are more than the suggested value of 0.7, rendering internal consistency. For convergent validity, the outer loadings should be greater than 0.708 and the average variance extracted (AVE) should be more than 0.5 (Hair et al., 2017). Table 2 shows all the included construct fulfills the AVE and the outer loadings thresholds. Constructs that are less than 0.708 were removed (D3, D4). The values of the constructs' AVE range between 0.713-0.865 show sufficient evidence of convergent validity. Figure 2 shows the measurement models where all the factor loadings are greater than 0.708 which corroborates internal consistency.

Discriminant validity is assessed using the Fornell-Larcker criterion and Heterotrait-Monotrait ratio (HTMT) criterion, HTMT is based on the work of Henseler et al. (2015) which posits that the value between two constructs should be below 0.85. Table 3 shows the HTMT results for discriminant validity. The HTMT results range between 0.001-0.56 is less than the stipulated value of 0.5, hence fulfilling the criterion for discriminant validity. In addition, the Fornell-Larcker criterion which ranges from 0.93-0.84 is in line with the contention that the square root of the AVE for the constructs should be higher than the inter-construct links (Fornell and Larcker, 1981). Results in Table 3 confirm the fulfilment of the discriminant validity concerns.

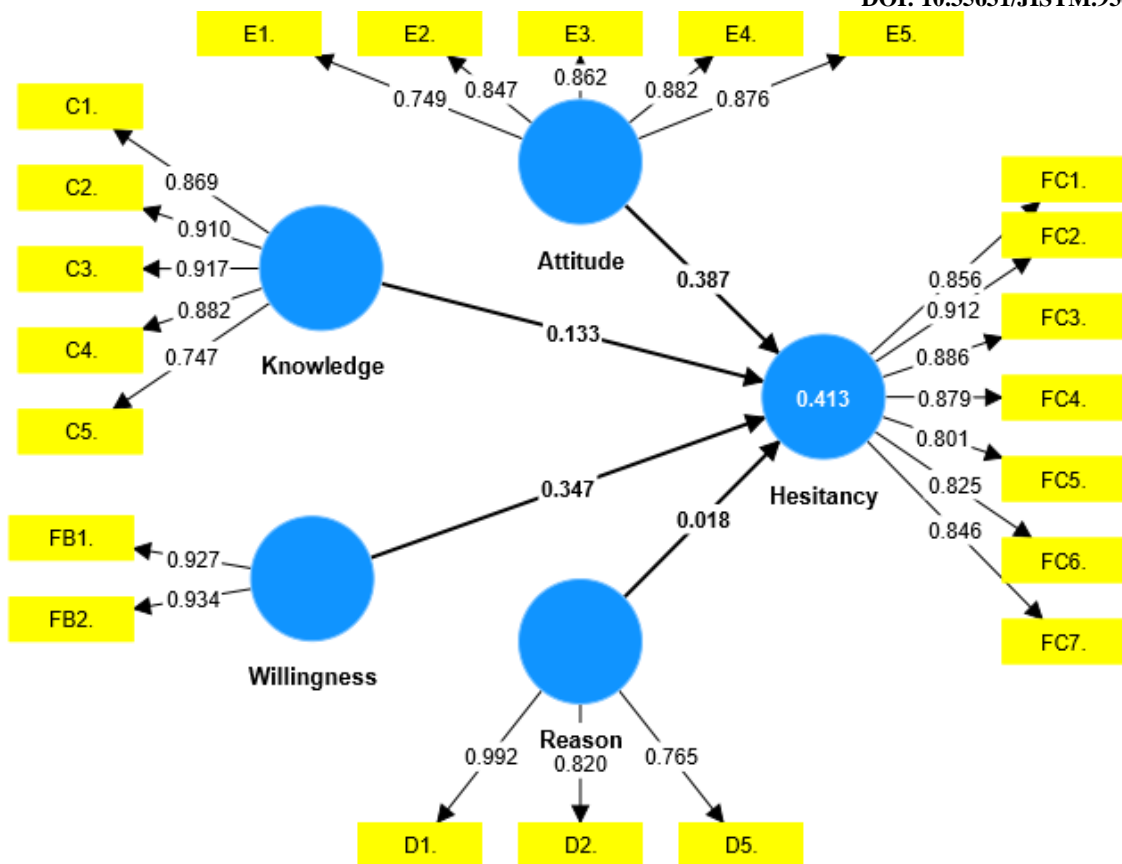
**Figure 3: Measurement Model**

Table 2: Measurement Model

Constructs	Items	Outer loadings	Cronbach's Alpha	Composite Reliability	AVE
Knowledge	C1.	0.869	0.917	0.938	0.752
	C2.	0.91			
	C3.	0.917			
	C4.	0.882			
	C5.	0.747			
Reason	D1.	0.992	0.882	0.898	0.747
	D2.	0.82			
	D5.	0.765			
Attitude	E1.	0.749	0.899	0.925	0.713
	E2.	0.847			
	E3.	0.862			
	E4.	0.882			
	E5.	0.876			
Willingness	FB1.	0.927	0.845	0.928	0.865
	FB2.	0.934			

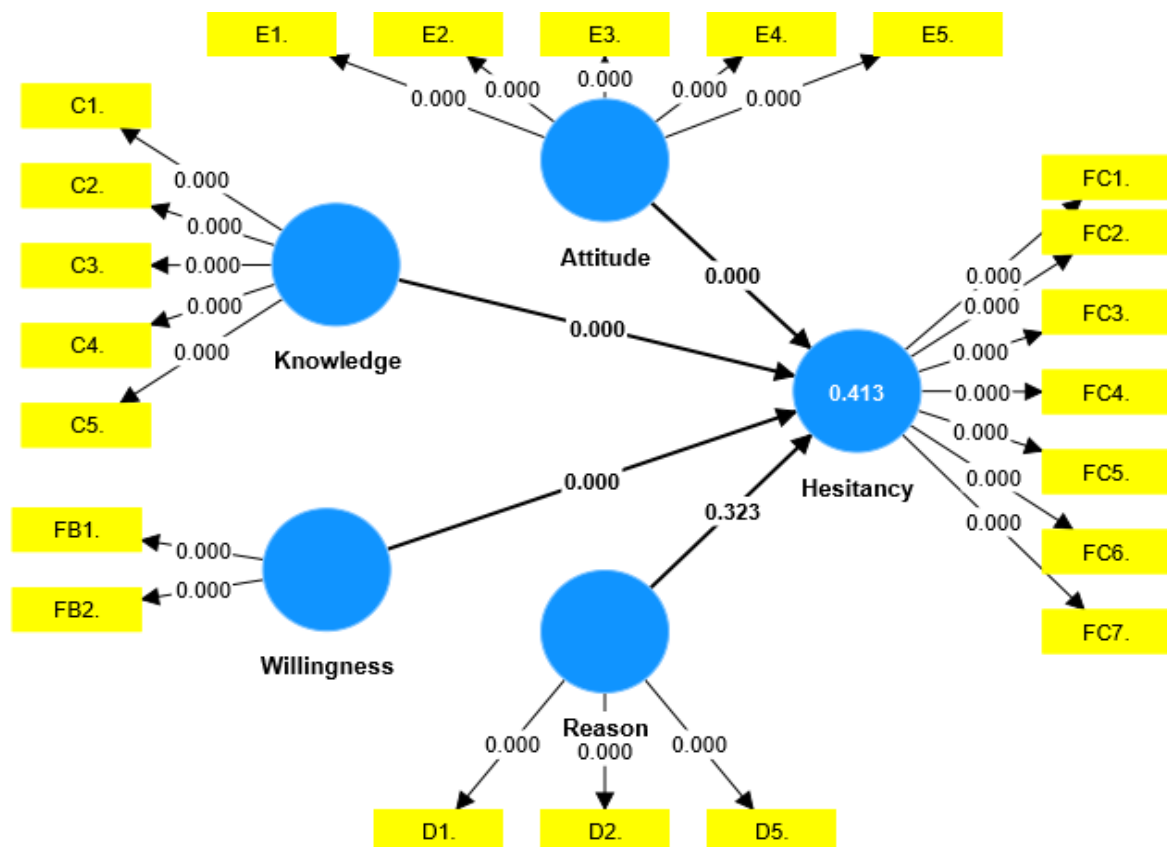
**Figure 4: Structural Model**

Table 3: Discriminant Validity

HTMT Criterion	Attitude	Hesitancy	Knowledge	Reason	Willingness
Attitude					
Hesitancy	0.558				
Knowledge	0.157	0.291			
Reason	0.098	0.055	0.276		
Willingness	0.361	0.562	0.272	0.053	

Fornell-Larcker criterion	Attitude	Hesitancy	Knowledge	Reason	Willingness
Attitude	0.844				
Hesitancy	0.518	0.859			
Knowledge	0.148	0.275	0.867		
Reason	0.001	0.077	0.212	0.864	
Willingness	0.319	0.503	0.232	0.085	0.93

Table 4: Structural Model

Direct effect	Coefficient	BCCI (5%-95%)	Standard error	t-value	p-value	Decision	f ²
Attitude -> Hesitancy	0.387	[0.324, 0.448]	0.032	12.239	0.000	Supported	0.23
Knowledge -> Hesitancy	0.134	[0.068, 0.196]	0.033	4.081	0.000	Supported	0.03
Reason -> Hesitancy	0.018	[-0.094, 0.074]	0.04	0.46	0.646	Not Supported	0
Willingness -> Hesitancy	0.345	[0.280, 0.415]	0.034	10.074	0.000	Supported	0.18

Prior to assessing the direct effects, the structural model suggests assessing the presence of multicollinearity (Hair et al., 2017). The variance inflation factor (VIF) is used to examine multicollinearity. VIF results show that all variables suffer no multicollinearity since the values are less than the recommended value of 5.

Next, to assess the significance of the coefficient path, a bootstrapping technique of 10,000 re-sample was applied. Table 4 shows the results for direct effects of how the construct affects hesitancy in the use of cashless payment. For the direct effect, results show that attitude, knowledge, and willingness has substantial positive impact on hesitancy to use cashless payment. Reason for usage, however, has no significant impact on cashless usage hesitancy.

The effect size is also reported in Table 3 by f^2 with cut-off values of 0.02 (small), 0.15 (medium), and 0.35 (large). Specifically, attitude and willingness has a medium effect size whilst knowledge has a small effect size.

Results show that knowledge and understanding plays pivotal role in the adoption and usage of cashless payment which is in line with Vasudevan et al. (2023) and Cheong and Nasuredin (2023). Various campaigns to give information to students, staff, and vendors which include various engagement programs such as meetings with vendors, talking to new and existing

students on cashless usage, various fun activities such as TikTok video competition to promote cashless usage and most frequent cashless usage competition with cash reimbursement. These activities were made possibly using the funds by Paynet (M) Sdn. Bhd. who allocated an RM20,000 grant for the student body to run the cashless campaign.

Attitude on the other hand is greatly influenced by knowledge. Campaigns conducted throughout the campus promote positive vibes in using cashless payment. Perceptions of convenience, security, and trust immediately translate into the adoption of cashless transactions. In addition, perceived risks of using cashless transactions associated with potential fraud or data breaches were relatively negligible amongst users during the period of study.

Willingness to use is associated with the availability of different modes of cashless payment offered by vendors such as QR Pay, debit card, and TnG card which records the highest usage vis-à-vis other modes of cashless payment. The availability of QR Pay offered by vendors facilitate cashless payment since it's free and easy to use. Vendors, on the other hand, pay no fee to the bank if QR Pay is used. Therefore, this is a win-win situation between students (consumers) and vendors (sellers) when cashless payment is used. Students no longer need to queue at the ATM and vendors no longer need cash to provide change for the buyers. Such facilities substantially increase the willingness of students and vendors to use cashless payment.

Conclusion

In conclusion, the evolution of electronic payment (e-payment) systems has revolutionised financial transactions, thus offering advantages driven by advancements in information technology. This has resulted in lower transaction costs, a rise in e-commerce, and an increase in trade worldwide. Furthermore, employing e-payment methods such as the use of electronic checks, credit cards, and electronic cash provides versatility for enhancing financial transactions remotely. However, worries remain especially among university students because of two factors; inadequate technical know-how and lack of security. In this regard, this study addresses to students the problem of e-payment adoption and its hesitance aiming to provide insights among the policymakers, financial institutions, and education stakeholders. The study surveys quantitative data and adopts structural equations modelling to understand e-payment hesitance factors. As a result, stakeholders must prioritise educational initiatives and awareness campaigns aimed at enhancing students' understanding of e-payment technologies. By addressing knowledge gaps, fostering positive attitudes, and providing appealing incentives, the barriers to e-payment adoption can be overcome, leading to greater financial inclusion and digital literacy among university students.

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