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The Impact of Low Distribution Costs and Short Transit Times on Moderating the Correlation Between Digital Wallet Adoption and Impulse Purchases

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Abstract: In the contemporary digital era, individuals are afforded the convenience of instantaneous transactions through electronic wallets (e-wallets) when engaging in online shopping. This study aims to investigate the extent to which the adoption of e-wallets influences impulsive purchasing behavior, with a particular focus on the moderating effects of low distribution costs (LDC) and short transit times. A descriptive quantitative methodology was employed, targeting users of Indonesian e-wallets. A non-probability research design was utilized, specifically employing snowball sampling techniques. Data were collected through a Google Forms questionnaire, yielding 297 responses. Partial Least Squares (PLS) analysis was conducted to evaluate the data. The results revealed that perceived risk, perceived usefulness, and perceived ease of use (PEOU) significantly and positively impacted the adoption of e-wallets. However, the adoption of e-wallets did not necessarily result in impulsive purchases driven by utilitarian needs. Moreover, LDC and short transit times did not moderate the relationship between e-wallet usage and impulsive buying (IB) behavior. This suggests that most respondents did not use e-wallets for purchases motivated solely by practical considerations, even when LDC and quick transit times were available. These findings contribute to the existing literature on digital money and e-wallets, offering insights for online merchants and digital wallet providers. It is recommended that digital wallet providers enhance accessibility, improve transparency regarding customer data protection, and disseminate information about the benefits and utility of e-wallets to foster wider adoption. Online retailers are encouraged to offer diverse payment options to attract customers. This study provides valuable implications for the optimization of customer service in the context of Indonesia.

Keywords: E-wallet adoption; Impulsive buying (IB); Low distribution costs (LDC); Short transit times; Digital wallet; Customer behavior

JEL Classification: D12; D91; E42; L81

1. Introduction

The development of the times and progress of technology have changed the behavior of the of the public in various aspects of life, thus resulting in the emergence of financial technology, or FinTech (Zada & Sopiana, 2021). FinTech arose as a result of shifts in the lifestyles of individuals who are predominantly reliant on information technology, driven by the need for a fast-paced existence (Bank Indonesia, 2018). Adoption of technology has led to a strict lifestyle where the individual depends on digital services as a fast tool and is comfortable doing activities every day (Yuneline & Rosanti, 2023), including online shopping. We Are Social's research reveals that 56.1% of regular global internet users shop online every week, with Indonesia ranking 9th among 10 countries with a proportion of 59.3% (Annur, 2024). This matter exists because people are still very interested in shopping online even after the pandemic is over. There are several reasons, namely: 1) consumers don't need to leave the house; 2) online businesses offer lots of promotions; 3) consumers can avoid COVID-19; 4) it's cheaper; and 5) there are

lots of choices (Zakawali, 2022).

In Populix (2023), as many as 72% of Indonesian people use the internet to shop using smartphones. Smartphones provide easy access to online shopping platforms, facilitating people's impulse purchases (Sari & Laksmidewi, 2021). Consumers who make online impulse purchases have a tendency towards shopping enjoyment, atmosphere, heart, and situation (Febrilia & Warokka, 2021). According to Zheng et al. (2019), more than fifty percent of online transactions are impulsive.

Digital wallets have gone wrong. One form of technology in finance has received significant attention because of its role in facilitating digital payments (Sutticherchart & Rakthin, 2023). An e-wallet is a service for conducting non-cash payment transactions to enhance efficiency and convenience, and it may be conveniently and securely utilized on smartphones without limitations (Rizkiyah et al., 2021). E-wallet is the most frequently chosen payment method for online shopping, namely 84.3% (Muhamad, 2023). This makes e-wallets a factor in influencing people towards impulsive purchases (Febria & Oktavio, 2020).

The selection of an e-wallet as a method payment for online purchases is influenced by several factors, such as risk factors, which refer to problems with using digital transactions to purchase products and services (Rahayu & Prasetyatama, 2021). Then, ease of use and utility also influence intentions for use and adoption of wallet electronics (Yang et al., 2021). According to Mujahidin et al. (2020), transactional convenience may lead to impulsive purchasing habits. Furthermore, LDC also refers to the prices consumers must pay for goods and services from companies (Le & Lei, 2018). According to research by Hameed et al. (2018), consumers prioritize products, services, and delivery time for both impulse purchases and other types of purchases. This aligns with perspective of Imran et al. (2019).

Understanding this connection regarding the use of digital wallets and impulse purchases is critical for businesses and consumers for several key reasons: e-wallet adoption has been shown to significantly influence impulse buying behavior (Lee et al., 2023). Businesses can benefit from this knowledge by offering mobile payment services that enhance user experience and enjoyment, thereby encouraging impulse purchases (Lee et al., 2022). Additionally, the adoption of e-wallets can lead to impulse purchases, which is very important for businesses to consider when strategizing marketing and sales approaches (Lee et al., 2022). Then, understanding the influence of delivery times and shipping prices is crucial for both organizations and consumers due to the significance of dependable delivery., safe packaging, and timely delivery of products, which are crucial determinants of consumer happiness in online shopping (Vasic et al., 2019). Gaining insight into the compromise between the time it takes to deliver a product, the convenience of the delivery process, the overall price of the product, and the costs associated with shipping is crucial for creating a successful e-fulfillment strategy in online retail (Gawor & Hoberg, 2019).

Study-related influence of e-wallet adoption towards purchase impulsiveness has been extensively researched in several countries; however, low cost distribution and low transit time as moderation are still minimal, especially in Indonesia. In order to test the perceived ease of decision to use a digital wallet and its influence on impulse purchases when people use digital money by using a low level of reduced transit time and distribution as moderation, the researcher wishes to investigate the influence of the of the adoption of e-wallets on impulse purchases with shorter transit times and reduced distribution costs as moderation. This study will also expand on prior research by adding one independent variable, namely the PEOU of e-wallets. Besides that, this research uses different samples with previously Because of this study, we used a sample user Indonesian digital wallet. Study This expectation can make a contribution to the development of literature related to the role of digital money and wallet electronic to ensure the best service for sellers and buyers, especially in Indonesia.

According to Didied et al. (2022), digital wallets are payments that allow users to carry out electronic transactions using cellphones and replace physical wallets. Sari et al. (2021) in their research indicate that a variety of factors influence the frequency of e-wallet use, including security, dangers, customer attitudes, perceived benefits, attractiveness of advertising, service features, and discounts. Then, the perceived simplicity of use and utility of e-wallets also have an impact on their utilization (Didied et al., 2022). Then, understanding and being aware of the dangers connected to digital wallets is also very important, because this is an obstacle to implementing digital wallets as a secure method of payment (Ahn et al., 2020; Sofi & Najar, 2018). The potential risks associated with e-wallets, such as unauthorized access to personal information and data breaches, make it important to have strong security features (Harishanthan & Neruja, 2023; Hassan & Shukur, 2021). This is because users can lose trust in electronic payment transactions if privacy and security features are inadequate (Undale et al., 2021). Nevertheless, digital wallet payments do not substitute cash transactions but rather serve as a supplementary option alongside cash (Sari et al., 2021). Usability refers to the extent to which individuals perceive that utilizing e-wallets can enhance their performance, and individuals are more likely to adopt a technology if they find it beneficial (Didied et al., 2022). Those that use e-wallets have the ability to transfer funds digitally between individuals as well as between businesses (Zhao et al., 2022). PEOU refers to an individual's perception of the simplicity of using technology (Didied et al., 2022). According to Toh et al. (2022), the ease of using a digital wallet is due to the absence of complications and problems when interacting with the electronic wallet platform. Perez (2022) believes that this perception directly impacts users' interest in using e-wallet technology. Perception of convenience in this

research uses indicators in research (Didied et al., 2022).

Effendi et al. (2020) argue that impulsive purchases are purchases made without planning, with decisions tending to be quick and ambitious to own. According to Lee et al. (2023) impulse purchases result in an abrupt, intense, and persistent need to act without deliberation. Online impulse buying occurs when consumers are highly stimulated during a shopping experience, leading to unexpected purchasing decisions (Thuong, 2020). E-commerce platforms often encourage impulse purchases, which can sometimes be detrimental to consumers (Moser et al., 2019). The rise in impulse purchases has been linked to the adoption of non-cash payment methods, including e-wallets (Lee et al., 2022). The convenience and interactivity of digital wallet applications may lead to impulse online purchases, especially among younger consumers (Lee et al., 2023).

In online shopping, shipping and delivery expenses significantly influence customer behavior and their overall experience. Distribution, as defined by Article 1 Paragraph 2 of Regulation of the Minister of Finance of the Republic of Indonesia No. 22 of 2016 about General Provisions for the Distribution of Goods, is the act of distributing goods to customers, straight or indirectly. Meanwhile, low levels of dissemination costs allude to the cash spent by consumers while making purchases of products or services from business entities (Wei et al., 2023). LDC is very important because customers are more satisfied if business entities provide services with LDC (Akram et al., 2018). Meanwhile, low transit time is how quickly services and products reach consumers (Wei et al., 2023). For people who buy products or services, low transit time is very important (Yaqub et al., 2022). This is because people are worried about product distribution times due to their desire to fulfill the need for rash shopping (Bellini et al., 2017; Lee et al., 2023). Apart from that, company management must also consider transit time so that people get the product as early as possible (Hameed et al., 2018).

The impact of risk is significant in determining the desire to adopt e-wallets, particularly in the context of online transactions (Krisnawati et al., 2021). Perceptions of security significantly influence consumers' intentions to use e-wallet systems (Andrew et al., 2021). Therefore, understanding the dangers of using digital wallets is also very important because this is an obstacle to implementing digital wallets as safe payments (Ahn et al., 2020; Sofi & Najar, 2018). If a technology has high risks, it can make people reluctant to use it. Numerous research studies have emphasized how critical it is to comprehend the hazards associated with adopting e-wallets. Apriani & Wuryandari (2022) found that there was a positive and substantial relationship between risk and the intention to utilize e-wallets. Studies (Abdull Rahman et al., 2022; Janteng & Dino, 2022; Purnamawati et al., 2023; Wei et al., 2023) are consistent with this. Therefore, it can be concluded that the inclination to utilize electronic wallets is influenced in a favorable manner by the presence of risk.

Hypothesis 1 (H1): The risk of digital wallets is significantly and positively correlated with e-wallet adoption.

Lack of understanding regarding the uses and benefits of technology can make someone not understand existing information technology and cause people to tend not to adopt it (Didied et al., 2022). Therefore, usefulness is important so that people can adopt e-wallets. Based on previous research, perceived usefulness has a positive effect on interest in using electronic money service wallets (Genady, 2018). Chawla & Joshi (2019) found that perceived usefulness significantly influences consumers' attitudes and intentions to use digital wallets. This is in line with research by Lee & Thoo (2022), Soelasih & Sumani (2022), and Wei et al. (2023). Thus, it can be said that the adoption of electronic wallets is positively impacted by usability.

Hypothesis 2 (H2): There is a significant positive relationship between usefulness and e-wallet adoption.

The convenience of utilizing an electronic wallet can lead consumers to exhibit consumptive behavior in their purchasing habits (Mujahidin et al., 2020). Multiple studies have examined the influence of PEOU on the adoption of digital wallets. For instance, Chawla & Joshi (2019) demonstrated that PEOU significantly affects consumer attitudes and intentions towards using digital wallets. This study aligns with previous research conducted by Romadhotul (2020), Seng et al. (2023), and Wei et al. (2023), which indicates that the level of convenience associated with e-wallet usage has a substantial impact on IB behavior. Therefore, it may be deduced that the use of electronic wallets has a positive impact on impulsive purchasing.

Hypothesis 3 (H3): There exists a statistically significant correlation between the PEOU and e-wallet adoption.

In impatient purchases, people do not have the intention to buy products and services online, but one of the triggers for impatient purchases is the use of digital wallets. Digital wallets allow consumers to purchase goods and services from home, removing the need for physical store visits (Habib & Qayyum, 2018). Increased use of e-wallets is associated with higher levels of IB behavior (Aulia et al., 2023). Wei et al. (2023) found that decisions made by e-wallet users significantly influence impulsive purchases, aligning with findings from Aulia et al. (2023), Panasea et al. (2022), and Sanny et al. (2023). Therefore, it can be concluded that the use of electronic wallets positively impacts IB.

Hypothesis 4 (H4): There is a significant positive relationship between e-wallet adoption and impulse purchases.

According to a study conducted by Sari et al. (2021), the utilization of e-wallets has a favorable impact on customers' impulsive purchasing behavior in online shopping. This is attributed to the enjoyable and satisfying shopping experience for consumers (Lee et al., 2022). Nevertheless, consumer satisfaction in online shopping is also influenced by the characteristics of cost and delivery time (Saha et al., 2020). Ensuring dependable transportation, secure packaging, and punctual delivery can enhance customer contentment (Vasic et al., 2019).

Prior studies indicate that businesses that offer free shipping and incorporate shipping costs into their pricing strategy experience higher sales compared to retailers that impose relatively high shipping fees (Hackl et al., 2021). Rabbani et al. (2023) demonstrate the impact of free shipping on consumer choices in the context of online shopping. Affordable and convenient shipping and handling costs are crucial for improving customer experience and loyalty in e-commerce (Amulya, 2019). Supplying consumers with information regarding delivery timeframes and freight prices might assist them in making informed decisions when shopping online (Cheah & Huang, 2022). Furthermore, Choi et al. (2019) demonstrate that the caliber of e-commerce delivery services has a substantial impact on customer satisfaction and can promote IB tendencies. In a study by Yulianto et al. (2021), it was found that reduced distribution costs had a substantial impact on IB behavior. This is in line with research by Wei et al. (2023) regarding the acceptance of virtual currency (e-wallets) in the era following COVID-19 on impulsive purchases and states that LDC moderation and reduced transit times have a major positive effect on impulsive purchases using wallets. So, it can be concluded that the moderator effect of scarcely dispersed costs and travel time has a positive influence on electronic wallet adoption and impulsive purchases.

Hypothesis 5 (H5): LDC moderation is significantly and positively correlated with e-wallet adoption and impulse purchases.

Hypothesis 6 (H6): Low transit time moderation significantly and positively correlated with e-wallet adoption and impulse purchases.

Figure 1 shows the proposed model as below.

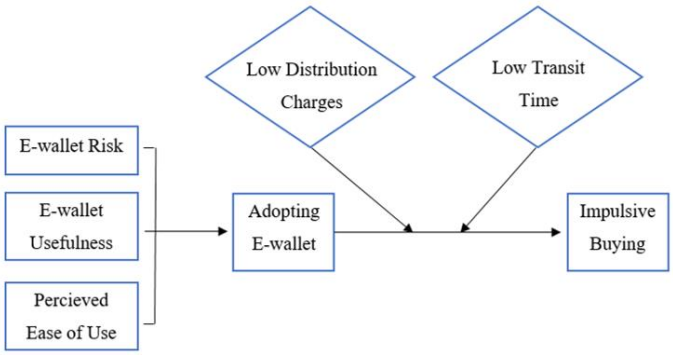

Figure 1. Proposed model

2. Methodology

2.1 Data and Sample Collection

This study uses descriptive quantitative methods to investigate the moderate impact of inexpensive distribution costs and short transit times on digital wallet adoption and impulse purchases. Data was collected using a Google Forms questionnaire that included a Likert scale assessment consisting of five points. The characteristics of e-wallet acceptance, risk, usefulness, impulsive purchases, inexpensive distribution costs, and short transit time were obtained from a study done by Wei et al. (2023). Additionally, the scale items assessing ease of use were adopted from the research carried out by Didied et al. (2022). The respondents in this study used Bahasa Indonesia as their language of choice. Therefore, the survey form was translated from English to Bahasa Indonesia in order to gauge their level of comprehension. The study was carried out in the regions of Cirebon, Indramayu, Majalengka, and Kuningan. This study specifically targets those who use e-wallets as a payment method. However, the exact number of digital wallet users in the region remains unknown. The population size in this study is unspecified; hence, a sample of around 30-500 respondents is collected to determine the appropriate sample size for the study, and it is necessary to multiply the number of variables by the sample size (Sekaran & Bougie, 2016). A grand total of 297 individuals were assembled for the purpose of this inquiry.

A snowball sample is utilized as a sample method to target people that are difficult to access because of their unknown characteristics in this study. This method employs social networks to identify individuals who are hard to reach using traditional sampling techniques (Aris & Othman, 2022).

2.2 Analysis Method

The researchers examined the hypotheses in this study using PLS equation modeling. They utilized SmartPLS 4 software, specifically version 4.0.9.6. To assess the outer model, they conducted validity and reliability tests, while the inner model was evaluated structurally. Bootstrap resampling was performed to determine the path coefficients and the moderation effects between variables.

For the outer model evaluation, the validity and reliability of the research instruments were tested. Validity was assessed through the outer loading and average variance extracted (AVE). Reliability was measured using Cronbach's alpha and composite reliability (CR). The inner model was assessed using the R-Squared test and the significance of the structural path coefficients.

According to Hair et al. (2022), data validity is established if the outer loading value exceeds 0.70. However, a loading value above 0.60 is deemed acceptable based on studies by Henseler & Fassott (2010). Researchers Ramayah et al. (2018) propose that the CR should be above 0.70, while the AVE should surpass 0.50. recommend a reliability coefficient of at least 0.70 for Cronbach's alpha, although Taherdoost (2016) considers a value above 0.60 to be appropriate and reliable. Variables are eliminated during validity testing to ensure their accuracy.

Discriminant validity testing can be done using three methods: the Fornell-Larcker criterion, cross-loading analysis, and the heterotrait-monotrait (HTMT) ratio. Hair et al. (2022) state that the Fornell-Larcker criterion requires a latent construct to explain its own measures' variance better than that of other constructs. For HTMT, Hair et al. (2022) recommend a value greater than 0.90. Cross-loading values show the correlation between indicators and constructs, and according to Hair et al. (2022), an indicator should correlate more with its latent variable than with others.

Collinearity among indicators is evaluated by looking at the variance inflation factor (VIF). A VIF value under 5 suggests no multicollinearity among the factors influencing the dependent variable Y. After assessing the significance of the path coefficient, hypothesis testing (inner model) can be conducted. According to Hair et al. (2022), a p-value less than 0.05 and a T statistic value over the crucial value of 1.960 at the 5% significance level indicate a significant effect.

3. Results

Table 1. Respondent demographics

Category	Number of Respondents	Percentage
Gender:		
Male	73	24.58%
Female	224	75.42%
Age:		
17-26	290	97.64%
27-35	6	2.02%
>35	1	0.34%
Education:		
Junior High School	1	0.34%
Senior High School	119	40.07%
Diploma Degree	9	3.03%
Bachelor Degree	165	55.56%
Magister	1	0.34%
PhD/Doctor	1	0.34%
Other	1	0.34%
Work:		
Student	5	1.68%
College Student	220	74.07%
Public Servant	1	0.34%
Self-employed	13	4.38%
Private Employed	50	16.84%
Other	8	2.69%
Owned Digital Wallet:		
Shopeepay	223	32.79%
Gopay	106	15.59%
OVO	99	14.56%
LinkAja	13	1.91%
Dana	224	32.94%
Doku	2	0.29%
Other	13	1.91%

Above is a tabulated representation of the respondent demographics in this study.

The results shown in Table 1 indicate that this sample was predominantly female, with 75.42% of the respondents being female. The remaining 24.58%, or 73 respondents, were male. Most respondents (97.64%) are between 17 and 26 years old, 2.02% are between 17 and 35, and only 0.34% are over 35. According to the respondents' educational background, the majority (55.56%) hold a bachelor's degree. A small percentage (0.34%) have completed junior high school, while 40.07% have completed high school. A total of 3.03% have a diploma,

and 0.34% have a master's degree or PhD. The remaining 0.34% fall into the category of "others." The respondents' occupations were primarily students (74.07%), followed by students (1.68%), civil servants (0.34%), self-employed individuals (4.38%), private employees (16.84%), and those in other occupations (2.69%). Out of the 297 participants who completed the study, 60.94% reported having several digital wallets.

The indications of LDC(3), IB(1), e-wallet risk (EWR)(3), and e-wallet usefulness (EWU)(4) are deemed invalid following validity testing, and they must be eliminated in order to pass the validity test. As a result, there are currently three indications remaining for the IB variable, two for the EWR variable, three for the EWU variable, and four for the LDC variable (Figure 2).

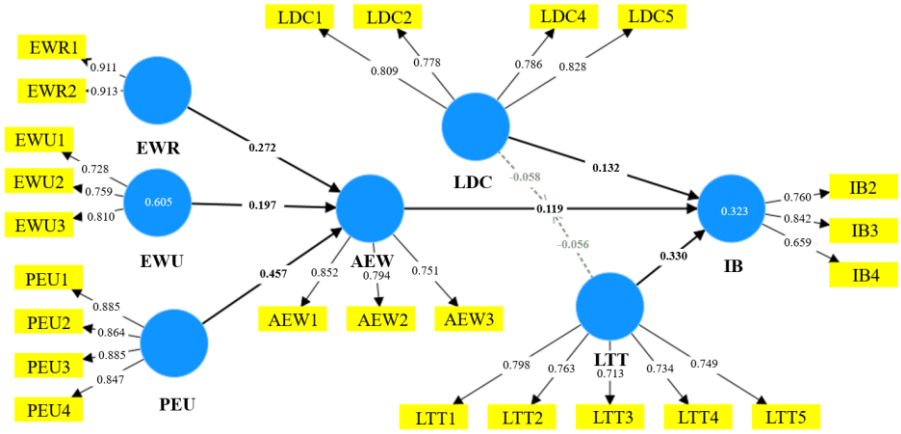

Figure 2. Structural model

The PLS calculation algorithm was used to perform validity and reliability tests (Table 2). According to Henseler & Fassott (2010), Figure 2's outer loading values for each scale item are greater than 0.60, indicating the validity of the data employed. Then, the Cronbach alpha value, which is more than 0.06 and regarded as dependable, falls between 0.625 and 0.893 (Taherdoost, 2016). In a similar vein, the provisions suggested by Ramayah et al. (2018) require that the AVE value of each variable be higher than 0.50 and that the CR value range from 0.800 to 0.926; this value is greater than 0.70.

Table 2. Construct reliability and validity

	Cronbach's Alpha	CR	AVE
AEW	0.717	0.842	0.640
EWR	0.798	0.908	0.832
EWU	0.651	0.810	0.587
IB	0.629	0.800	0.574
LDC	0.814	0.877	0.641
LTT	0.809	0.867	0.565
PEU	0.893	0.926	0.757

This study includes a discriminant validity test using the HTMT technique. The discriminant validity was assessed to examine the distinctions in the scale items employed by the research variables to collect data from the participants. Table 3 showed the discriminant test results in that demonstrate clear discriminant validity between scale items since the variable value does not exceed 0.90.

Table 3. Discriminant validity - HTMT

	AEW	EWR	EWU	IB	LDC	LTT	PEU	LDC × AEW	LTT × AEW
AEW									
EWR	0.807								
EWU	0.881	0.816							
IB	0.584	0.439	0.699						
LDC	0.697	0.632	0.666	0.602					
LTT	0.657	0.528	0.630	0.682	0.769				
PEU	0.869	0.569	0.708	0.644	0.580	0.584			
LDC × AEW	0.297	0.184	0.155	0.343	0.255	0.197	0.435		
LTT × AEW	0.209	0.146	0.168	0.331	0.218	0.205	0.357	0.789	

The Forner-Larcker validity test is used to measure the linear validity of indicators. The results of Table 4 show that for all variables based on the Forner-Larcker test as a whole, the discriminant validity evaluation is fulfilled, as seen from the AVE variable root value > correlation between variables (Hair et al., 2022). Then, the results of the discriminant validity test (cross-loading) show that all variables are discriminantly valid and can be processed to get conclusions; this is because each item correlates higher with the variable it measures.

Table 4. Discriminant validity – Fornell-Larcker

	AEW	EWR	EWU	IB	LDC	LTT	PEU
AEW	**0.800**						
EWR	0.610	**0.912**					
EWU	0.609	0.594	**0.766**				
IB	0.395	0.320	0.445	**0.757**			
LDC	0.537	0.508	0.492	0.442	**0.800**		
LTT	0.500	0.427	0.470	0.505	0.623	**0.752**	
PEU	0.697	0.482	0.547	0.493	0.499	0.497	**0.870**

Table 5 shows the coefficient of determination (R-Square) on the e-wallet adoption variable of 0.605 and the impulsive buying variable of 0.323, meaning that all research variables contribute 60.5% (AEW) and 32.3% (IB) so that other factors that are not studied can affect 7.2%.

Table 5. R-Square

	R-Square	R-Square Adjusted
AEW	0.605	0.601
IB	0.323	0.312

The inner model test results show that the variance inflating factors (VIF) have a value of less than 5. Therefore, it can be inferred that multicollinearity is not present among the variables that influence Y. In this study, PLS bootstrapping testing was conducted to examine hypothesis one. The results, presented in Table 6, indicate a statistically significant link between the risk of e-wallet adoption and EWR (y = 0.272, t = 4.480, p-value = 0.000). Next, hypothesis two was examined and demonstrated a substantial correlation between the usability of e-wallets and the adoption of digital wallets (y = 0.197, t = 3.026, resulting in a p-value of 0.002). The third hypothesis was examined and demonstrated a substantial correlation between the ease of use of e-wallets and the adoption of e-wallets (y = 0.457, t = 9.855, and p-value = 0.000). The fourth hypothesis was examined, and the findings indicated that there is not a statistically significant correlation between the utilization of digital wallets and impulsive buying (y = 0.119, t = 1.926, and p-value = 0.054) due to the fact that the p-value is more than 0.05.

Table 6. Inner VIF & boostrapping

	VIF	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
AEW -> IB	1.544	0.119	0.114	0.062	1.926	0.054
EWR -> AEW	1.634	0.272	0.272	0.061	4.480	0.000
EWU -> AEW	1.790	0.197	0.200	0.065	3.026	0.002
LDC -> IB	1.857	0.132	0.137	0.067	1.962	0.050
LTT -> IB	1.762	0.330	0.335	0.061	5.386	0.000
PEU -> AEW	1.509	0.457	0.457	0.046	9.855	0.000
LDC × AEW -> IB	2.763	-0.058	-0.055	0.047	1.250	0.212
LTT × AEW -> IB	2.688	-0.056	-0.054	0.053	1.060	0.289

The fifth hypothesis was tested, and the results showed that there is no significant relationship between the moderating impact of LDC on the usage of e-wallet adoption and impulsive purchases (y = -0.058, t = 1.250, and p-value = 0.212). The findings of Hypothesis 6 suggest that there is no statistically significant relationship between short transit time and the connection between e-wallet adoption and impulse purchases. The regression coefficient (y) is -0.056, with a t-value of 1.060 and a p-value of 0.289. This observed value does not meet the threshold recommended by Hair et al. (2022), which requires a p-value below 0.05 to achieve statistically significant results.

4. Discussion

4.1 The Effect of Risk Perception on E-Wallet Adoption

This study demonstrates a notable and favorable correlation between risk and the use of e-wallets. The findings of hypothesis testing indicate a p-value of 0.000, which is less than the significance level of 0.05. Therefore, we accepted Hypothesis 1 (H1) or concluded that it has a significant effect. The findings of this study align with the research conducted by Janteng & Dino (2022), Rahayu & Prasetyatama (2021), Ridaryanto et al. (2019) and Wei et al. (2023), all of which indicate that the risk associated with e-wallets has a notable and favorable impact on individuals' inclination to embrace e-wallets. The reason for this is that individuals are primarily preoccupied with the security vulnerabilities associated with electronic wallets when engaging in financial transactions (Sari et al., 2021).

4.2 The Impact of Usefulness on Electronic Wallet Adoption

This study demonstrates a noteworthy correlation between usability and the uptake of e-wallets. The findings of hypothesis testing indicate a p-value of 0.000, which is less than the significance level of 0.05. Therefore, Hypothesis 2 (H2) is accepted as statistically significant. This study aligns with the studies conducted by Lee & Thoo (2022), Ridaryanto et al. (2019), and Wei et al. (2023), which assert that the perceived usefulness of digital wallets has a strong beneficial impact on individuals' intention to use them. People are more likely to utilize technology when it proves to be beneficial (Didied et al., 2022). Therefore, it can be inferred that there is a positive correlation between the perceived usefulness of technology and the level of interest among the public in adopting e-wallets.

4.3 The Impact of PEOU on Electronic Wallet Adoption

This study shows that there is a significant relationship between PEOU and e-wallet adoption. The hypothesis testing findings indicate a p-value of 0.000, which is less than the significance level of 0.05. Therefore, we accepted Hypothesis 3 (H3) or concluded that it has a significant effect. This demonstrates a positive correlation between the level of perceived ease and the level of interest in using e-wallets. According to the research of Shankar & Rishi (2020), the main factor that influences the adoption of technology is technological convenience. Similarly, the studies conducted by Didied et al. (2022), Genady (2018), and Romadhotul (2020) found that perceived convenience has a significant positive impact on interest in using electronic money.

4.4 The Impact of Electronic Wallet Adoption on Impulse Purchases

This study found no statistically significant correlation between the use of e-wallets and the tendency to make intrusive purchases. The results of hypothesis testing indicate that the p-value is 0.054, which is higher than the significance level of 0.05. Therefore, we reject Hypothesis 4 (H4) or conclude that it has no significant effect. The findings align with the studies conducted by Lee et al. (2022) and Sinaga (2022), who conclude that the use of e-wallets does not have a substantial impact on impulsive buying behavior.

Contrary to the findings of Wei et al. (2023), it does not support the idea that there is a strong correlation between the use of e-wallets and impulsive buying. The results suggest that the respondents do not utilize e-wallets to fulfill their practical requirements. This suspicion arises due to the high level of financial literacy among respondents, which can be attributed to the fact that a majority of them have completed undergraduate education. Financial knowledge can curb impulsive buying behavior (Rahayu & Suja'i, 2022).

4.5 The Impact of Lower Distribution Charges Moderation the Correlation among an Electronic Wallet Adoption and Impulse Purchases

When making online purchases, it is crucial to consider the costs associated with distribution. The hypothesis test results concerning lower distribution costs indicate that there is no moderating effect between e-wallet adoption and impulse purchases. The p-value obtained from the test is 0.212, which exceeds the significance level of 0.05. Based on these findings, H5 is not supported, suggesting that cheap distribution costs do not moderate the relationship between digital wallet adoption and impulse purchases. These findings contradict prior research conducted by Wei et al. (2023) and Manss et al. (2020), which suggest that reduced distribution costs influence impulsive buying behavior. The results indicate that most respondents utilize LDC primarily to meet practical needs rather than engaging in impulsive purchase behavior.

4.6 The Effect of Short Transit Times Moderates the Relationship Between Electronic Wallet Adoption and Impulse Purchases

In this study, there is no significant relationship between the moderation of low transit time and e-wallet adoption and impulse purchases. The results of hypothesis testing indicate that the p value, which is 0.289, is greater than the significance level of 0.05. Therefore, hypothesis 6 (H6) is rejected. The findings of this study are inconsistent with the studies conducted by Wei et al. (2023) and Yulianto et al. (2021). This indicates that the majority of respondents do not prioritize short transit times while making online purchases, therefore reducing the likelihood of impulsive buying behavior.

Nevertheless, organizations and corporations must continue to reduce supply chain and logistics time in order to enhance their competitive edge in the market, thereby enabling buyers to receive items promptly (Oshodin & Omoregbe, 2021).

5. Conclusions

Indonesia has implemented a digital payment system, necessitating individuals to be ready for swift technological advancements in order to adjust and stay up-to-date. Utilizing electronic wallets eliminates the need to carry physical currency for transactions, enabling transactions anytime and anywhere. Therefore, understanding the factors driving individuals to adopt digital wallets—such as risk, utility, and PEOU—is crucial for a comprehensive understanding of this topic. Investigating influences on impulsive buying behavior, specifically how distribution costs and short travel times can moderate this behavior, is essential.

This study examines the impact of reduced distribution costs and quick transit times on the relationship between e-wallet usage and impulse purchases. This has not been extensively studied in Indonesia. Research indicates that factors like ease of use, convenience, and perceived risk significantly influence trust and the decision to use e-wallets. The findings suggest that companies should prioritize digital transactions, user-friendly system interfaces, and application security to enhance customer satisfaction and streamline business operations. However, the data suggests that the introduction of e-wallets and the moderation of LDC and short transit times have minimal impact on impulsive buying behavior. Nevertheless, more than 60% of the participants possess numerous digital wallets. Indonesian e-commerce companies should capitalize on this opportunity by providing a variety of digital wallet payment choices to entice clients and broaden their market presence.

E-wallet use does not exclusively stimulate impulsive shopping behavior for practical considerations. Furthermore, the correlation between the utilization of e-wallets and impulsive purchasing is not impacted by reduced distribution expenses or rapid transit durations. This inference is derived from the substantial proportion of participants possessing a bachelor's degree, which suggests a notable degree of financial literacy. Hence, forthcoming studies could use financial literacy as a moderating variable and encompass people with diverse educational backgrounds. The utilization of snowball sampling in this study necessitates improvement in order to precisely depict the entire population, as it strongly relies on the social networks of initial participants, which may restrict the diversity and representativeness of the sample. In order to encompass e-wallet users from various regions, future studies may consider employing probability sampling techniques. To improve the influence of the literature and online business practices related to impulsive purchase behavior in Indonesia, it is necessary to address these restrictions.

Data Availability

The data used to support the research findings are available from the corresponding author upon request

Conflicts of Interest

The authors declare no conflict of interest.

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