

## **Examine the moderating effect of personal innovativeness on e-wallets usage: An empirical study**

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### **Abstract**

E-wallets have been widely adopted as a convenient mode of payment. However, there are still many consumers who are hesitant to use e-wallets due to various reasons. Personal Innovativeness (PI) is a key factor in whether consumers use new technologies, such as e-wallets. This study shows the relationship of Personal Innovativeness (PI) that affects e-wallet use, and how Personal Innovativeness (PI) affects consumers' views of e-wallets and their willingness to adopt and use this technology. A survey was conducted among a sample of 350 respondents in the age range of 18 to 50 years old. The findings of the research demonstrated that personal Innovativeness has a significant impact on e-wallet use. People with higher Personal Innovativeness (PI) are likelier to use e-wallets. The research suggests that companies that make and market e-wallets should consider PI when making and promoting their solutions to make them more popular and used. The results show that e-wallets should focus on users with higher PI and highlight their creative and easy features. This method could involve custom marketing to increase user engagement and the benefits

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of e-wallets. The data could also be used to develop new ways to market e-wallets and get more customers to use them.

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*Keywords:* E-wallets, Personal innovativeness, Moderating effect, TPB, Technology adoption, PLS.

## Introduction

E-wallets and other ways to pay with your phone have become very popular. Payment systems have changed a lot in the last few decades, which has led to a worldwide demand for digital and cashless transactions because the expansion of the internet has grown the emergence of a new method of payment known as the e-payment system for transactions. (Teng & Khong, 2021). E-wallets, also known as electronic wallets, have attracted a lot of interest as a part of the electronic payment system. (Karim et. al., 2020). The benefits of e-wallets, such as being easy to use, saving time, and saving money, have led several countries to add e-wallets to their regular payment options for everyday transactions. (Abbasi et. al., 2022). However, although several national governments have spent a substantial amount of money on developing e-wallets, most individuals in several countries do not use them (Karim et. al., 2020). Nowadays, trends are changing through the expansion of the payment system and devices have contributed to this shift in payment methods (Chi and Tsai, 2017; Luna et. al., 2019; Kabra et. al., 2023; Upadhyay et. al., 2020) because Consumers want quick, easy, and useful solutions. It has been shown that this is true in all sectors (Verkijika SF, 2018). Digital payments may spread more quickly if e-wallets are standardized, can connect, and can be used differently (Zhong J 2009). With the advancement of this technology, other payment methods, such as near-field communication, have emerged. Even if electronic or online payment system usage has increased substantially, Tecnomcom reports that the expansion of mobile payment systems has not kept pace with what was previously projected. Even if electronic or online payment methods have rapidly increased, this is still the case and (Yang et. al., 2023).

The significant growth seen by electronic wallets over the last few years in Delhi NCR is evidence of their ability to acquire and retain clients. The two most common payment instruments are cash, which may mean either paper money or actual coins and notes, and non-cash instruments (e-wallets and other Digital Services). Implementing electronic payment

systems may change the amount of cash available in a nation (Yaokumah et. al.,2017). The increasing popularity of digital wallets draws attention to the critical need to complete the e-payment infrastructure (Mohamad et. al.,2019).

The main objective of this study is to identify the factors that influence consumers' adoption of e-wallets and to examine the moderating effect of personal Innovativeness on e-wallets usage.

### **Literature Review and Hypothesis Development**

An E-wallet is also called electronic money; it is a way to pay for things that use a way to store value. This method is based on the monetary value deposited with the issuer. An E-wallet is not meant to be saved like money in a bank account. (Wahyuni, AT., & Susanto, P., 2022) Says that an e-wallet is a card that can be used for more than one type of payment. This differs from a prepaid card that can only be used for one thing, like a phone card. To clarify things, an e-wallet is a way to pay using a card with a chip that can track and record payments.

#### **Attitude to use e-wallets**

Davis (1989) claims that the user's attitudes and behaviour when interacting with a product are significantly impacted by the product's ease of use and usefulness. a higher favourable attitude towards a behaviour is associated with a greater likelihood of engaging in that behaviour because the TPB says that a person's feelings about a certain activity are the most important factor in determining whether they will do that activity.

#### **Subjective Norms**

When the TPB discusses "subjective norms," they refer to the pressure individuals feel from their competitors to do actions. The TPB defines "subjective norms" as the degree to which a person feels obligated to perform something. A person's domain of influence determines the level for a specific behaviour is acceptable in socially, which shapes the individual's subjective standard. (Tiwari, S et al 2021). A person's behaviour intentions may be considerably impacted by the perspective and degree of pressure exerted by his or her social network or organisation.

Subjective norms are hard to understand because there hasn't been much in-depth research into where they came from. This becomes very

clear when comparing different cultures. Even so, several cases show that its possible effect on purpose has been studied and confirmed (Pawlak & Malinauskas, 2008).

**H2:** Subjective norms significantly impact the intention to use e-wallets.

### **Perceived Behavioural to use**

Users' perceptions about how simple and obvious it is to utilize a technology have a significant influence on how they feel about the technology and whether they intend to use it. (Chawla, D.; Joshi, H. 2020). It was shown that a customer's PBU, also known as the value they place on a product or service, is a crucial factor in determining whether they would make a purchase. Because of this, customers' perception of their behaviour about using e-wallets could be impacted by their previous shopping experiences. Several consumers have praised the e- wallet's user interface for its easy accessibility.

**H3:** Perceived Behavioural significantly impact on intention to use e-wallets.

### **Intention to use e-wallets**

Reasoned Action Theory (TRA) is a helpful method to look at the aspects that can help forecast how people will respond to new technology and how they will utilise it. This can be done by looking at the components from the viewpoint of the rational action theory. (Wijayanthi, I. 2019). For example, it shows how likely someone is to operate an e-wallet as a proper way to figure out how badly they want to buy something. Furthermore, a study examining the interaction between cognitive feedback, user interface, and behaviour intention discovered that behaviour intention makes consumers more inclined to use e-wallets(Asif, M et.al 2023).

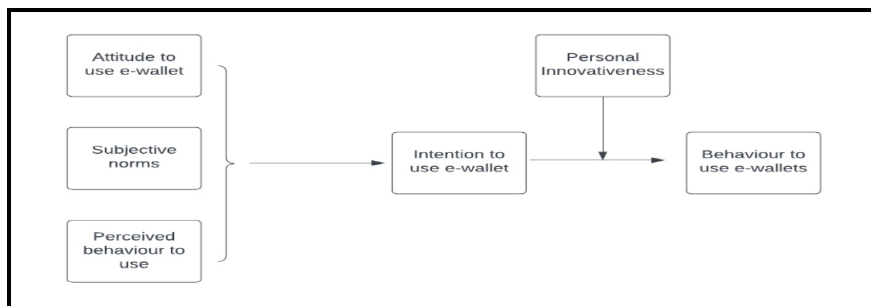
**H4:** There is a significant impact between the intention and behaviour to use an e-wallet.

### **Personal Innovativeness as a moderating variable**

The idea of a person's capacity for original thought and action has become much more popular in the current scenario. (Rogers and

Shoemaker 1971) Originally defined innovation as “ideas, products, and practices that individuals perceive as new. Personal Innovativeness refers as a person level of willingness and ability to embrace and explore novel technological advancements. Similarly, the role of an individual’s creativity is seen differently (Schillewaert et. al., 2005). Describe individual creativity, learned and long-lasting cognitive judgments, emotional sentiments, and behavior choices around using new information technologies (Figure 1).

**H5:** Personal Innovativeness moderates the relationship between Behaviour and Intention to use an e-wallet



**Figure 1**  
**Conceptual Framework**

## Methodology

The present research gives a detailed overview of the data-gathering methods used. This provides a full explanation of the activities performed before, during, and after the construction of measuring and collecting the data.

## Measurement Construct

In this study, the measurement scale is adopted the established theory of planned behaviour, which is based on the idea that people do things on purpose. The Likert scale was used to find out how much people agreed or disagreed, with answers ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), where 2 (Disagree), 3 (neutral), and 4 (Agree). The questionnaire covers the construct of planned behaviour theory and adds on the moderating variable, Personal Innovativeness. A different set of items was used to measure each of these dimensions Ajzen, I., (1991).

### **Collection of Data**

In this research the data was gathered from various sources; the available source included in the study both primary and secondary sources, the available literature from different journal, books, blogs, and website were summarized in the form of literature review. Data collected through primary source used questionnaire. The questionnaire was organized into four sections, with section A devoted to extracting respondents' demographic information. The sections were split into three parts according to the study aims. For the purpose of determining the degree of respondents' awareness and collecting their feedback, a Likert scale with five points was used. The questionnaire was distributed using Google Forms and sent to contacts on Facebook and WhatsApp. Responses were obtained via the use of convenience sampling. Reminder emails were sent out emphasizing maintaining the participants' right to privacy to boost the percentage of people who responded to the survey. It was inquired of the respondents whether they had made use of the services and whether they recommended them. 50 responses were discarded out of the total 350 gathered because the data was incomplete or inaccurate. The study aimed to investigate the attitudes and actions of people concerning e-wallets, and it targeted individuals who were interested to use.

### **Analysis and Result**

The model was analysed using a statistical technique known as analysis of partial least squares (PLS). The PLS approach is a two-stage process commonly used in Structural Equation Modelling and analogous to the two-stage process presented in the study.

The first step of the Partial Least Squares (PLS) method is to develop a set of latent variables that will remain in the underlying constructs being studied. Next, several statistical methods, such as exploratory factor analysis, regression, and their variations, are needed to estimate these latent variables. At this point in the process, the goal is to reduce many observable variables to a set of latent variables that are easier to work with and can explain a large portion of the overall variation in the data.

Path analysis is used to test the hypothesized relationships and in the second step of the Partial Least Squares (PLS) method. Path analysis is a statistical method often used in structural equation modelling to examine how latent variables are connected. The PLS method uses a bootstrap

resampling procedure to determine how important the path coefficients are and how well the model fits together.

The study investigated the feasibility of the proposals by accessing data convergence through various statistical measures such as average variance extracted, factor loadings, Cronbach's alpha, and composite reliability. Results indicated that all the analysed products exhibited factor loadings exceeding the value of 0.70, indicating strong convergence. (Hair et. al., 2011). Converging and divergent simultaneously, it was determined whether or not the data converged each of the goods analysed had factor loadings larger than the cut-off value of 0.70. (Hair et. al., 2006) Examining the degree of correspondence between the different components of the measure and the latent variable is one example of the many strategies that may be used to assess the composite dependability. In the current investigation, the aggregate dependability score of each component achieved a value that was more than the cutoff value of 0.70 that had been determined by (1979), suggesting that the levels of composite dependability were sufficient.

As a consequence of this, the range of the distribution of the findings was from 0.86 to 0.94. The Variance of Average Extracted measure was used to determine how well the predictors could explain and calculate the observed variables. In addition, the score for each component was more than 0.5 once the model structure was included, indicating that the variation levels that can be attributed to each component are sufficient. Table 1: Fornell and Larcker (1981).

**Table 1**  
**Construction of reliability and validity**

|                              | <b>Cronbach's alpha</b> | <b>(rho_a)</b> | <b>(rho_c)</b> | <b>(AVE)</b> |
|------------------------------|-------------------------|----------------|----------------|--------------|
| Attitude to use an e-wallet  | 0.802                   | 0.830          | 0.869          | 0.625        |
| Behaviour to use an e-wallet | 0.772                   | 0.840          | 0.863          | 0.679        |
| Intention to use an e-wallet | 0.903                   | 0.904          | 0.933          | 0.776        |
| Perceived Behaviour to use   | 0.770                   | 0.767          | 0.868          | 0.689        |
| Personal Innovativeness      | 0.772                   | 0.800          | 0.860          | 0.672        |
| Subjective norm              | 0.788                   | 0.801          | 0.875          | 0.701        |

When the relationships between the constructs and the ( $\sqrt{^2}$ ) were examined and had a stronger relationship with the other constructs

than the relationships between the constructs themselves. This was seen when the correlations between the concepts and the AVE were examined. (Table 2) This is true, as shown by the results of this investigation. This was the conclusion from comparing the two sets of connections (Fornell & Larcker, 1981). It has been shown that validity works well to tell people apart in these situations. To determine the connections can be made. (Harman's, 1976) single-factor test was used to identify the possibility of the responses, even though the survey was self-administered. The whole set of data was looked at with P.L.S. exploratory component analysis. Only 27.46% of the difference between the items could be explained by the first part of the reconstructed factor structure, which is much less than 50%. The diagnostic tests have shown that the investigated data set does not include any bias caused by a conventional unit operation.

**Table 2**  
**Discriminant validity**

|                 | <b>AUEW</b> | <b>BUEW</b> | <b>IUEW</b> | <b>PBU</b> | <b>PI</b> | <b>SN</b> | <b>PI*IUEW</b> |
|-----------------|-------------|-------------|-------------|------------|-----------|-----------|----------------|
| <b>AUEW</b>     |             |             |             |            |           |           |                |
| <b>BUEW</b>     | 0.988       |             |             |            |           |           |                |
| <b>IUEW</b>     | 0.695       | 0.750       |             |            |           |           |                |
| <b>PBU</b>      | 0.810       | 0.651       | 0.885       |            |           |           |                |
| <b>PI</b>       | 0.587       | 0.501       | 0.564       | 0.553      |           |           |                |
| <b>SN</b>       | 0.700       | 0.645       | 0.821       | 0.774      | 0.764     |           |                |
| <b>PI* IUEW</b> | 0.179       | 0.152       | 0.507       | 0.575      | 0.277     | 0.443     |                |

Testing a structural model involves examining the relationships between constructs and testing hypotheses by analyzing the coefficient values, as shown in Table 3.

**Table 3**  
**Path Coefficient**

|             | <b>Original value (O)</b> | <b>(M)</b> | <b>(STDEW)</b> | <b>T statistics</b> | <b>P value</b> |
|-------------|---------------------------|------------|----------------|---------------------|----------------|
| AUEW > IUEW | 0.099                     | 0.110      | 0.096          | 1.038               | 0.300          |
| IUEW > BUEW | 0.704                     | 0.696      | 0.085          | 8.286               | 0.000          |
| PBU > IUEW  | 0.458                     | 0.452      | 0.091          | 5.047               | 0.000          |
| PI > BUEW   | 0.139                     | 0.162      | 0.084          | 1.654               | 0.098          |

*Contd....*

|                 |        |        |       |       |       |
|-----------------|--------|--------|-------|-------|-------|
| SN > IUEW       | 0.359  | 0.355  | 0.086 | 4.174 | 0.000 |
| PI* IUEW > BUEW | -0.167 | -0.163 | 0.086 | 1.938 | 0.053 |

R<sup>2</sup>, refers for the coefficient is a statistical indicator that evaluates the degree to which fluctuations in independent variables may account for variations in dependent variables. This implies that a change of one unit in the independent variable is followed by a change of one in each dependent variable. Academic research generally agrees that an R<sup>2</sup> value of 0.01 or above constitutes good performance (Table 4).

Table 4  
R- Square

|                              | R <sup>2</sup> | Adjusted (R <sup>2</sup> ) |
|------------------------------|----------------|----------------------------|
| Behaviour to use an e-wallet | 0.593          | 0.578                      |
| Intention to use an e-wallet | 0.656          | 0.646                      |

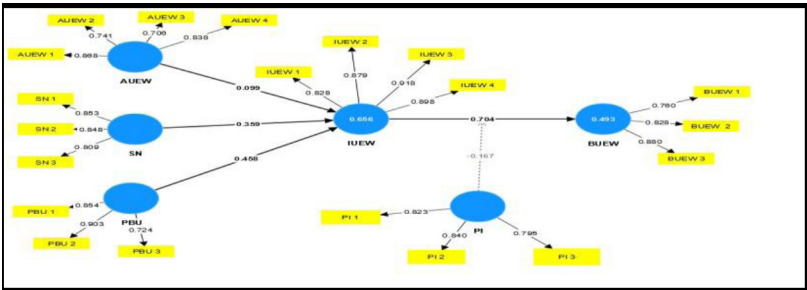


Figure 2  
Structural Model self-constructed by Author

Figure 2 depicts how Personal Innovativeness (PI) impact (0.086) on the simple effects (0.096), which indicates the link between the construct. The moderating influence of PI has attracted a significant amount of attention. The picture also includes a cross-slope analysis, which provides further context for understanding the moderator analysis findings. The graph depicts three lines, each representing a different aspect of the connection between the variables (x-axis) or the actual behaviour of utilising (y-axis). The relationship between the average values of the moderator variable, which is democratic leadership style, is shown by the centre line in the graph. The slope of the line in the image is positive; we can determine that the relationship between PI and the intention to use e-wallets has a

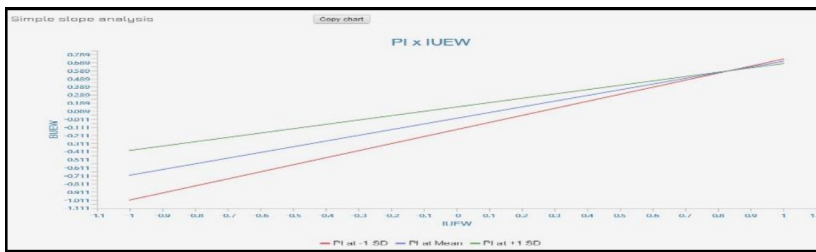


Figure 3

### Graphical Representation of Moderating Variable

favourable impact on each of the three lines. The overall implication of the moderating effect of PI as a positive moderator is that individuals with high PI are more likely to adopt and use e-wallets than those with low PI and that the relationship between the factors that is stronger for individuals with high PI. Consequently, it is essential, for adopting the e-wallet, to consider the amount of PI maintained by the person (Figure 3).

### Conclusion

This study examines the rising acceptance of digital and cashless transactions, particularly using e- wallets to make monetary transactions. Even though electronic wallets provide several advantages, including ease of use, reduction in transaction times, and cost savings, most people in many nations have not adopted their usage. This research seeks to explain both the purpose of using technology and the acceptability of conduct that is connected to technology by presenting this research analyses of the applicability of the Planned Behavior (TPB) combined with the moderating. In addition, the study offers conceptual clarity on the nature of e-wallets and distinguishes them from prepaid cards. This was accomplished by comparing the two payment methods.

### Future Scope and Implications

The research explores the moderating impact of personal Innovativeness on e-wallet usage, contributes to the existing literature on adopting and using digital technologies. However, the study has only placed a secondary emphasis on personal Innovativeness and its impact on using electronic devices. Therefore, future studies can be conducted to investigate the impact of individuals' levels of Innovativeness on their likelihood to embrace and use various forms of digital technology,

such as mobile banking, cryptocurrency, and digital payment systems. Furthermore, this line of inquiry can provide valuable insights into that what are the factors which influence the adoption and use of digital technologies beyond e-wallets. Furthermore, future research can also investigate the impact of societal variables. Culture, for instance, can significantly influence the acceptance and usage of e-wallets. Therefore, understanding how culture interacts with personal Innovativeness in shaping e-wallet usage can provide valuable insights for policymakers and practitioners. In addition, qualitative research can give a deeper a knowledge of the fundamental variables influencing personal innovativeness and e-wallet usage. For example, interviews and focus groups can be conducted to gain insights into the attitudes, beliefs, and motivations of e-wallet users with personal Innovativeness. Such qualitative research can give in depth understanding of the underlying factors that influence personal innovativeness and e-wallet usage, which can be used for the development of promoting e-wallet adoption and usage. Overall, the study of personal Innovativeness has many potential future options to explore, which can help to investigate the factors that influence on the adoption and usage of different technologies.

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