



Consumer Preferred E-Payment Services: A Conjoint Analysis

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Abstract

Innovation and advancement of financial technology in E-payment services integrate various features of E-payment platforms that influence the consumer experience during utilization. This study measures how consumers value different attributes of E-payment services using a choice-based Conjoint analysis. Using a questionnaire checklist based on 16 E-payments plan cards generated, we analyzed consumers' preferences to determine the relative importance of each attribute and to calculate utility scores to quantify their preferences. Our findings revealed that while most consumers are highly economically active, factors such as age, gender, and educational attainment influence consumer preferences. Ease of use, security features, transaction speed, rewards, and transaction costs were the attributes most influential to consumers. Surprisingly, transaction cost emerged as the most influential attribute, and contrary to conventional expectations, consumers favored higher transaction costs in E-payment services. This emphasizes the importance of consumer-centered service design and the need for further analysis to enhance outreach and consumer satisfaction in emerging economies.

Keywords: *Conjoint analysis, e-payment services, financial technology, attributes*

INTRODUCTION

E-Payment Services encompasses a broad spectrum of financial transactions conducted electronically or through internet-based platforms. A study by [Naeem, M. et al. \(2020\)](#) explains the intricacies of E-Payment Services, which encompass a multitude of electronic payment modes.

[Kaviya, R. \(2024\)](#) determines that each type of E-Payment Services has its own set of features and functionalities, catering to various needs and preferences of consumers. Factors such as Ease of Use, Perceived Security, Usefulness, Transaction Speed, Rewards, and Cost influence consumer use of E-payment platforms. E-payment services that integrate user-friendly features, such as a simple interface and graphic design, may provide convenience for consumers, while E-payment facilitated by secure transactions may increase consumer confidence in utilizing E-payment services, leading to increased perceived trust. Moreover, a transaction facilitated by seamless processes that enable immediate financial transactions may be perceived as useful, especially when associated with lower transaction costs than traditional transactions. While E-payment transactions that offer rewards or cashback may also increase consumer utilization.

[Jiang Y. \(2022\)](#) highlighted that Ease of Use and Transaction Speed provide convenience, which directly influences consumers' spending behavior and utilization of E-payment services. The study by [Kishnani, U., Cardenas, I., et al. \(2024\)](#) emphasizes that integrating adequate security and privacy features may enhance the usability of E-payment platforms, thereby increasing consumer confidence and utilization. Moreover, the study by [Zehra et al. \(2024\)](#) finds that rewards or cashback are among the factors driving consumer choices and satisfaction in E-payment services.

However, an E-payment platform with rich, complex flows may not be suitable for the average consumer, as processing financial transactions can be challenging. Likewise, an E-payment platform that offers minimal protection or a multi-layered, high-end protection mechanism can be favorable for highly skilled and knowledgeable users but may pose challenges and inconvenience

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for common users, as it requires many credentials. Attributes such as transaction speed, rewards or cashback, and transaction cost may also have drawbacks that could influence consumers' preferences for E-payment services. For instance, immediate transactions may be viewed as unsecured or unreliable, while transactions lasting more than 10 minutes may undermine the usefulness of the platforms. Transactions that impose costs higher than on other platforms may also influence consumers' preferences. E-payment platforms that offer high rewards or cashback can be seen as engaging and may influence consumer use, but they may also impose conditional terms for redeeming rewards, which can change consumers' views.

A study by [Zhao, Y., et al. \(2022\)](#) identifies that not all consumers associate lower transaction costs with E-payment perceptions. It is assumed that lower transaction costs are associated with trade-offs such as basic security, poor service, and trust issues. This is further supported by the study of [Khalik, N. et al. \(2023\)](#), which highlights that product or service quality can satisfy consumer expectations. Meanwhile, the study of [Fernando, N. et al. \(2022\)](#) determines that ease of use in E-payment services influences consumers in both rural and urban areas. However, the article published by [Accenture \(2023\)](#) emphasizes that an overly simple interface can signal missing features. Users trade a little extra effort for functionality they value; perceived usefulness often outweighs marginal extra ease. Meanwhile, the study of [Yomas, J. \(2018\)](#) points out that advanced security levels are challenging, as these technologies may not be widely implemented or may require specialized technical knowledge that goes beyond the scope of many technical adoptions. Furthermore, [Suteu et al. \(2025\)](#) stress that rewards or cashback were not highlighted as key determinants of consumer satisfaction. This notion suggests that consumers will not adopt a platform with high risk and cost solely for rewards, and that monetary benefits are perceived as low relative to other attributes, with rewards sometimes coming with trade-offs.

Despite the growing body of literature on E-Payment and consumer preferences, several research gaps remain. For example, the study by [Saxena, N., et al. \(2021\)](#) used Conjoint analysis to evaluate customer preferences among internet banking, mobile banking, and payment portals in India such as consumer motivations and attitudes in usage of e-payment services. Though the study determined that paying less, urgent, and discounted as factors driving utility it did not capture trade-offs among attributes or identify which attributes emerged as influential, and it focused on a highly urbanized context in India. In addition, the study of [Choi, H., et al. \(2020\)](#) focused on mobile payment service attributes in South Korea, including platform type, assurance policies, mileage programs, authentication methods, and affiliated stores, without considering attributes associated with E-payment services. Moreover, in the context of the Philippines, the study of [Pleno, A. \(2024\)](#) highlighted the utilization of E-payment among micro-business owners, focusing on top E-payment platforms such as G-Cash and Maya, without considering individual preferences in the local context.

Although E-Payment services have significantly advanced financial transactions by meeting consumers' diverse needs through convenience, accessibility, and efficiency, not all E-Payment platforms are adopted equally, indicating that consumers weigh the attributes of these services.

E-payment services continue to show utility. Globally, from 2011 to 2022, cashless transactions, or E-payment services, grew by 271% and continue to increase annually ([Birigozzi, A. et al., 2025](#)). In the Philippines, adoption of E-Payment services increased significantly, rising by 52.8% to 393.6 million in 2023 from 257.5 million in 2022, and e-money transaction volume also grew by 40.2% to 10.6 billion from 7.6 billion in 2022 ([Mesina- Romero, et al., 2023](#)). Additionally, the volume share of digital payments surpassed 50% in 2023, exceeding BSP's Digital Payments Transformation Roadmap target, supported by increased mobile banking use, greater accessibility of digital platforms, and improved consumer trust ([Bangko Sentral ng Pilipinas, 2023](#)). Furthermore, 2022 national data showed that digital payments accounted for 42.1% of total retail payment volume, demonstrating a consistent upward trend as online services and fintech solutions

became more integrated into daily transactions ([Bangko Sentral ng Pilipinas, 2023](#)). However, the significant increase in consumer preferences for E-Payment services at the national level is largely concentrated in urban areas, which comprise diverse populations and demographics. [Pulvera, G. J. \(2025\)](#) emphasizes that there is a difference in the extent of dependency and disparity in E-Payment services: in urban areas, cash dependency decreased by 41%, while in rural areas it decreased by 29%; demographic disparities in the urban population were 48.8%, while in the rural population they were 51.2% in 2025. Utilization of E-Payment services is higher in urban areas due to broader cross-age adoption, support, awareness, and merchant acceptance, compared to rural areas, where most utilization is driven by young adults and limited infrastructure.

In the context of the province of Dipolog City, Zamboanga del Norte, whose economic base is characterized by small and medium enterprises and limited industrial diversification ([Platform Executive, 2025](#); [Wikipedia, 2025](#)), compared with the National Capital Region (NCR), which has a strong MSME sector and serves as a national consumption and employment hub, underpinning its large economic output ([Research and Markets, 2024](#); [PSA, 2025](#)), and which commonly comprises diverse populations and demographic profiles such as farmers, professionals, and students, E-payment service utilization may provide a different perspective. [PhilAtlas \(2020\)](#) provides statistical data indicating that, based on the 2020 census, 34.82% represent the youth population, 61.3% represent the working-age population, and around 5% are seniors, while it shows a 4.6% GDP growth, and primary services are driven by services in 54%, industry in 28.8%, and agriculture and forestry in 17.1%. This study could highlight consumers' preferences for using E-payment services, more specifically within local demographics.

Thus, integrating Conjoint Analysis may offer a different perspective on how consumers value attributes across similar and dissimilar platform and economic contexts. The study aims to analyze how demographic profiles such as age, gender, and educational level influence consumer preferences; determine the relative significance of attributes and levels of E-payment services for consumer utility; and highlight how specific levels affect consumer utility. It also determines how the Conjoint model predicts consumer preferences and provides a simulation based on those predictions. Given the proliferation of E-payment services, the study seeks to contribute valuable insights for various stakeholders by addressing questions such as: What is the significant influence of demographic profiles on consumer preferences for E-payment services? What is the relative importance of E-payment service attributes influencing consumer preferences? How do levels within each attribute affect consumer utility? And what are the predicted preference shares for hypothetical E-payment service profiles under different combinations of attribute levels?

LITERATURE REVIEW

This study is based on the theory introduced by [McFadden, D. \(1974\)](#), which posits Random Utility Theory (RUT). RUT suggests that individuals make choices by maximizing their utility, but this utility is not perfectly observable and includes a random component. RUT introduces the concept of Random Utility Models (RUMs) and their application to discrete choice analysis, with a particular focus on the conditional logit model. RUMs are used to model situations in which individuals choose among discrete alternatives, and their choices are influenced by random factors in their preferences ([McFadden, D., 1974](#)). Random Utility Theory supports the analysis of consumer preferences in E-Payment Services by enabling individuals to model how they choose among discrete alternatives (e.g., different E-Payment platforms) based on their attributes. Several studies have applied RUT in E-Payment Services research, such as the study by [Bounie, D. et al. \(2017\)](#), which applied a multinomial logit model based on RUT to analyze E-Payment adoption in France, showing how cost sensitivity and perceived usefulness significantly influence choices; and the study by [Choi, H., et al. \(2020\)](#) on understanding consumers' preferences for mobile wallet

services in South Korea using Choice-Based Conjoint Analysis (CBC) based on RUT, estimated with a multinomial logit model to determine how attributes such as cost per transaction, reward incentives, payment speed, user interface, and security level influence consumer preferences. McFadden's model is grounded in Random Utility Theory (RUT), which assumes that consumers choose the option that yields the highest utility, but that part of that utility is unobservable (random).

Impact of E-payment Services on Consumer Behavior

E-Payment Services play a significant role in advancing financial transactions. A study by [Van Dinh, D. \(2024\)](#) highlighted that E-Payment Services provide a faster and more accessible way to conduct transactions than traditional methods such as cash or checks. They offer numerous benefits to consumers, primarily centered on convenience, ease of use, accessibility, security, and cost-effectiveness. These attributes can lead to cost savings for consumers through lower transaction fees and potential rewards programs, which can positively impact consumers' E-Payment behavior. In an article published by [Malyshev, A. \(2025\)](#) in FinTech Finance, E-Payment Services increased transaction speed and reduced processing costs. These capabilities enable consumers to process financial transactions quickly, leading to faster cash flow and improved efficiency, and typically have lower processing costs.

Additionally, a study by [Raon. C. J., et al. \(2021\)](#) shows a positive impact of E-Payment Services on Filipinos in numerous aspects, including convenience, security, and efficiency, as they can be used without a bank account, making them accessible to a wider population. E-Payments also enable financial inclusion by providing transaction histories that can be used to access other financial services, such as credit. Additionally, they streamline payments, reduce waiting times, and enhance customer experience.

However, the benefits of E-Payment Services are not without limitations. Various studies on E-Payment Services have found that, despite their widespread use, they have limitations. According to [Hossain \(2019\)](#), perceived risk can negatively influence customers' trust and satisfaction with E-Payment Services. Perceived risk is a subjective assessment that individual consumers make about potential negative consequences or losses associated with a particular E-Payment Service. A study by [Naik, M., et al. \(2024\)](#) explores the issues and challenges of the electronic payment system faced by consumers in the adoption of E-Payment Services and determines that lack of usability, lack of security, issues with e-cash, lack of trust, lack of awareness, being highly expensive and time-consuming, and online payments not being feasible in some rural areas are among the challenges faced by consumers.

These findings reinforce the complex relationship between transaction cost, security features, transaction speed, ease of use, customer support, device compatibility, and rewards or cashback. This complexity underscores the importance of understanding consumers' preferences, which is the focus of the study. Using Conjoint Analysis, this study aims to identify the key factors influencing consumers' E-Payment Service preferences, offering deeper insights into how E-Payment can better align its services with consumers' needs and expectations, ultimately improving their satisfaction with financial services.

E-payment services: Insights from International Studies

While research on E-Payment Service preferences in the Philippines is limited, studies conducted in other countries provide valuable insight into the factors that influence consumer preferences for E-Payment Services.

For instance, a study by [Zehra et al. \(2024\)](#) explores consumer behavior and preferences toward digital payment gateways in India, focusing on the factors that drive consumer choices and

satisfaction. The study is grounded in three hypotheses that test differences in perceived convenience, trust in security, and the impact of cashback and rewards on consumer recommendations for digital payment platforms such as Phone-Pe, Google Pay, and Paytm. Key findings indicate significant differences in convenience and trust levels among platforms, with convenience and rewards strongly correlating with consumer recommendations. This emphasizes that enhancing convenience and perceived security, alongside attractive reward schemes, can significantly influence consumer adoption and loyalty in India.

In addition, [Wang et al. \(2025\)](#) investigate how the perceived value of payment methods affects the transaction experience at the Christmas market and how this experience influences consumer willingness to pay. The results demonstrate that consumers' transaction experience at the Christmas market is significantly influenced by perceptions of cash inefficiency, health risks associated with cash, the convenience and security of cashless payments, and the privacy of cashless payments. Furthermore, the transaction experience significantly affects consumers' willingness to pay. Additionally, the perceived value of payment methods and willingness to pay are mediated by the transaction experience. [Ghosh, A., et al. \(2022\)](#) further support this claim by exploring consumer preferences for digital payment services. A Conjoint Analysis approach was used to determine consumers' top preferences for digital payment services. The results highlight that transaction cost was a significant factor affecting preferences, with security of digital services ranking second.

[Fernando, N., et al. \(2022\)](#) explore consumer behavior in the adoption of E-Payment Services in Sri Lanka and determine that performance expectancy and ease of use significantly influence both rural and urban consumers of E-Payment Services. These findings suggest that reducing interface complexity is crucial across demographics. Performance expectancy is a central concept in the Unified Theory of Acceptance and Use of Technology (UTAUT) and directly aligns with transaction speed as an attribute in the context of E-Payment. Therefore, convenience, reliability, fast transactions, and simplicity of E-Payment Services are primary concerns for consumers in Indonesia.

In the Philippines, [Pleno, A. \(2024\)](#) examines E-Payment Service readiness among Micro Business Owners in Bulacan City and identifies significant challenges, including technical issues and unreliable internet connections that hinder smooth transactions. Older users and those with limited technological skills face difficulties in adopting such systems. The study concludes that although there is potential for greater adoption of E-Payment Systems, addressing infrastructure challenges and enhancing digital literacy—especially among older demographics—is crucial for facilitating a full transition.

Furthermore, [Reyes, L.D., & Francisco, A.R. \(2021\)](#) explore consumer preferences for Mobile Payment Systems in the Philippines using a Conjoint Approach based on platforms like G-Cash, Maya, and Coins.ph, and determine that reliability and security are among the top concerns of Filipino consumers in E-Payment Services, followed by transaction cost. Promotions have a moderate effect. In contrast, [Bacamante & Campos \(2024\)](#) systematic literature review on e-wallet adoption in the Philippines found that perceived ease of use, usefulness, security, and trust were among the most frequently cited drivers of e-wallet usage. The findings suggest that convenience-related benefits often play a stronger role than cost considerations in users' adoption decisions.

Transaction cost is one of the most critical attributes influencing the adoption and use of E-Payment Services in developing countries, including the Philippines. [Al-Saedi, K., et al. \(2020\)](#) on mobile payment adoption in developing countries found that perceived cost was one of the strongest predictors of resistance to mobile payment in Jordan, a proxy for other developing countries. Attributes such as transaction speed, ease of use, perceived security, and reward or cashback programs remain important implications in E-Payment Services.

It is important to note that studies on E-Payment Service preferences in the Philippines have been scarce, particularly those focusing on specific consumer preferences regarding E-Payment attributes such as transaction cost, security features, transaction speed, ease of use, customer support, device compatibility, and reward or cashback.

Conjoint Analysis in Understanding Customer Preferences in E-Payment Services

Conjoint Analysis is a decomposition approach used to identify the structure of consumers' preferences for different product profiles (Green & Srinivasan, 1990). Consistent with the assumption that a consumer's choice of a product or service depends on a subjective evaluation of its separate features, Conjoint Analysis assesses consumers' preferences for alternatives and explains how they make decisions involving multiple trade-offs between attributes (Green et al., 2001).

It has been used in various contexts to explore preferences for E-Payment, including the study by Choi et al. (2020), which shows that consumers value assurance policies, such as guidelines that provide users with security or reliability in E-Payment Services, as the most critical factor, while mileage programs, such as rewards, are considered imperative, and the authentication method of services has relatively less influence. The study by Kishnani et al. (2024) examines and evaluates the current posture of E-Payment applications from three major user-facing angles: security, privacy, and usability. The researchers conducted a pilot study, recruiting 12 participants to test the prototype. The study finds that both security and privacy are important for users of E-Payment applications. Additionally, some participants perceive the strength of security and privacy in terms of the application's usability. The study by Persada et al. (2024) explores consumer preferences for marketplace attributes in Indonesia. Conjoint Analysis was used to assess consumer preferences using specified marketplace attributes. Platform view, promo, payment method, marketplace type, delivery services, and reviews are the stated attributes. This last research will determine the combination and level of qualities that students desire when selecting a marketplace platform. The payment method attribute was found to be the most influential on student preferences. The second attribute is marketplace, followed by promotions, delivery services, reviews, and platform appearance.

The study by Wang et al. (2025) investigates how the perceived value of payment methods affects the transaction experience at the Christmas market and how this experience influences consumer willingness to pay. The results demonstrate that consumers' transaction experience at the Christmas market is significantly influenced by their perceptions of cash inefficiency, health risks associated with cash, the convenience of cashless payments, and the security and privacy of cashless payments. Furthermore, the transaction experience significantly impacts consumers' willingness to pay.

Although Conjoint Analysis has been applied to various types of E-Payment services, including mobile banking, online shopping, and more, there remains a gap in the literature on its use to understand E-Payment preferences. While research on consumer preferences in E-Payment Services is generally lacking, applying Conjoint Analysis could provide valuable insights into the specific attributes that Filipino consumers prioritize when adopting E-Payment Services. This could help financial institutions design more tailored and effective financial products that meet the needs of consumers in the Philippines.

E-payment attributes and consumer preferences

Lowering transaction costs significantly increases the adoption of E-Payment Services in developing countries such as the Philippines. Chang, Gunawan, and Sumarwan (2023) found that mobile payment adoption in Southeast Asia is influenced by factors such as performance

expectancy, effort expectancy, trust, security, perceived risk, and financial incentives. The study further highlighted that incentives are commonly used to attract new users of mobile payment systems in the ASEAN region, a finding supported by [Zhao, Y., et al. \(2022\)](#), which found that perceived cost is an attribute of E-Payment Services, especially in developing countries. In addition, a [GSMA \(2022\)](#) study identified transaction fees as a top barrier to E-Payment Services in Southeast Asia. In the Philippines, [BSP \(2023\)](#) reported that while e-wallet usage increased, cost remains a key concern for users, especially for small-value transactions. Furthermore, a study by [Ghosh, A., et al. \(2022\)](#) explored consumer preferences for digital payment systems. A Conjoint Analysis approach was used to identify consumers' top preferences for digital payment systems. The results highlight that transaction costs were a significant factor affecting preferences, with the security of digital services ranking second. In the context of the Philippines, transaction cost is considered the most important attribute in E-Payment Services, as consumers prefer providers that offer transfers at no cost or with lower cash-out fees.

An article published by the Bangko Sentral ng Pilipinas ([BSP, 2022](#)) cited instant confirmation and real-time availability of funds as essential factors in increasing trust in QR-based and mobile wallet payments. Transaction delays (even 5–10 minutes) led to abandonment or duplicate transactions, particularly in low-connectivity areas. Major e-wallets such as Instapay enable real-time transactions for amounts under P50,000, and their rapid growth indicates a preference for speed. G-Cash and Maya also promoted their real-time fund transfer features as major value propositions. In fact, [Raon, C.J.B. \(2021\)](#), using Conjoint Analysis, found that transaction speed (instant vs. delayed) ranked third in importance, after cost and security, among E-Payment consumers in the Philippines.

An additional study by [Chawla et al. \(2019\)](#) found that perceived ease of use (PEOU), perceived usefulness (PU), trust, security, facilitating conditions, and lifestyle compatibility significantly influence consumer attitudes and intentions to use mobile wallets. Ease of use significantly influenced usefulness and trust, whereas PU significantly influenced trust, attitude, and intention. Security and trust were found to play an important role in determining trust.

Several studies, such as research by [BSP \(2022\)](#), showed that several E-Payment Systems are designed with user-friendly interfaces to boost adoption, including simplified visual icons, native language support, and simplified navigation. This means that consumers will not take as long to fully understand the E-Payment Service features. Furthermore, the study showed that over 70% of e-wallet users found simplicity a key reason for continued use. Perceived security concerns data protection, fraud prevention, and security features. Transaction cost and security were rated as most important; ease of use was among the least prioritized, as users found most apps “good enough” already.

Finally, the study by [Teoh et al. \(2021\)](#) found that consumers were attracted to e-wallet services by cashback offers and reward-point programs. The study highlighted that promotional campaigns and user-friendly interfaces were important drivers of actual e-wallet usage, suggesting that financial incentives can play a substantial role in shaping consumer payment preferences.

In general, various studies highlight that consumer attributes such as cost-effectiveness, security features, transaction speed, ease of use, and rewards or cashback are crucial factors in consumer decision-making processes and in understanding preferences for E-Payment Services. These findings highlight the importance of considering E-Payment attributes that cater to consumers' preferences, especially in e-commerce.

RESEARCH METHOD

A quantitative research design using a full-profile conjoint analysis was employed in this study to evaluate consumer preferences for specific attributes at different levels, quantify the

relative importance of each attribute, analyze trade-offs among product profiles, and simulate real-world buying decisions to reveal consumers' feature preferences and sensitivity in E-payment services. This design integrates a structured framework for planning, implementing, and systematically analyzing consumer preferences by gathering quantifiable data through a descriptive survey (Slater & Hasson, 2025). A full-profile conjoint study presents consumers with sets of full product concepts and requires them to choose their preferred option (or "none"), mimicking real-world purchasing behavior rather than relying on ranking or rating (Sawtooth Software, 2017).

The study's respondents comprised two groups. The first group consisted of twenty (20) E-payment consumers who participated in the Key Informant Interview (KII). A high-quality conjoint study depends on selecting attributes that genuinely drive decision-making by highlighting specialized knowledge and contextual factors. Pahwa et al. (2023) emphasize that KIIs provide "practical insight" and "conceptual clarity" necessary to define constructs in applied research. Similarly, Kibuacha (2024) notes that KIIs capture nuanced motivations and enable researchers to understand the "why" behind observable trends, which is crucial when selecting attributes for preference modeling, such as conjoint analysis. The second group consisted of 381 individuals, of whom 174 were aged 18-25 years, 274 were female, and 253 had graduate-level education, all purposively selected from different institutions and backgrounds and considered to have experience with E-payment services. Cochran's formula was used to determine the required precision and confidence for an infinite population. Siddiqui, K. (2013) emphasizes that in conjoint studies, sample sizes generally range from about 150 to 1,200 respondents. Additionally, Johnson & Orme (1996) explain that typical sample sizes and practical guidelines assume an infinite or very large population, and in market research, sample sizes generally range from 150 to 1,200 in conjoint studies. For an infinite population, 385 is the minimum sample size needed for Cochran's populations at 95% confidence and $\pm 5\%$ precision. However, the actual sample was 381, which means the difference between $\pm 5.02\%$ ($n=381$) and $\pm 5.00\%$ ($n \approx 384-385$) is 0.02 percentage points—far below typical reporting precision and inconsequential for interpretation. Moreover, 381 is within $\sim 0.8\%$ of the calculated target and within common field variances allocated for incomplete responses and data cleaning.

Survey questionnaires consist of 20 profile cards generated using the Special Package for the Social Sciences (SPSS), including 4 holdout cards. Cards are arranged by card ID, from 1 to 20, with ratings from 5 (greatest preference) to 1 (lowest preference) for each profile card. Holdout tasks are essential for testing how well the conjoint model predicts choices not used in model estimation and for directly checking the model's external validity (Sawtooth Software, 2015). They also serve as a benchmark to determine which model fits unseen data (Wittink, D. R., & Bergestuen, T., 2001). To ensure the reliability and validity of the survey questionnaire, a pilot test was conducted with 20 participants in KII to assess the clarity and realism of the profile cards, evaluate whether respondents understood the attributes, determine whether Likert-scale ratings varied, estimate completion time, and identify overwhelmed respondents. Feedback from participants' completion of the profile rating task, including comments on task difficulty and reports of confusing attribute descriptions, indicated no cognitive overload (0%), meaning no attribute was systematically ignored. Ratings showed variability, and the time to complete the survey was acceptable.

Likert ratings provide a supplementary check to see whether the utilities and choice patterns from full-profile conjoint align with consumers' expressed attitudes. Full-profile conjoint designs are incentive-aligned and adaptive to improve predictive validity (Sablotty-Wackershauser, V., Lichters, M., Guhl, D., Bengart, P., & Vogt, B., 2024).

Table 1. E-payment attributes; Key levels; and Orthogonal values

Attribute	Levels	Orthogonal Values
Transaction Cost	Free or P0-P10 per transaction	1
	P11-P25 per transaction	2
	P26 and above per transaction	3
Transaction Speed	Within a few seconds to 1 minute	1
	Within 2-10 minutes	2
	More than 10 minutes	3
Ease of Use	Very Easy	1
	Moderate	2
	Difficult	3
Security Features	Advance	1
	Standard	2
	Basic	3
Reward or Cashback	Greater than or equal to 5% per transaction	1
	1% - 4% per transaction	2
	No rewards or cashback	3

Table 1 provides a systematic, methodologically sound foundation for analyzing consumer preferences and identifying the relative importance of E-Payment Service attributes within the Conjoint framework. It assigns orthogonal values to each attribute level, allowing independent estimation of part-worth utilities for each attribute level. The orthogonal design approach enhances the reliability and validity of the conjoint results by ensuring that respondents evaluate balanced and non-redundant combinations of attribute levels.

Attributes are identified based on the results of the KII of the respondents conducted in several studies, such as [Lahari, C., et al. \(2024\)](#); [Olipane & Inocencio \(2023\)](#); and [Mada \(2025\)](#), which identified attributes such as ease of use, speed, cost, security, and reward as highly considered by consumers in various contexts.

Conjoint analysis emphasizes discrete choices, preference trade-offs, and the attitudinal construct of consumer preferences in E-payment services.

Pearson's r. Pearson's r will be used to quantify the strength and direction of a linear relationship between actual respondent data and predicted utility or preference scores generated by the Conjoint model (part-worth estimates). After estimating the part-worth utilities, researchers will predict the preference or rank order of different profiles.

Kendall's tau. Kendall's tau will be used to evaluate the strength and direction of the association between two ranked variables. Kendall's tau measures the ordinal correlation between respondents' observed rank order of E-Payment Service profiles and the predicted rank order from the Conjoint model based on utility scores or part-worth estimates.

STATEMENT OF HYPOTHESIS

After reviewing the previous studies and literature related to the study, several authors claim that attributes such as transaction cost, transaction speed, ease of use, security features, and rewards or cashback are among the factors consumers consider when choosing E-Payment Services. For instance, a study by [Bounie, D. et al. \(2017\)](#) claims that transaction cost is the main factor that influences consumers' preferences in E-Payment, while the study of [Kurniasari \(2021\)](#) highlights that security and trust are significant to consumers of E-Payment Services in different

contexts. Different studies identify different preferences in payment services, depending on the context.

Thus, the researchers developed hypotheses to test and later answer the study's research question and to draw recommendations based on the findings from hypothesis testing. Pearson's r and Kendall's tau are used to test the study's hypotheses. The following are the hypotheses of this study:

Attribute Importance

H₀₁: There is no significant difference in the importance of Transaction Cost, Transaction Speed, Ease of Use, Security Features, and Reward or Cashback in shaping consumer preferences.

H₁₁: There is a significant difference in the importance of Transaction Cost, Transaction Speed, Ease of Use, Security Features, and Reward or Cashback in shaping consumer preferences.

Utility-based Hypothesis

H₀₂: Attribute levels of "Free or P0-P10 per transaction," "Within a few seconds to 1 minute," "Very Easy," "Advance," and "Greater than or equal to 5% per transaction" significantly affect the part-worth utility in Conjoint Analysis.

H₁₂: Attribute levels of "Free or P0-P10 per transaction," "Within a few seconds to 1 minute," "Very Easy," "Advance," and "Greater than or equal to 5% per transaction" have no significant effect on the part-worth utility in Conjoint Analysis.

FINDINGS AND DISCUSSION

The findings of this study show the extent of consumers' preferred profiles of E-payment services, as perceived by 318 participating consumers. Consumers aged 18-25 years, typically women with graduate-level education, contributed most to the study findings. It is evident that consumers are willing to trade off certain E-payment profiles and balance the perceived quality of the services against cost.

Relative Importance of E-payment Service Attributes

Data from the survey questions were gathered and analyzed in SPSS. Conjoint Analysis revealed the relative importance of five E-payment attributes and the utility estimates for each of their levels.

Table 2. Relative Importance of E-payment Service Attributes

Attribute	Importance (%)
Transaction Cost	47.430
Ease of Use	14.063
Security Features	13.321
Transaction Speed	12.587
Reward or Cashback	12.333
Total	100.00%

Table 2 shows the relative importance of attribute values in shaping consumer preferences. The results highlight that transaction cost emerged as the most influential attribute in shaping consumer preferences for E-payment services. This suggests that respondents prioritize minimizing fees and charges when choosing an E-payment platform. Attributes such as ease of use and security features, with scores, were the next most important, suggesting that user-friendly interfaces and robust security measures also play a significant role in decision-making. Meanwhile,

attributes such as transaction speed and rewards or cashback was considered less important than other attributes, although they still contribute to overall preferences. These findings imply that pricing strategies, cost competitiveness, and user-friendly interfaces are the primary drivers of consumer choice in E-payment services.

Part-worth Utilities of E-payment Service Attribute Levels

The part-worth utilities of E-payment service attribute levels quantify consumers' relative preferences for different levels of These attributes.

Table 3. Part-worth Utilities of E-payment Service Attributes Levels

Attribute	Level	Utility Estimate	Std. Error
Transaction Speed	Within a few seconds to 1 minute	0.033	0.114
	Within 2–10 minutes	0.007	0.134
	More than 10 minutes	-0.040	0.134
Ease of Use	Very Easy	-0.020	0.114
	Moderate	0.070	0.134
	Difficult	-0.049	0.134
Security Features	Advance	-0.013	0.114
	Standard	0.043	0.134
	Basic	-0.030	0.134
Reward or Cashback	≥ 5% per transaction	-0.054	0.114
	1%–4% per transaction	0.005	0.134
	No rewards or cashback	0.049	0.134
Transaction Cost	Free or ₱0–₱10 per transaction	0.452	0.103
	₱11–₱25 per transaction	0.904	0.207
	₱26 and above per transaction	1.355	0.31

Table 3 shows that transaction cost levels have the strongest influence on utility estimates. Respondents show a higher preference for the E-Payment Service that costs ₱26 and above per transaction, with the highest utility score of 1.355, followed by ₱11–₱25 per transaction with a utility score of 0.904, and Free or ₱0–₱10 per transaction with a utility score of 0.452, which is the least preferred by respondents. This unusual pattern suggests that respondents in this sample may associate higher transaction costs with better service quality or reliability, contrary to the common expectation that lower costs are preferred.

Regarding Transaction Speed, transactions completed within a few seconds to 1 minute have the highest utility value of 0.033, followed by those completed within 2-10 minutes (0.007), and those taking more than 10 minutes (-0.04). This suggests that respondents prefer shorter transaction times, as they minimize waiting and potential frustrations, leading to a more productive experience.

For the third attribute, Ease-of-Use, respondents prefer a moderate user system experience with a utility score of 0.070. A very easy user system experience has a utility score of -0.020, while a difficult user system experience is least preferred by consumers, with a utility score of only -0.049. This suggests that respondents value a balance between ease of navigation and functionality, where tasks can be completed comfortably without significant frustration, though there may be room for improvement in efficiency and advanced features.

For the fourth attribute, Security Feature, consumers preferred E-Payment Service with standard security features, with a utility score of 0.043, while advanced security features had a utility score of -0.013, and basic security features had a utility score of -0.030. This suggests that respondents preferred the standard security level. Advanced security may introduce increased complexity and frustration due to complicated authentication, while basic security may leave the respondent's transaction vulnerable.

Lastly, when it comes to Rewards or Cashback, respondents value transactions with no Rewards or Cashback the most, with a utility score of 0.049; rewards or cashback of 1%-4% per transaction, with a utility score of 0.005; and $\geq 5\%$ per transaction, with a utility score of -0.054. This suggests that rewards or cashback in E-Payment transactions are not the primary preference among respondents. Consumers preferred no rewards or cashback, with a utility score of 0.049; 1%-4% per transaction, with a utility score of 0.005; and $\geq 5\%$ per transaction, with a utility score of -0.054.

Reversals in consumer choice across different E-payment Attributes

The extent of consistent patterns or reversals in consumer choices across different E-Payment attributes reveals the implicit preferences and trade-offs of what consumers truly value and are willing to sacrifice.

Table 4. Number of reversals per Attributes

Attribute	Number of Reversals
Transaction Cost	1
Reward or Cashback	0
Security Features	0
Ease of Use	0
Transaction Speed	0

Note: Reversals indicate inconsistencies in preference ordering for attribute levels. Zero reversals imply perfect consistency.

Table 4 shows the number of reversals per attribute. The analysis shows that transaction cost recorded 1 reversal, indicating a minor level of inconsistency in respondents' ordering of preference for this attribute's levels. This suggests that while cost was a key determinant of preference in SOP No. 1, respondents consistently favored lower- or higher-cost options in the expected pattern. In contrast, reward or cashback, security features, ease of use, and transaction speed each recorded zero reversals, indicating that respondents' choices for these attributes were consistent with their estimated utility patterns. This pattern highlights that non-cost attributes were evaluated more uniformly, whereas cost preferences varied significantly among respondents.

Model Fit and Predictive Validity Statistics

Model fit and predictive validity statistics were used to assess the Conjoint model's internal consistency and external accuracy.

Table 5. Correlations between observed and estimated preferences for E-payment Service Attributes

Statistic	Value	Sig. (p)
Pearson's r	0.877	0
Kendall's tau	0.605	0.001

Kendall's tau for holdouts	0.667	0.087
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Table 5 presents the correlations between observed and estimated preferences for E-Payment Service attributes. The results indicate that the Conjoint model demonstrates strong, statistically significant predictive capacity for consumer preferences regarding these attributes. Pearson's $r = 0.877$ ($p < .001$) shows a very strong linear relationship between observed and estimated preferences. Similarly, Kendall's tau = 0.605 ($p = .001$) confirms a strong, significant ordinal association. For holdout profiles, Kendall's tau = 0.667 ($p = .087$) suggests good agreement, although this relationship is not statistically significant at the 0.05 level.

Market Preference Simulation Results

To estimate consumer preferences across the five identified E-Payment Service attributes, market simulations were conducted using three models: Maximum Utility, Bradley-Terry-Luce (BTL), and Logit. Each model provided distinct insights into how consumers might behave in a real-world market setting, based on utility scores derived from the Conjoint Analysis.

Table 6. Simulated preference probabilities for E-payment service profiles

Profile (Card-ID)	Maximum Utility (%)	Bradley-Terry-Luce (%)	Logit (%)
Card 10 – ID 21	26.4	24.4	39.7
Card 14 – ID 22	73.6	75.6	60.3

The simulation results indicate that Card 14 (ID 22) is consistently favored over Card 10 (ID 21) across all decision rules. Under the Maximum Utility rule, Card 14 captures 73.6% of predicted choices compared to only 26.4% for Card 10, showing overwhelming dominance when consumers always select the highest-valued profile. In the Bradley-Terry-Luce model, Card 14 remains strongly preferred (75.6% vs. 24.4%), while the Logit model produces a narrower but still clear advantage (60.3% vs. 39.7%). The relative appeal of Card 14 can be attributed to its quality service, such as transactions completed within a few seconds to a minute (1), a moderate level of ease of use (2), and standard security features, even though it offers no rewards or cash back (3) and has a high transaction cost (3), which appear to outweigh its trade-offs in transaction speed (level 1). Meanwhile, Card 10, despite offering a lower transaction cost (1), is penalized by transaction times exceeding 10 minutes (3), difficult ease of use (3), and advanced security features (3), even though it offers rewards or cash back at 1%-4% (2) with low transaction cost (1).

This suggests that, in the simulated market, respondents are more sensitive to the quality of the services offered, especially transaction speed, ease of use, and security features, whose trade-offs in transaction costs and rewards/cash back outweigh respondents' preferences.

Theoretical and Practical Contributions

Recent literature in the context of the Philippines, such as [Ramayanti, R., et al. \(2025\)](#) on consumer attitudes toward digital payments; [Jain, V., et al. \(2024\)](#) on security and privacy; and [Baltisoto, A. P. \(2024\)](#) on consumer perceptions of risk and trust, strongly shaped the understanding of consumer E-payment adoption and utilization, extending theories such as TAM and the Unified Theory of Acceptance and Use of Technology (UTAUT) by affirming that consumers' perceptions and experiences are core predictors in digital payments. However, the study findings imply the inclusion of an age-sensitive adoption pathway, suggesting that generational familiarity, not only socio-economic factors, is a driver of E-payment utilization, especially in rural communities. Moreover, transaction cost economics also shaped consumer utilization of E-

payment, suggesting that consumers are willing to trade off higher costs when associated with quality services and infrastructure reliability. This suggests that consumers emphasize reliable systems and stability as top concerns compared to rewards, which are mostly associated with conditions in E-payment services.

Findings could further contribute to various stakeholders, such as LGUs, banks, financial technology providers, and regulators, by improving E-payment services, designing services aligned with consumers' preferences in rural communities, and implementing regulations that address cost, services, and features mandated and aligned with standards in digital transactions.

CONCLUSIONS

Based on the study's findings, the researcher concludes that demographic factors, such as age, have implications for the utilization of E-payment services, with the majority of respondents being young adults aged 26-35. The sex profile highlights the dominance of females, which can be explained by a strong interest in spending that links to the higher utility of E-payment services. Educational attainment indicates that higher levels of education are associated with greater utility of E-payment services due to advanced digital literacy, greater economic activity, and more transactions.

Furthermore, the analysis found that transaction cost, ease of use, and security are the top attributes, followed by transaction speed and rewards. This emphasizes consumers' priority on security, cost, and ease of use, with rewards and speed considered less preferred but still contributing to overall utility. Moreover, among all the attributes considered, Conjoint Analysis determined the preferred levels. For Transaction Cost, consumers consider a high transaction cost of ₱26 or more per transaction (1.355), which is contrary to the common assumption that lower cost is preferred. This pattern may reflect a preference for higher costs when they are associated with quality, reliable, and secure E-payment services. Furthermore, the results are consistent with the Utility Theory of [Neumann et al. \(1944\)](#), which emphasizes that consumers seek to maximize benefit relative to cost (utility). In the context of transaction costs, it is concluded that consumers weigh potential costs and benefits when making transactions, highlighting that consumers utilize E-payment services if such costs are reasonable for the services availed. Other attributes, such as ease of use, showed the highest utility at a moderate level, suggesting that consumers' perceptions of technology as free or effort-based, as posited by TAM ([Davis, 1989](#)), do not hold as a basic feature. Features that may be perceived as vulnerable or difficult can add frustration and dissatisfaction to the consumer experience.

Security Features were preferred at a standard level (0.043), highlighting consumers' perception that overly advanced security features may lead to dissatisfaction due to excessive authentication, while basic security may be perceived as making the system easily vulnerable, which connotes risk, especially financial risk, from the consumer's point of view. These perceptions are clearly reflected in [Bauer's \(1960\)](#) Perceived Risk theory. In Transaction Cost, consumers preferred transactions taking a few seconds to 1 minute (0.033), and lastly, consumers preferred no reward or cashback (0.049) in E-payment services. It is concluded that while consumers consider shorter transaction times an influential attribute, rewards are not a primary motivator for using e-payment. Though grounded in TAM proposed by [Davis, F. \(1989\)](#), cashback, alongside ease of use and speed, enhances perceived technology performance and benefits; it is not the primary focus for consumers, but it still contributes to overall preferences. It can be concluded that consumers are more likely to utilize an E-payment that is cost-efficient, easy, and secure, with faster transactions and reasonable rewards or cashbacks.

It can be concluded that consumers balance cost and benefit in E-payment transactions. E-payment services with reasonable transaction costs, regulated security, user-friendly features, and

associated rewards or cashback are the profile features that overwhelmingly dominate as the highest-valued profile.

Though consumers may prefer low transaction costs, they are willing to trade off for higher costs when associated with better service quality and efficiency. This further implies that the certainty of service quality fulfills consumers' expectations. Attributes such as security features and ease of use remain significant and consistently favored. By contrast, attributes such as transaction speed, while offering faster transactions, can be traded off, incurring higher costs and lower rewards. This implies that rewards or cashback influence consumer preference. In the context of this study's findings, the market simulation results can serve as a reference for addressing consumers' satisfaction and preferences in E-payment services in Dipolog City.

Theoretical and Practical Implications

Several studies indicate that factors such as ease of use, security, cost, rewards, and transaction speed explicitly influence consumer utilization of E-payment services, reinforcing and extending established frameworks such as Utility Theory, which emphasizes maximizing benefits relative to costs; Perceived Risk Theory, which focuses on perceived risks of adoption and preferences in E-payment; and the Technology Acceptance Model (TAM), which highlights consumers' perceived usefulness and usability of E-payment services. Based on these findings, future models explaining the utilization of E-payment services should integrate behavioral-affective dimensions and contextual enablers, such as ease of onboarding, network stability, and infrastructure readiness. Digital inclusion must also be reframed to prioritize generational dynamics, positioning young adults as catalysts for diffusion, especially in rural communities. The risk model should also be refined to include system-level reliability, such as network quality and application stability, as primary antecedents of trust, which links to security and forms a psychological construct for consumers. A behavioral economics construct should be incorporated, recognizing consumers as emotional and experiential decision-makers, rather than treating it as an auxiliary moderating variable. In line with these findings, E-payment service providers should design programs that leverage youth adoption through school-based digital finance campaigns and gamified onboarding. Furthermore, banks, E-payment service providers, and local governments must deliver community-based digital literacy programs to reduce errors, correct consumers' perceptions, and increase confidence in E-payment services, while regulators such as the BSP should implement real-time transaction cost regulations and services in compliance with consumers' expectations and benefits.

LIMITATION & FURTHER RESEARCH

Self-reported data may introduce unintentional bias by focusing solely on consumers in Dipolog City. This study limits respondents to consumers with direct experience with E-payment services in a specific locality; their responses indicate different preferences for E-payment services.

Furthermore, this study focuses only on top attributes identified through pilot tests and does not test specific E-payment platforms, which may yield a generalized outcome. The scope of the study should be broadened to include the preferences of other E-payment users, especially local merchants, farmers, and other vulnerable sectors; the locality should include other rural communities to compare how consumer preferences vary across different demographics, from urban to rural communities; and a longitudinal study should be conducted to track consumer preferences over time when a new innovation exists in E-payment to identify factors contributing to long-term effectiveness.

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