**Journal of Mathematics Instruction, Social Research and Opinion**
Vol. 3, No. 1, March 2024, pp. 33 – 48, https://doi.org/10.58421/misro.v3i1.171
ISSN 2962-7842 

# Adoption of Electronic Cash Payment among Students: A Case Study of Siem Reap Build Bright University

**POR Narith[1], SAY Chanminea[2], MOV Socheat[3]**
[1,2]Build Bright University, Cambodia
[3]The University of Cambodia, Cambodia

**Article Info**

***Article history:***

Received 2023-08-29
Revised 2023-10-19
Accepted 2023-11-12

***Keywords:***

Adoption
electronic cash
Payment
Students
*Build* Bright University

**ABSTRACT**

This research aimed to assess students' awareness and adoption of electronic cash and analyze the factors influencing their attitudes towards this payment method. The study was conducted in Siem Reap province, Cambodia, with 211 students from Build Bright University. Findings indicated that the majority of respondents had knowledge and understanding of electronic cash, highlighting a positive level of familiarity. Convenience and ease of use influenced students' adoption of electronic cash. Students valued the seamless experience, quick transactions offered by electronic cash, and prioritizing security and privacy. Technological appeal and innovation also played a crucial role in shaping students' preferences. Trust in the payment system and perceived benefits such as rewards and discounts were influential factors.



***Corresponding Author:***

POR Narith
Build Bright University, Cambodia
Email: narithpor18@gmail.com

## 1. INTRODUCTION

The use of electronic cash is growing around the world. In 2021, the number of mobile payment users worldwide will reach 1.33 billion. This growth is driven by several factors, including the increasing popularity of smartphones, the growing availability of Internet access, and the convenience and security of mobile payments [1].

In Cambodia, the use of electronic cash is also growing. In 2020, the National Bank of Cambodia launched the Bakong system, a blockchain-based nationwide payment system. Bakong allows people to make payments using their smartphones, even if they do not have a bank account [2].

The number of payments made via electronic systems in Cambodia reached nearly 1,000 per cent of the country's gross domestic product (GDP) in 2022, said a senior official of the National Bank of Cambodia (NBC) [3]. The pandemic has accelerated the adoption of digital payments among Cambodian consumers, as they believe going cashless will

make society more hygienic (43%), efficient (39%), and environmentally friendly (37%) [4].

There were several studies on the use of electronic cash in other countries, such as China. The study identified some factors, including perceived security and cost of use, as beneficial extensions of the traditional UTAUT model, and intention is a crucial antecedent to users' actual utilization of e-cash [5].

In Cambodia, there was a lack of study on the increase in electronic cash use, particularly with students' attitudes toward electronic cash use in Siem Reap province. The research on factors affecting electronic cash use, in particular the people in Siem Reap province in Cambodia,

The research addresses the lack of understanding of the factors influencing electronic cash use in Siem Reap province, Cambodia. This study will provide valuable insights by investigating the current level of awareness and adoption among students and analyzing the factors that shape their attitudes towards electronic cash, such as convenience, security, privacy, and technological appeal.

This research can inform policymakers, businesses, and other stakeholders about the potential barriers and opportunities for the broader adoption of electronic cash in the region. Additionally, this research can contribute to the existing literature on electronic cash usage and serve as a basis for further studies. The current research addresses the gaps in the previous studies with the two research objectives below.

(1) To identify the current awareness and adoption of electronic cash among students.
(2) To analyze the factors influencing students' attitudes toward electronic cash, including convenience, security, privacy, and technological appeal.

## 2. THEORETICAL REVIEW

Six theories were employed to understand research objectives and conceptualize research: TAM, PMT, DIT, TPB, TT, and TRA. First, the Technology Acceptance Model (TAM) was applied to assess users' perceptions of the convenience and ease of using electronic cash. TAM suggests that users are more likely to adopt technology if they perceive it as easy to use and beneficial [6].

Second, the TAM theory was complemented by another theory, the Protection Motivation Theory (PMT), which is used to understand users' attitudes and behaviours related to security and privacy concerns. PMT suggests that individuals are motivated to protect themselves from potential threats, and their adoption of electronic cash may be influenced by their perception of the security measures in place [7].

Moreover, the Diffusion of Innovation Theory was applied to analyze users' attitudes towards technological appeal and innovation. This theory suggests that individuals who are more open to adopting new technologies are more likely to embrace electronic cash due to its innovative features [8]. A familiarity factor was identified with adopting the Theory of Planned Behavior (TPB). TPB suggests that individuals' familiarity with behaviour can influence their attitude and perceived behavioural control [9].

The Trust and TRA theories guided trust in payment systems and benefits. Trust theory indicates the importance of trust for users' adoption of technology, which can

impact their willingness to use electronic cash [10]. The Theory of Reasoned Action (TRA) was used to understand users' attitudes towards the perceived benefits of electronic cash over traditional payment methods [11].

The literature review helps the researcher conceptualize the factors affecting students' use of electronic cash as below:

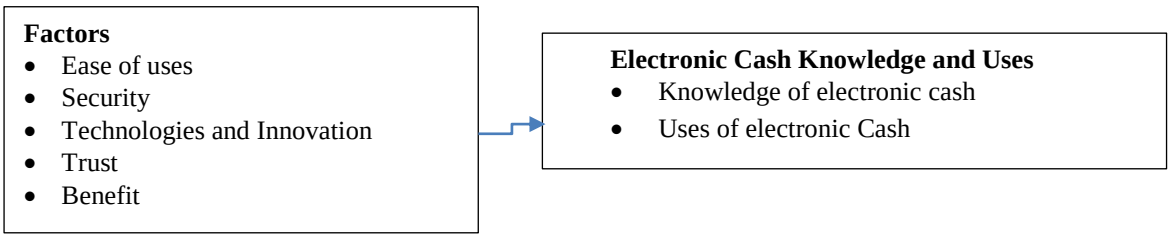


Figure 1. Research Framework

## 3. METHOD

Quantitative research was employed. Statistical methods are used to collect and analyze numerical data in quantitative research [12]. Quantitative research entails gathering data to quantify information and subject it to statistical analysis, thereby supporting or challenging alternative claims of knowledge [13]. The research was conducted in Siem Reap province, Cambodia, explicitly targeting students from Build Bright University. A total of 211 students participated in the study. Convenience sampling was employed to gather information from the students.

The data collection process involved the use of questionnaires administered through Google Forms. The questionnaires were divided into three parts: demographic data, awareness and adoption of electronic cash, and factors influencing the adoption of electronic cash. The questionnaire design included different response formats, such as "1=Yes, 2=No" for categorical questions, and a Likert scale ranging from 1 to 5. A score of 1 indicated strong disagreement or no influence, while a score of 5 indicated strong agreement or high influence.

Both primary and secondary data were used in this research. The primary data was collected through the questionnaires, while the secondary data was gathered from existing literature and resources related to electronic cash adoption.

After collecting the data using Google Forms, the responses were cleaned and transferred to SPSS (Statistical Package for the Social Sciences) for analysis. Descriptive statistics were used to analyze the data to answer the research objectives.

## 4. RESULTS AND DISCUSSION

### 4.2. Demographic Data

#### 4.2.1. Sex of respondents

The research findings indicate that out of the 211 respondents, 46.9% identified as male, while 52.6% identified as female. There was also one respondent (0.5%) who chose not to disclose their sex data. These results provide valuable insights into the sex distribution among the participants in the research study.

Table 1. Sex of Respondents

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Male | 99 | 46.9 | 46.9 | 46.9 |
| | Female | 111 | 52.6 | 52.6 | 99.5 |
| | Prefer not to say | 1 | .5 | .5 | 100.0 |
| | Total | 211 | 100.0 | 100.0 | |

### 4.2.2. Ages

The research findings reveal the age distribution of the respondents, providing valuable insights into the demographics of the study participants. Most respondents (60.2%) fell into the age range of 21–25, indicating a significant presence of young adults in the sample. Additionally, the age groups of 15-20 and 26–30 accounted for 24.2% and 7.6% of the respondents, respectively. The findings also highlight smaller proportions of respondents in the older age categories, with 5.2% falling in the 31–35 range, 1.9% in the 36–40 range, and only 0.9% in the 41–45 range.

Table 2. Age of Respondents

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 15-20 | 51 | 24.2 | 24.2 | 24.2 |
| | 21-25 | 127 | 60.2 | 60.2 | 84.4 |
| | 26-30 | 16 | 7.6 | 7.6 | 91.9 |
| | 31-35 | 11 | 5.2 | 5.2 | 97.2 |
| | 36-40 | 4 | 1.9 | 1.9 | 99.1 |
| | 41-45 | 2 | .9 | .9 | 100.0 |
| | Total | 211 | 100.0 | 100.0 | |

### 4.2.3. Majors of Studies

The data presented shows the distribution of majors among a group of respondents. The most popular major among the respondents was accounting, with 33.6% choosing this field of study. This is followed by Business, chosen by 22.3% of the respondents. Engineering and Civil Construction are also popular, with 21.3% of the respondents opting for this major. Other majors such as Law, Information and Technology, Agriculture, and Tourism Development also have a significant representation, although to a lesser extent. Interestingly, English has the lowest percentage, with only 0.5% of the respondents choosing this major.

Table 3. Majors of Studies

| Majors | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|
| Business | 47 | 22.3 | 22.3 | 22.3 |
| Accounting | 71 | 33.6 | 33.6 | 55.9 |
| Law | 22 | 10.4 | 10.4 | 66.4 |
| Information and Technology | 17 | 8.1 | 8.1 | 74.4 |
| Engineering and Civil Construction | 45 | 21.3 | 21.3 | 95.7 |
| Tourism Development | 3 | 1.4 | 1.4 | 97.2 |
| Agriculture | 5 | 2.4 | 2.4 | 99.5 |
| English | 1 | .5 | .5 | 100.0 |
| Total | 211 | 100.0 | 100.0 | |

### 4.2.4. Education

The data presented reveals the education degrees that the respondents were studying. The majority, accounting for 89.1% of the respondents, were pursuing a bachelor's degree. On the other hand, a smaller percentage, 10.9%, were studying for a master's degree.

Table 4. Education Degree of Respondents

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Bachelor | 188 | 89.1 | 89.1 | 89.1 |
| | Master | 23 | 10.9 | 10.9 | 100.0 |
| | Total | 211 | 100.0 | 100.0 | |

### 4.2.5. Incomes

The data provides an overview of the monthly incomes of the respondents. It reveals that a significant portion, 29.4%, have a monthly income of less than $100. This suggests that a considerable number of respondents may be facing financial challenges with limited income resources. On the other hand, the most significant percentage, 47.4%, falls within the income range of $100 to $300, indicating that a significant portion of the respondents have a moderate income level. The data also shows that a smaller percentage of respondents fall within the higher income range, with only 0.5% reporting a monthly income over $5,000.

Table 5. Monthly Incomes

| Income Classification | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|
| Less than $100 | 62 | 29.4 | 29.4 | 29.4 |
| [$100 - $300[ | 100 | 47.4 | 47.4 | 76.8 |
| [$300 - $500[ | 30 | 14.2 | 14.2 | 91.0 |
| [$500 - $1,000[ | 16 | 7.6 | 7.6 | 98.6 |
| [$1,000 - $2,000[ | 2 | .9 | .9 | 99.5 |
| Over $5,000 | 1 | .5 | .5 | 100.0 |
| Total | 211 | 100.0 | 100.0 | |

## 4.2. Knowledge and Uses of Electronic Cash

### 4.2.1. Knowledge of Electronic Cash

The data in Table 6 indicates that 82.9% of the respondents know electronic cash, while 17.1% do not. This suggests that most surveyed individuals know the concept and understand how electronic cash works. However, it is essential to note that many respondents still lack knowledge in this area.

Table 6. Knowledge of electronic cash

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 175 | 82.9 | 82.9 | 82.9 |
| | No | 36 | 17.1 | 17.1 | 100.0 |
| | Total | 211 | 100.0 | 100.0 | |

The research findings indicated that respondents' knowledge about electronic cash is distributed across different levels. Of the 175 participants who know electronic cash, only 4% rated their knowledge as very low, suggesting a limited understanding of it. Another 9.7% rated their knowledge low, indicating a slightly better but inadequate

understanding. The majority of respondents, 45.1%, rated their knowledge as moderate, suggesting a fair understanding but with room for improvement. 31.4% of respondents rated their knowledge high, indicating a good understanding and familiarity with electronic cash. Finally, 9.7% rated their knowledge as very high, suggesting an extensive understanding and expertise in electronic cash.

Table 7. Rate knowledge about electronic cash on

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | being very low | 7 | 4.0 | 4.0 | 4.0 |
| | Low | 17 | 9.7 | 9.7 | 13.7 |
| | Moderate | 79 | 45.1 | 45.1 | 58.9 |
| | High | 55 | 31.4 | 31.4 | 90.3 |
| | being very high | 17 | 9.7 | 9.7 | 100.0 |
| | Total | 175 | 100.0 | 100.0 | |

The data in Table 8 reveals that the primary sources of awareness about electronic cash are friends, family, media, advertisements, and other sources. Friends were cited by 17.7% of respondents, indicating the influence of personal recommendations and discussions. Family members played a role for 5.1% of respondents, emphasizing the impact of close relationships. Media was the most significant source, with 52.6% of respondents gaining awareness through various channels such as television, newspapers, and social media. Advertisements contributed to 8.0% of respondents, while 16.6% mentioned other sources.

Table 8. Sources of awareness about electronic cash

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Friends | 31 | 17.7 | 17.7 | 17.7 |
| | family | 9 | 5.1 | 5.1 | 22.9 |
| | media | 92 | 52.6 | 52.6 | 75.4 |
| | advertisements | 14 | 8.0 | 8.0 | 83.4 |
| | other | 29 | 16.6 | 16.6 | 100.0 |
| | Total | 175 | 100.0 | 100.0 | |

### 4.2.2. Use of Electronic Cash

The research findings show that most respondents, 98.3%, reported using electronic cash to make payments. This indicates a high adoption and usage of electronic cash as a payment method among the surveyed individuals. Only a tiny percentage of respondents, 1.7%, reported not using electronic cash to make payments. These findings suggest that electronic cash has become a popular and widely accepted payment option, with high trust and convenience among users. The widespread usage of electronic cash highlights its importance and relevance in modern-day transactions.

Table 9. Use of electronic cash for making payments

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 172 | 98.3 | 98.3 | 98.3 |
| | No | 3 | 1.7 | 1.7 | 100.0 |
| | Total | 175 | 100.0 | 100.0 | |

The research and previous studies' findings collectively demonstrate a high adoption and usage of electronic cash as a payment method. The research findings indicate that most respondents use electronic cash for making payments, highlighting its popularity and acceptance among users. The frequency of use emphasizes the convenience and integration of electronic cash into daily financial transactions.

These findings are consistent with previous studies that reported high adoption rates and positive perceptions of electronic cash among consumers. The studies [14], [15], and [16] support the research findings, highlighting the widespread acceptance and trust in electronic cash as a payment method.

### 4.2.3. Frequency of Electronic Cash

The research findings provide insights into respondents' frequency of electronic cash usage. 13.1% of respondents reported using electronic cash rarely, which means once a month or less. 33.7% reported using electronic cash occasionally, translating to 1-3 times a month. 18.3% reported using electronic cash regularly, meaning 1-3 times a week. Lastly, 34.9% reported using electronic cash frequently, indicating usage more than three times a week. These findings indicate that many respondents use electronic cash regularly or frequently, highlighting its convenience and popularity as a payment method.

Table 10. Frequency of electronic cash usage

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Rarely (once a month or less) | 20 | 11.6 | 11.6 | 11.6 |
| | Occasionally (1-3 times a month) | 59 | 34.3 | 34.3 | 45.9 |
| | Regularly (1-3 times a week) | 32 | 18.6 | 18.6 | 64.5 |
| | Frequently (more than three times a week) | 61 | 35.5 | 35.5 | 100.0 |
| | Total | 172 | 100.0 | 100.0 | |

### 4.2.4. Payment Method

#### a. Mobile App Payment

The research findings indicate varying preferences among respondents regarding using mobile apps as a payment method. Only 2.3% of respondents rated mobile apps as their least preferred payment method. Similarly, 2.9% rated mobile apps as less preferred. A significant portion, 30.8%, had a neutral preference for mobile apps as a payment method. On the other hand, 35.5% of respondents rated mobile apps as more preferred, indicating a higher level of preference for this payment method. Lastly, 28.5% of respondents rated mobile apps as their preferred payment method. These findings suggest that while there is a range of preferences for mobile apps as a payment method, a considerable percentage of respondents favour using mobile apps for transactions. This highlights mobile apps' growing popularity and acceptance as a convenient and preferred payment option.

Table 11. Preference on payment method: Mobile App

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | being least preferred | 4 | 2.3 | 2.3 | 2.3 |
| | Less preferred | 5 | 2.9 | 2.9 | 5.2 |
| | Moderate preferred | 53 | 30.8 | 30.8 | 36.0 |
| | More preferred | 61 | 35.5 | 35.5 | 71.5 |
| | being the most preferred | 49 | 28.5 | 28.5 | 100.0 |
| | Total | 172 | 100.0 | 100.0 | |

**b. Payment through Cards**

The research findings indicate varying preferences among respondents regarding using cards (credit or debit) as a payment method. 25% of respondents rated cards as their least preferred payment method. Similarly, 22.1% rated cards as less preferred. 31.4% of respondents had a moderate preference for using cards as a payment method. On the other hand, 15.1% of respondents rated cards as more preferred, indicating a higher preference for this payment method. Only 6.4% of respondents rated cards as their most preferred payment method. These findings suggest that while there is a range of preferences for using cards as a payment method, a significant percentage of respondents have a lower preference for using cards than other payment options.

Table 12. Preference on payment method: Cards (Credit/Debt)

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | being least preferred | 43 | 25.0 | 25.0 | 25.0 |
| | being less preferred | 38 | 22.1 | 22.1 | 47.1 |
| | being moderate preferred | 54 | 31.4 | 31.4 | 78.5 |
| | being more preferred | 26 | 15.1 | 15.1 | 93.6 |
| | being the most preferred | 11 | 6.4 | 6.4 | 100.0 |
| | Total | 172 | 100.0 | 100.0 | |

**c. Digital Currencies**

The research findings indicate varying preferences among respondents regarding using digital currencies as a payment method. 7% of respondents rated digital currencies as their least preferred payment method. Similarly, 11% rated digital currencies as less preferred. 41.3% of respondents had a moderate preference for using digital currencies as a payment method. On the other hand, 29.1% of respondents rated digital currencies as more preferred, indicating a higher level of preference for this payment method, and 11.6% of respondents rated digital currencies as their most preferred payment method. These findings suggest that while there is a range of preferences for using digital currencies as a payment method, a significant percentage of respondents prefer using digital currencies over other payment options. This indicates a growing acceptance and preference for digital currencies as a viable payment method.

Table 13. Preference on payment method: Digital currencies

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | being least preferred | 12 | 7.0 | 7.0 | 7.0 |
| | being less preferred | 19 | 11.0 | 11.0 | 18.0 |
| | being neutral | 71 | 41.3 | 41.3 | 59.3 |
| | being more preferred | 50 | 29.1 | 29.1 | 88.4 |
| | being the most preferred | 20 | 11.6 | 11.6 | 100.0 |
| | Total | 172 | 100.0 | 100.0 | |

### 4.3. Factors Affecting Electronic Uses

#### 4.3.1. Convenience and ease of use

Table 14 shows the frequency and percentage distribution of respondents' perceptions regarding the convenience and ease of use of electronic cash. Convenience and ease of use have varying degrees of influence on students' usage of electronic cash. A small percentage (1.7%) of students indicated that convenience and ease of use did not influence their usage of electronic cash. A slightly larger percentage (7.0%) of students felt that convenience and ease of use had less influence on their usage.

Table 14. Convenience and ease of use

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | being no influence | 3 | 1.7 | 1.7 | 1.7 |
| | being less influence | 12 | 7.0 | 7.0 | 8.7 |
| | being moderate influence | 56 | 32.6 | 32.6 | 41.3 |
| | being more influence | 65 | 37.8 | 37.8 | 79.1 |
| | being high influence | 36 | 20.9 | 20.9 | 100.0 |
| | Total | 172 | 100.0 | 100.0 | |

Most students (32.6%) perceived convenience and ease of use as having a moderate influence on their usage of electronic cash. A similar percentage of students (37.8%) indicated that convenience and ease of use had more influence on their usage. This shows that for many students, convenience and ease of use play a significant role in their decision to use electronic cash. Lastly, 20.9% of students felt that convenience and ease of use greatly influenced their usage.

The author's findings highlight the significance of convenience and ease of use in influencing students' usage of electronic cash as a payment method. The data indicates that students value electronic cash's convenience and seamless experience, aligning with their digital lifestyles and the desire for quick and hassle-free transactions. This emphasizes the need for electronic cash providers to prioritize user-friendly interfaces and seamless functionality to cater to students' preferences and encourage further adoption. The studies [17] and [18] have found that convenience and ease of use significantly influence consumers' adoption and intention to use mobile payment services.

The study conducted by Sasongko et al. [19] in Indonesia found that perceived usefulness strongly influences the intention to continue using electronic money applications [20]. This current research finding supports the studies by Anil et al. [21] and Michael and Wiese [22], which showed that perceived usefulness has a positive and

significant impact on the continued intention to use electronic money applications [23], [24].

Qu et al. [25], in a study conducted with consumers in pilot cities of e-cash in China, found that perceived e-cash ease of use leads to a higher positive attitude toward e-cash. They highlighted that attitude toward e-cash is an essential determinant of user intention for e-cash services [5]. Kim et al. [26] reported similar findings, indicating that perceived convenience positively impacts the intention to use e-cash.

Kim et al. [26] illustrated that perceived convenience is one of the most influential variables on the usage intention of payment-related FinTech services, emphasizing the importance of convenience in driving adoption [16], [26]. Podile and Rajesh [27] found that respondents' perception of convenience positively impacts their intention to adopt cashless transactions in India.

Gao and Waechter [28] identified a positive relationship between perceived convenience and usage intention for mobile payments in Australia. They highlighted the role of convenience in shaping users' intentions to adopt mobile payment solutions.

Pal et al. [29] demonstrated that perceived convenience positively impacts individuals' intention to use mobile payments. They highlighted the convenience of digital currencies, such as offline transaction capabilities, and the flexibility of digital wallets.

Widayat et al. [30] identified ease of use, efficient transaction time, faster payment, and the simplicity of the payment process as the main reasons customers adopt electronic money. They highlighted the significance of convenience in driving the adoption of e-cash.

### 4.3.2. Security and privacy

Table 15 provides insights into the factors affecting students' use of electronic cash, specifically security and privacy. Security and privacy are significant considerations for students when using electronic cash. A small percentage (3.5%) of students felt that security and privacy had less influence on their usage of electronic cash.

Table 15. Security and privacy

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | being no influence | | | | |
| | being less influence | 6 | 3.5 | 3.5 | 3.5 |
| | being moderate influence | 50 | 29.1 | 29.1 | 32.6 |
| | being more influence | 75 | 43.6 | 43.6 | 76.2 |
| | being high influence | 41 | 23.8 | 23.8 | 100.0 |
| | Total | 172 | 100.0 | 100.0 | |

A significant portion of students (29.1%) perceived security and privacy as having a moderate influence on their usage of electronic cash. A more significant percentage of students (43.6%) indicated that security and privacy had more influence on their usage. This shows that for most students, security and privacy play a significant role in their decision to use electronic cash. Lastly, 23.8% of students felt that security and privacy greatly influenced their usage. This suggests that for a notable portion of the sample, these factors substantially impact their decision to use electronic cash.

This study was supported by other authors, who indicated that security and privacy concerns are significant factors influencing consumer adoption and usage of digital payment systems. The authors [31] and [32] have confirmed that security and privacy concerns significantly influence consumers' intentions to use mobile payment systems. These findings align with current research, reinforcing the importance of electronic cash providers addressing security and privacy concerns to build trust and encourage adoption among students.

The impacts of security and privacy on electronic cash usage have been a significant area of investigation in recent studies. Shin [33] emphasized the importance of perceived security and trust in mobile wallets, highlighting their influence on electronic cash adoption. This finding suggests that users' perceptions of electronic cash systems' security measures and reliability can be crucial in shaping their willingness to adopt and use such systems.

Further supporting this finding, Khalilzadeh et al. [34] demonstrated substantial evidence of the effects of security and trust on customers' intentions to use mobile payment technology. Their research highlighted the crucial role of these factors in driving electronic cash adoption. Users need to feel secure and trust the electronic cash systems to be confident to adopt and continue using them. Khalilzadeh et al. [34] specifically focused on perceived security, primarily based on consumer perceptions of reliability and privacy. Users' confidence in the reliability of electronic cash systems is crucial for their willingness to engage in electronic transactions. Additionally, privacy concerns are paramount, as users expect their personal and financial information to be protected when using electronic cash services.

### 4.3.3. Technological appeal and innovation

Table 16 presents data on the perceived influence of technological appeal and innovation on students' usage of electronic cash. Technological appeal and innovation are important factors affecting students' usage of electronic cash. Only a tiny percentage (0.6%) of students indicated that technological appeal and innovation did not influence their usage of electronic cash.

Table 16. Technological appeal and innovation

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | being no influence | 1 | .6 | .6 | .6 |
| | being less influence | 11 | 6.4 | 6.4 | 7.0 |
| | being moderate influence | 68 | 39.5 | 39.5 | 46.5 |
| | being more influence | 63 | 36.6 | 36.6 | 83.1 |
| | being high influence | 29 | 16.9 | 16.9 | 100.0 |
| | Total | 172 | 100.0 | 100.0 | |

A slightly larger percentage (6.4%) of students felt that technological appeal and innovation had less influence on their usage. This implies that while these factors may have some impact, they are not the primary considerations for these students. Most students (39.5%) perceived technological appeal and innovation as having a moderate influence on their usage of electronic cash.

A significant percentage of students (36.6%) indicated that technological appeal and innovation had more influence on their usage. This shows that for most students, technological appeal and innovation play a significant role in their decision to use electronic cash. Lastly, 16.9% of students felt that technological appeal and innovation greatly influenced their usage. This suggests that for a notable portion of the sample, these factors substantially impact their decision to use electronic cash.

This research was supported by other studies that found that technological factors significantly shape consumers' adoption and usage of digital payment systems. Studies done with MBA students enrolled in a regional university in Texas [18] and [35] have found that personal innovation in information technology has not directly impacted the adoption of wireless mobile technology.

### 4.3.4. Familiarity with the payment method

Table 17 presents data on the perceived influence of familiarity with the payment method on students' usage of electronic cash. Familiarity with the payment method is an essential factor affecting students' usage of electronic cash.

Table 17. Familiarity with the payment method

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | being no influence | 3 | 1.7 | 1.7 | 1.7 |
| | being less influence | 4 | 2.3 | 2.3 | 4.1 |
| | being moderate influence | 63 | 36.6 | 36.6 | 40.7 |
| | being more influence | 71 | 41.3 | 41.3 | 82.0 |
| | being high influence | 31 | 18.0 | 18.0 | 100.0 |
| | Total | 172 | 100.0 | 100.0 | |

A small percentage (1.7%) of students indicated that familiarity with the payment method did not influence their usage of electronic cash. A slightly larger percentage (2.3%) of students felt that familiarity with the payment method had less influence on their usage.

Most students (36.6%) perceived familiarity with the payment method as having a moderate influence on their usage of electronic cash. A significant percentage of students (41.3%) indicated that familiarity with the payment method had more influence on their usage. This shows that for most students, familiarity with the payment method plays a significant role in their decision to use electronic cash. Lastly, 18.0% of students felt familiarity with the payment method greatly influenced their usage. This suggests that for a notable portion of the sample, familiarity with the payment method substantially impacts their decision to use electronic cash.

The other studies also support these findings, indicating that familiarity with a technology or payment method is significant in determining adoption and usage. Studies [36] [17] have found that familiarity positively influences consumers' intentions to use and adopt technology-based systems, including mobile payment systems.

### 4.3.5. Trust in the payment system/provider

Table 18 provides insights into the perceived influence of trust in the payment system or provider on students' usage of electronic cash. Trust in the payment system or provider is an essential factor affecting students' usage of electronic cash. Only a tiny percentage (0.6%) of students indicated that trust in the payment system or provider did not influence their usage of electronic cash.

Table 18. Trust in the payment system/provider

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | no influence | 1 | .6 | .6 | .6 |
| | less influence | 4 | 2.3 | 2.3 | 2.9 |
| | moderate influence | 64 | 37.2 | 37.2 | 40.1 |
| | more influence | 75 | 43.6 | 43.6 | 83.7 |
| | high influence | 28 | 16.3 | 16.3 | 100.0 |
| | Total | 172 | 100.0 | 100.0 | |

A slightly larger percentage (2.3%) of students felt that trust in the payment system or provider had less influence on their usage. Most students (37.2%) perceived trust in the payment system or provider as having a moderate influence on their usage of electronic cash.

A significant percentage of students (43.6%) indicated that trust in the payment system or provider had more influence on their usage. This shows that trust plays a significant role in most students' electronic cash use. Lastly, 16.3% of students felt trust in the payment system or provider greatly influenced their usage. This suggests that trust substantially impacts a notable portion of the sample's decision to use electronic cash.

This current research finding is aligned with other research that indicates that trust is a significant factor influencing consumer adoption and usage of digital payment systems. The studies [17] and [32] have found that trust significantly influences consumers' adoption and intention to use mobile payment systems. Similarly, a study [31] found that trust significantly influences consumers' acceptance and usage of technology-based services.

The research conducted in Indonesia has shed light on the significant influence of trust on the continued intention to use electronic money applications [20]. This finding underscores trust's crucial role in shaping users' attitudes and behaviours towards electronic money.

### 4.3.6. Perceived benefits

Table 19 shows the benefits of electronic cash compared to traditional payment methods. Students perceive several benefits of electronic cash over traditional payment methods, indicating a potential motivation for their usage. A small percentage (6.4%) of students indicated that the perceived benefits of electronic cash did not influence their usage.

A more significant percentage (15.1%) of students felt that the perceived benefits of electronic cash had less influence on their usage. This implies that while these benefits may have some impact, they are not the primary considerations for these students. Most

students (47.7%) perceived the benefits of electronic cash as having a moderate influence on their usage.

Table 19. Perceived benefits over traditional payment methods

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | being no influence | 11 | 6.4 | 6.4 | 6.4 |
| | being less influence | 26 | 15.1 | 15.1 | 21.5 |
| | being moderate influence | 82 | 47.7 | 47.7 | 69.2 |
| | being more influence | 38 | 22.1 | 22.1 | 91.3 |
| | being high influence | 15 | 8.7 | 8.7 | 100.0 |
| | Total | 172 | 100.0 | 100.0 | |

A significant percentage of students (22.1%) indicated that the perceived benefits of electronic cash had more influence on their usage. This shows that for most students, the perceived benefits play a significant role in their decision to use electronic cash. Lastly, 8.7% of students felt that the perceived benefits of electronic cash had a high influence on their usage. This suggests that for a notable portion of the sample, the perceived benefits substantially impact their decision to use electronic cash.

The current research findings were supported by several studies that indicated that perceived benefits are essential factors in consumer adoption and usage of digital payment systems. Studies [18] and [17] have found that perceived benefits significantly influence consumers' intentions to use and adopt mobile payment systems.

## 5. CONCLUSION

In conclusion, the research objectives of assessing respondents' knowledge and usage of electronic cash and identifying factors influencing students' usage have provided valuable insights into the understanding, adoption, and preferences related to electronic cash as a payment method.

The findings indicate that most respondents know electronic cash and understand how it works, highlighting a positive level of familiarity and understanding. However, some respondents still lack knowledge in this area, indicating the need for continued education and awareness campaigns to promote understanding and adoption among the general population.

The research also reveals that convenience and ease of use significantly influence students' usage of electronic cash. Security and privacy are also crucial for students, as they prioritize protecting their personal and financial information. Technological appeal and innovation play a crucial role in shaping students' preferences for electronic cash. Familiarity with the payment method also influences students' usage, suggesting that they are more likely to adopt electronic cash if they are already familiar with it.

Trust in the payment system and provider is another significant factor influencing students' usage of electronic cash. Students require confidence in the security, reliability, and transparency of the system and the provider. Perceived benefits, such as rewards and discounts, also significantly shape students' preferences for electronic cash. Students value the advantages offered by electronic cash over traditional payment methods.

It is recommended to focus on education and awareness campaigns to improve students' knowledge and understanding of electronic cash. Additionally, designing user-friendly interfaces, implementing robust security measures, and staying updated with technological trends will enhance the user experience and build student trust.

## ACKNOWLEDGEMENTS

We want to express our sincere gratitude to BBU for their invaluable assistance in coordinating the data collection process for this research. Their support and cooperation were instrumental in ensuring the successful completion of this study.

We would also like to extend our heartfelt appreciation to the MBA students who collected the data for this research. Their dedication, hard work, and commitment to the project were essential in gathering the necessary information and ensuring its accuracy and reliability.

Without the assistance of BBU and the MBA students, this research would not have been possible. We are truly grateful for their contributions and their valuable role in the successful execution of this study.

Thanks again to BBU and the MBA students for their invaluable support and collaboration.

## REFERENCES

[1] Statista, "Mobile payments worldwide - statistics & facts," 2020.

[2] National Bank of Cambodia, "The Next-Generation Mobile Payments and Banking. Bankong," *National Bank of Cambodia*, 2023.

[3] K. Sothear, "Cambodia's electronic payment amount among highest in world - Khmer Times," 2023. https://www.khmertimeskh.com/501319532/cambodias-electronic-payment-amount-among-highest-in-world/ (accessed Nov. 12, 2023).

[4] VISA, "Digital payments on the rise as Cambodians shift away from cash – Visa Study," *VISA*, 2022.

[5] B. Qu, L. Wei, and Y. Zhang, "Factors affecting consumer acceptance of electronic cash in China: an empirical study," *Financ. Innov.*, vol. 8, no. 1, 2022, doi: 10.1186/s40854-021-00312-7.

[6] F. D. Davis, "Perceived usefulness, perceived ease of use, and user acceptance of information technology," *MIS Q. Manag. Inf. Syst.*, vol. 13, no. 3, pp. 319–339, 1989, doi: 10.2307/249008.

[7] R. W. Rogers, "A Protection Motivation Theory of Fear Appeals and Attitude Change1," *J. Psychol.*, vol. 91, no. 1, pp. 93–114, 2010, doi: https://doi.org/10.1080/00223980.1975.9915803.

[8] M. Holland, *The change agent*. 2017.

[9] I. Ajzen, "The theory of planned behavior," *Organ. Behav. Hum. Decis. Process.*, vol. 50, no. 2, pp. 179–211, 1991, doi: 10.1016/0749-5978(91)90020-T.

[10] D. H. McKnight, V. Choudhury, and C. Kacmar, "Developing And Validating Trust Measure for E-Commerce: An Integrative Typology. Information System Research.," *Inf. Syst. Res.*, vol. 13, no. 3, pp. 334–359, 2002.

[11] R. J. Hill, M. Fishbein, and I. Ajzen, "Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research.," *Contemp. Sociol.*, vol. 6, no. 2, p. 244, 1977, doi: 10.2307/2065853.

[12] O. D. Apuke, "Quantitative Research Methods : A Synopsis Approach," *Kuwait Chapter Arab. J. Bus. Manag. Rev.*, vol. 6, no. 11, pp. 40–47, 2017, doi: 10.12816/0040336.

[13] W. Leal Filho and M. Kovaleva, "Research Methods," *Environ. Sci. Eng.*, vol. 5, no. 3, pp. 81–82, 2015, doi: 10.1007/978-3-319-10906-0_5.

[14] Y. K. Annie Becker, "Spreading Use of Digital Cash," 2008, doi: : 10.4018/978-1-59904-943-4.ch175.

[15] U. Chaudhery and J. Arora, "a Comparative Study on the Usage of E-Payment System in Various Age Groups," *Int. J. Adv. Res. Commer.*, vol. 03, no. 01, pp. 209–215, 2020.

[16] M. Merhi, K. Hone, and A. Tarhini, "A cross-cultural study of the intention to use mobile banking between Lebanese and British consumers: Extending UTAUT2 with security, privacy and trust," *Technol. Soc.*, vol. 59, no. July, p. 101151, 2019, doi: 10.1016/j.techsoc.2019.101151.

[17] F. Liébana-Cabanillas, J. Sánchez-Fernández, and F. Muñoz-Leiva, "Antecedents of the adoption of the new mobile payment systems: The moderating effect of age," *Comput. Human Behav.*, vol. 35, no. June, pp. 464–478, 2014, doi: 10.1016/j.chb.2014.03.022.

[18] J. Lu, J. E. Yao, and C. S. Yu, "Personal innovativeness, social influences and adoption of wireless Internet services via mobile technology," *J. Strateg. Inf. Syst.*, vol. 14, no. 3, pp. 245–268, 2005, doi: 10.1016/j.jsis.2005.07.003.

[19] D. T. Sasongko, P. W. Handayani, and R. Satria, "Analysis of factors affecting continuance use intention of the electronic money application in Indonesia," *Procedia Comput. Sci.*, vol. 197, pp. 42–50, 2022, doi: 10.1016/j.procs.2021.12.116.

[20] D. T. Sasongko, P. W. Handayani, and R. Satria, "Analysis of factors affecting continuance use intention of the electronic money application in Indonesia," *Procedia Comput. Sci.*, vol. 197, no. 2021, pp. 42–50, 2021, doi: 10.1016/j.procs.2021.12.116.

[21] A. Ari, S. Chen, and L. Ratnovski, "The Dynamics of Non-Performing Loans During Banking Crises: A New Database," *SSRN Electron. J.*, 2020, doi: 10.2139/ssrn.3580827.

[22] M. Humbani and M. Wiese, "An integrated framework for the adoption and continuance intention to use mobile payment apps," *Int. J. Bank Mark.*, vol. 37, no. 2, pp. 646–664, Apr. 2019, doi: 10.1108/IJBM-03-2018-0072.

[23] A. Gupta, A. Yousaf, and A. Mishra, "How pre-adoption expectancies shape post-adoption continuance intentions: An extended expectation-confirmation model," *Int. J. Inf. Manage.*, vol. 52, no. April 2019, p. 102094, 2020, doi: 10.1016/j.ijinfomgt.2020.102094.

[24] M. Humbani and M. Wiese, "An integrated framework for the adoption and continuance intention to use mobile payment apps," *Int. J. Bank Mark.*, vol. 37, no. 2, pp. 646–664, 2019, doi: 10.1108/IJBM-03-2018-0072.

[25] B. Qu, L. Wei, and Y. Zhang, "Factors affecting consumer acceptance of electronic cash in China: an empirical study," *Financ. Innov.*, vol. 8, no. 1, p. 9, Dec. 2022, doi: 10.1186/s40854-021-00312-7.

[26] Y. Kim, Y.-J. Park, J. Choi, and J. Yeon, "An Empirical Study on the Adoption of 'Fintech' Service: Focused on Mobile Payment Services," no. December 2015, pp. 136–140, 2015, doi: 10.14257/astl.2015.114.26.

[27] V. Podile and P. Rajesh, "Public Perception on Cashless Transactions in India," *Asian J. Res. Bank. Financ.*, vol. 7, no. 7, p. 63, 2017, doi: 10.5958/2249-7323.2017.00069.4.

[28] L. Gao and K. A. Waechter, "Examining the role of initial trust in user adoption of mobile payment services: an empirical investigation," *Inf. Syst. Front.*, vol. 19, no. 3, pp. 525–548, Jun. 2017, doi: 10.1007/s10796-015-9611-0.

[29] A. Pal, T. Herath, R. De', and H. R. Rao, "Is the Convenience Worth the Risk? An Investigation of Mobile Payment Usage," *Inf. Syst. Front.*, vol. 23, no. 4, pp. 941–961, 2021, doi: 10.1007/s10796-020-10070-z.

[30] W. Widayat, I. Masudin, and N. R. Satiti, "E-Money payment: Customers' adopting factors and the implication for open innovation," *J. Open Innov. Technol. Mark. Complex.*, vol. 6, no. 3, 2020, doi: 10.3390/JOITMC6030057.

[31] S. . A. Maruping , L . M ., Bala , H ., Venkatesh , V ., and Brown, . "' Going Beyond Intention : Integrating Behavioral Expectation into the Unified Theory of Acceptance and Use of Technology ,' Journal of the Association for Information Science and ** Final published version will be subject to copyediting and other edito," pp. 623–637, 2017.

[32] M. Janssen *et al.*, "Open and Big Data Management and Innovation," *Lect. Notes Comput. Sci.*, no. November, 2015, doi: 10.1007/978-3-319-25013-7.

[33] D. H. Shin, "Towards an understanding of the consumer acceptance of mobile wallet," *Comput. Human Behav.*, vol. 25, no. 6, pp. 1343–1354, 2009, doi: 10.1016/j.chb.2009.06.001.

[34] J. Khalilzadeh, A. B. Ozturk, and A. Bilgihan, "Security-related factors in extended UTAUT model for NFC based mobile payment in the restaurant industry," *Comput. Human Behav.*, vol. 70, pp. 460–474, 2017, doi: 10.1016/j.chb.2017.01.001.

[35] V. Podile and P. Rajesh, "Public Perception on Cashless Transactions in India," *Asian J. Res. Bank. Financ.*, vol. 7, no. 7, p. 63, 2017, doi: 10.5958/2249-7323.2017.00069.4.

[36] Q. L. Chen and Z. H. Zhou, "Unusual formations of superoxo heptaoxomolybdates from peroxo molybdates," *Inorg. Chem. Commun.*, vol. 67, no. 3, pp. 95–98, 2016, doi: 10.1016/j.inoche.2016.03.015.