Business Students' Utilization of Mobile Money Applications

Kimberly Mae M. Panganiban[1], Jay-Ann P. Hiponia[2], Xyrah L. Simon[3], Paul Cedric M. Pacaul[4], Dr. Rey Fernan G. Refozar[5]

College of Business Administration
Lyceum of the Philippines University Batangas

kimberlymaepanganiban@lpubatangas.edu.ph[1],
jayannhiponia@lpubatangas.edu.ph [2], xyrahsimon@lpubatangas.edu.ph [3],
paulcedricpacaul@lpubatangas.edu.ph[4], rgrefozaar@lpubatangas.edu.ph [5]

Abstract: *Mobile money is a technology that allows users to access financial services easier and more conveniently using only a mobile phone and an internet connection. With the growth of Filipinos using smartphones, Bangko Sentral ng Pilipinas saw mobile money as the answer to the Philippines' progress toward financial inclusion. Hence, the researchers conducted this study to analyze the factors influencing mobile money apps utilization among business students. Specifically, it aimed to present the demographic profile of the students; to determine the factors affecting mobile money apps usage as to convenience, social influence, security, speed, and internet affiliation; to examine significant differences in the responses when grouped according to profile variables; and, to propose an action plan. Online survey questionnaires were distributed to a sample size of 285 College of Business Administration (CBA) students, selected at random using stratified sampling. The data gathered revealed that the students have a high agreement on speed and convenience as factors affecting the utilization of mobile money, while there was a general agreement on factors like social influence, security, and internet affiliation. Also, there were significant differences in the responses when grouped according to profile variables. Recommendations, as well as a proposed action plan, were given for the improvement of the utilization of mobile money.*

Keywords – Business Students, E-Money, Influencing Factors, Mobile Money, Utilization

INTRODUCTION

Bangko Sentral ng Pilipinas has taken steps in solving the problem regarding financial inclusion, one of these is by encouraging the success of mobile money in the country. Mobile money has been perceived as one of the means for Filipinos to achieve financial inclusion. With continuous improvements, mobile money apps now offer vast financial services. Users can now use the app for various services such as investing, insurance, saving, or accessing credit other than transferring money or conducting online payments. Moreover, mobile money is helpful in situations like the COVID-19 pandemic, where face-to-face interactions are limited. With these, it is not far-fetch to say that mobile money will help solve financial exclusion; it enables an individual to access financial services that would otherwise be unavailable to him through a single mobile money app.

However, the adoption of financial technology in the Philippines is growing, although slowly. Schellhase and Garcia [1] stated that three factors could push through the digital transformation in the Philippines: The country's young and increasingly urban demographics, the economy's strong recent and projected performance,

and the growing popularity of mobile devices with internet access. An investigative study further found that the volume of digital payments increased in 2018 thus, in the same year, more Filipinos own an active mobile money account, compared to 2017. Growth was observed that resulted from a push by GCash and PayMaya, the leading providers of mobile money services [2].

Numerous studies have found that certain factors affect the willingness of consumers to use mobile money applications. Baganzi and Lau [3] and Koloseni and Mandari [4] stated that perceived security is an essential factor, with the latter even stating further that it has a positive relationship with convenience. Similarly, Chaves et al. [5] also found that convenience and security along with other factors affect the utilization of mobile money. For Chern et al. [6], factors such as speed, social influence, and convenience are relevant, while security has no significance. While Massally et al. [2] strongly believed that the poor internet connection in the Philippines negatively affects the experience of consumers.

Indeed, people have entered an era in which tools and technology play an increasingly important role in our daily lives. The researchers pushed this study to further explore other cashless systems via mobile phones. With the ongoing COVID-19 pandemic, where cashless transactions are favored, the researchers discovered that mobile money apps benefitted the students as it aids financial access at any given time. Researchers believed that this would make a significant contribution to existing studies on mobile money services as well as the improvement of mobile money apps. At an early age, this may serve as the students' reference or guide in understanding the cycle of how financial technology works as to the utilization of mobile money. As business students, this could help familiarize themselves with valuable skills beneficial to the corporate industry and the impact these skills can have on their personal growth and society.

OBJECTIVE OF THE STUDY

This study analyzed the factors influencing the mobile money apps utilization among the College of Business Administration (CBA) students in Lyceum of the Philippines University – Batangas Campus.

More specifically, it presented the profile of the students in terms of sex, year level, program, average annual family income, mobile money apps used, sources of information, and transactions using mobile money; determined the factors affecting the mobile money apps utilization as to convenience, social influence, security, speed, and internet affiliation; examined significant differences in the responses when grouped according to profile variable; and, proposed an action plan to improve the utilization of mobile money apps of the students in Batangas City.

METHODS

Research Design

For this study, a quantitative method was used. The quantitative method is a method of objective measurement that involves a statistical, mathematical, or numerical examination of data acquired or the use of computing techniques to manipulate pre-existing statistical data [7]. Furthermore, the quantitative method was applied in analyzing to what extent do the factors (convenience, social influence, security, speed, and internet affiliation) affect the mobile money apps utilization among the College of Business Administration students in LPU - Batangas.

Participants of the Study

The sample of the study consisted of 285 CBA students with an effect size of 0.26, a power probability of 0.95, and an alpha level of 0.05 using G*Power 3.1.9. The sample was selected at random using stratified sampling. Stratified sampling is a method of probability sampling and a type of random sampling where the population is divided into two or more groups (strata) based on one or more common characteristics [8]. This technique was used to highlight a specific subgroup within the population. Due to the accuracy involved, the required sample size was lesser and helped the researchers save time and effort.

Instrument

A modified and adapted survey questionnaire containing study-related questions was used as the key instrument. When data have been quantified, it was used to compare and contrast other studies and may be used to assess change. Likert-type or frequency scales were used to measure attitudes, opinions, or perceptions. These ordinal scales allow individuals to express how much the respondents agree or disagree with a particular statement. Thus, this method lets the readers uncover degrees of opinion that could make a real difference in understanding respondents' feedback.

The survey questionnaire was divided into two main parts. For Part I, the researchers made use of Questionnaire Design for Mobile Money FSP Multi-Country Study retrieved from World Bank Organization. Also, the researchers modified an instrument from the study of Moving into Cashless

Society: Factors Affecting Adoption of E-Wallet by Chern et al., [6] used in Part 2.

In Part I, the questions were mainly linked to demographic information of the respondents which includes gender, year level, program, average annual family income, transactions using mobile money, sources of information, and reasons why the respondents use mobile money. Meanwhile, Part 2 determined the factors affecting mobile money apps utilization in terms of convenience, social influence, security, speed, and internet affiliation.

Procedure

The researchers did the data gathering into four phases. The first phase included the approval of the Dean of the CBA Department for permission to conduct the survey. After the request was approved, the researchers proceeded with data collection using a survey questionnaire. The questionnaires were distributed to the respondents through online and social media platforms to avoid face-to-face human interactions due to the ongoing pandemic. A consent form was included with the survey questionnaires to ensure the respondents' privacy and confidentiality of data. A total of 285 questionnaires were collected, which took four weeks to complete. Third, the content and data analysis wherein various statistical tools were used to tabulate and evaluate all the data collected. Lastly, the researchers interpreted and analyzed the data gathered. The researchers summarized the necessary data and utilized them to answer the key objectives of the study. In addition, the answers obtained were used to form conclusions and recommendations.

Ethical Consideration

The voluntary participation of respondents served as the consent for their participation in the study. Following the Data Privacy Act that was written at the beginning of the questionnaire, none of the respondents were required or forced to provide personal information as it is their right to secure their data. Privacy and anonymity of respondents were of utmost importance. The information gathered was used for research purposes alone and would not be disclosed to any other party.

Data Analysis

The researchers used statistical tools to analyze and interpret the gathered data. The information and response of the respondents were processed and subjected to the following statistical treatment:

Frequency Count and Ranking. Items are classified according to a particular plan and an arithmetical count is made of the number of items within the text which belong to each classification or type. This method was used to present the demographic profile of the respondents in terms of gender, year level, program, average annual family income, mobile money apps used, transactions using mobile money, sources of information, and reasons for using mobile money.

Weighted Mean. This method was used to determine the effect of the factors affecting mobile money apps utilization in terms of convenience, social influence, security, speed, and internet affiliation.

Independent Sample T-Test and Analysis of Variance. These methods compare the means between two unrelated groups on the same continuous, dependent variable. These were utilized to test significant differences among the demographic profile of the respondents, their awareness, and factors affecting the utilization of mobile money apps as to convenience, social influence, security, speed, and internet affiliation.

RESULTS AND DISCUSSION

Table 1 shows the factor influencing the use of mobile money apps in terms of convenience. The composite mean is 3.63 with a verbal interpretation of Strongly Agree which signifies that the respondents have the highest level of agreement in terms of convenience. When compared to traditional payment methods, mobile phone services offer agility, accessibility, and availability, as well as time and location flexibility. Apart from providing convenience in terms of space and time, mobile phone service also eliminates the inconvenient nature of payment devices such as desktops and laptops by allowing customers to conduct transactions using their phones. Furthermore, mobile payment systems can facilitate small transactions and minimize the annoyance experienced by consumers such as students who may conduct transactions involving small amounts of money. Convenience reflects the comfort of accessing a website or an app to transact online [9]. It has been proven that convenience has a significant impact on consumers' willingness to transact. Therefore, this signifies the ease of using technology to access the apps to purchase or do transactions online.

The item, "mobile money apps are easy to use," garnered the highest weighted mean of 3.76, interpreted as Strongly Agree. Respondents, as mobile money apps users, can pay bills or transfer money to another person

_____

just by downloading the mobile money application on their mobile phones and following the steps to create their account. They simply select their chosen service from their apps' mobile money menu. It is as simple as sending a text message. Indeed, the easiness to use is a fundamental factor in user attitude and behavior intention to use and adopt the technology. Studies have proven that it has a large effect on consumers' willingness to transact. Therefore, this indicates the simplicity of technology to access apps for consumers to make purchases or conduct transactions online. In other words, convenience while using the apps contributes to becoming the payment method of the respondents [10].

Table 1. *Convenience as a Factor Affecting the Mobile Money Apps Utilization*

Indicators	WM	VI	Rank
1.Mobile money apps are easy to use.	3.76	Strongly Agree	1
2.Ensures access to accounts when abroad.	3.40	Agree	5
3.Convenient to use while on travel.	3.66	Strongly Agree	3
4.I would find a mobile payment procedure to be flexible to interact with.	3.62	Strongly Agree	4
5.Using mobile money apps would make me perform my financial transactions quickly.	3.71	Strongly Agree	2
Composite Mean	**3.63**	**Strongly Agree**	

Legend:3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

Furthermore, performance expectation refers to the extent to which using mobile money apps assists consumers in performing activities. Effort expectancy and performance expectancy have a positive link. Baganzi and Lau [3] emphasized that when mobile money users believe the app is simple to use, their expectations for its performance rise.

While the second-highest mean of 3.71 interpreted as Strongly Agree is item 5; "using mobile money apps would perform financial transactions more quickly." For faster transactions, society would benefit from using a mobile money app. Users would immediately receive, send, and spend money. It saves time spent traveling to send/receive money or waiting in long lines to send/receive money or pay bills. Consumers such as students are greatly relieved because of this. According to Rosenberg [11], a payment app functions similarly to a digital wallet in that users do not need to carry their wallets with them. It's a fast and easy way to send and receive money, as well as pay for items online and in stores. Cashless payments can be advantageous to consumers because they are perceived as quick and convenient, assuming that no issues with the methods are found, such as queues. Consumers are also interested in the contactless payment technique since it improves the shopping experience. Favored factors include faster and more cost-effective service [12].

Last is item number 2, which ensures access to account when abroad has the lowest weighted mean of 3.40, interpreted as Agree. Mobile money apps have significantly changed the financial world by making it more diverse. It guarantees account access when traveling abroad as long as one keeps an active Philippines mobile number (any PH network). If one is currently traveling abroad, he/she has to ensure that his/her SIM/mobile phone has roaming enabled. Additionally, one of the most significant advantages of mobile money apps is their ease of use. Almost any financial transaction can be completed using mobile money apps. So, if users are in a rush and need to transfer money from one account to another, they do not have to go to a branch or wait until they get home as accounts can be accessed 24/7 [13]. This allows students to keep a watch on their finances, as they can monitor their spending regularly. It also allows them to learn about any unauthorized transactions immediately and discuss them [14].

Table 2 illustrates the factors influencing the use of mobile money apps in terms of social influence. The composite mean is 3.14 with a verbal interpretation of Agree which signifies that the respondents have an average level of agreement in terms of social influence. While increasing the rate of adoption of consumer-focused digital services, especially mobile-based services, social influence plays a key role. If users' confidence in using new technology is low, social groups might help them develop a perceived support structure for trying them out. Moreover, the researchers believed that if there was support from social groups, even if one started using such a service, it would have an impact on the experience connected with such usage. The better the service user experience, the more support there was when people were using it.

According to the study of Yang et al. [10], social

_____

influence has been significantly constructed to assess consumers' desire to use mobile payment. The potential influencers for consumers to use are family members, friends, colleagues, and neighbors. Hence, social influence denotes the effect of environmental factors that encourage consumers to purchase or sell new products. Meanwhile, Chaouali et al. [15] reported that social influence affected the mindset of every individual on the use of new innovative products through technology services.

Table 2. *Social Influence as a Factor Affecting the Mobile Money Apps Utilization*

Indicators	WM	VI	Rank
1. People who influence my behavior think that I should use mobile money apps.	3.31	Agree	2
2. My friends think that I should use mobile money apps.	3.34	Agree	1
3. Using mobile money apps is considered a status symbol among my friends.	2.79	Agree	5
4. People who are important to me expect me to use mobile payment technology.	3.01	Agree	4
5. People who are important to me are likely to recommend using mobile payment technology.	3.26	Agree	3
Composite Mean	**3.14**	**Agree**	

Legend:3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

In this table, item number 2, "my friends think that I should use mobile money apps," ranked first with a weighted mean of 3.34 interpreted as Agree. The respondents engage in a lot of campus activities and even outside the university premises. They became exposed to plenty of people and organizations. As the days pass by, they are meeting strangers that turned into friends. As their bonds strengthen, they are continuously influenced by the opinions of others. The subjective influence of contributing variables such as friends' views on mobile money users' actions refers to social influence. Previous researchers have discovered some information on why friends have such an effect on people. Studies show that users are influenced by social relationships in a variety of ways. It can directly influence user decisions, which can be viewed as the short-term influence of social relationships. Users care about the opinions of their trusted friends [16].

Secondly, Item number 1, "people who influence my behavior think that I should use mobile money apps," garnered a weighted mean of 3.31 interpreted as Agree. The potential influencers for respondents are their family members, friends, colleagues, and neighbors. Social influence denotes the effect of the environment they relate to that encourages them to purchase new products and adapt to mobile money services. Any person that the respondents look up to wants them to utilize mobile money apps. Influencers believe that respondents can benefit from the utilization of a mobile money app as there are greater returns from using the technology. Mobile phones are typically used in public or social settings where users can observe the behavior of others. Social influence affects individuals' behaviors in the adoption of mobile phone services. Likewise, in a study by Koenig-Lewis et al. [17], social influence is firmly rooted in models of technology acceptance and, more broadly, consumer behavior models. Because the adopter's social environment is important in the m-payment process of adoption, promoting m-payment services through word of mouth from opinion leaders is critical for the quicker dissemination of these technologies to young people. Offline and online encouragement of word of mouth will aid in persuading young consumers with a high level of social influence.

Lastly, Item 3, "using mobile money apps is considered a status symbol among my friends," ranked the lowest with a weighted mean of 2.79 interpreted as Agree. The advancement of electronic services such as mobile money apps makes consumers have a status symbol in the community. Using mobile money services slowly becomes a normal part of our lives when we need to perform financial transactions because it is of high value. Respondents are likely to join the trend to feel a sense of belongingness among their circles. Concerning these arguments, Gharaibh [18] recognized that the adoption of mobile money services is influenced by social factors. Past studies have identified social influence as a significant factor in consumer behavior, and not a single person in this world can completely avoid the influence of others. The reason could be people change their ideas and actions to meet the standards of a social group because they perceive the need to act in a certain way to meet social pressure [19].

_____

Table 3. *Security as a Factor Affecting the Mobile Money Apps Utilization*

Indicators	WM	VI	Rank
1. Satisfied with the security system.	3.41	Agree	4
2. Mobile money apps keep customers' information private and confidential.	3.47	Agree	2
3. Customers' financial information is protected.	3.49	Agree	1
4. It keeps my payment credentials secure.	3.46	Agree	3
5. Mobile money apps ensure protection against the risk of fraud and financial loss.	3.38	Agree	5
Composite Mean	**3.44**	**Agree**	

Legend:3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

Table 3 shows the security and privacy concerns of the respondents regarding the mobile money apps. This indicates that with the corresponding indicators, security's composite mean of 3.44 justifies that the respondents agree that they felt secure when doing mobile money apps transactions. Security is the programs and procedures that are used to authenticate information sources and to ensure that there is privacy and integrity to avoid issues regarding data and networks [20]. Customers, as well as banks and mobile money apps, value security. When utilizing mobile applications, customers want to know that their data, and most importantly, their money, is secure. Mobile security concerns are equally significant for banks and mobile money apps. Even if a customer's error causes data leakage or money loss, a bank's reputation might be damaged. According to Traynor and Butler [21], these could be exposed to many vulnerabilities. The researchers observed that many applications created their own communications protocols that could allow an attacker to capture account information, impersonate users and steal money with ease. Some of the weaknesses would require an attacker to be physically near their target. Crucial to the success of these systems is genuine cooperation between the technology, policy, and NGO communities.

The item, "customers' financial information is protected," garnered the highest weighted mean of 3.49 interpreted as Agree. When using mobile money apps, users want to know that their data, and most importantly, their money, are safe. Mobile money applications assist users to check account balances, transfer money, or pay bills. These applications are becoming more sophisticated in terms of services and features, allowing users to transact more quickly and efficiently. These users value the quick and informal transactions that these applications provide. Since mobile money apps are directly linked to users' finances, they become enticing targets for cybercriminals. With that, security should be

a top priority. A study conducted by Koloseni and Mandari [4] in Tanzania stated that most mobile phone payment service users were so concerned about whether the mode of payment was secure. The security risk perceived in this study was the uncertainty of trust. Customers' trust had a significant positive relationship when compared with the perceived ease of use. The findings implied that most consumers would put much of their concern on matters of reliability, accuracy, privacy, safety, and to a certain extent of physical contact.

While, Item number 2, "mobile money apps keep customers' information private and confidential," ranked second with a weighted mean of 3.47 interpreted as Agree. The respondents agreed that mobile money apps are protecting their personal information. Respondents feel that mobile money apps are safe and worry-free. Utilizing mobile money apps has become a new norm and is favored by users because it's safer than the traditional methods. Ghana approved a comprehensive data protection bill in February 2012, establishing users' rights to data access, control, and consent to use. In addition, the bill establishes a Data Protection Commission to enforce and regulate the new law. Furthermore, in Kenya, a draft bill about electronic retail requires user consent for any information sharing. Both are constructive measures that demonstrate the two countries' recognition of the need to protect users and foster trust to expand the efficiency of new technologies such as mobile money.

Moreover, item 5, "mobile money apps ensure protection against the risk of fraud and financial loss," has the lowest weighted mean of 3.38, interpreted as Agree. Users will not adopt mobile money apps unless it is safe and secure. They are concerned about their privacy and are worried that the advent of mobile money technology will leave them more vulnerable than ever to identity theft and invasive data collection. The respondents have highly agreed when it comes to

_____

customers' private and financial information being protected and secured but, a lower level of agreement on security systems and protection against fraud and financial loss. Baganzi and Lau [3] said that it is necessary to have structural assurance – mobile money has the legal structures, technological structures, and efficient security measures– to guarantee that mobile money transactions are always completed successfully which would reduce the perceived risk in using mobile money and positively help in consumers having more intention to adopt mobile money, therefore making mobile money successful.

Table 4. *Speed as a Factor Affecting the Mobile Money Apps Utilization*

Indicators	WM	Verbal Interpretation	Rank
1. I believe that using mobile money will improve the speed of transactions.	3.73	Strongly Agree	1
2. Transactions will be faster compared to traditional payment methods.	3.70	Strongly Agree	2.5
3. It will save my time in using the mobile money payment system.	3.70	Strongly Agree	2.5
4. Using mobile money can get a quick response.	3.67	Strongly Agree	4
5. No waiting time/delay.	3.45	Agree	5
Composite Mean	**3.65**	**Strongly Agree**	

Legend:3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

Table 4 depicts indicators of speed when using mobile money apps. The composite mean of 3.65 signifies a verbal interpretation of Strongly Agree that imposes a great advantage of speed when using a mobile money service. Mobile money apps decrease or eliminate the need for users to carry payment methods like cash and credit cards. Adding payments to a device that is already in use makes the procedure easier and more convenient than ever before. Mobile money services make the consumers digitally empowered, reduce intermediation and thereby make society cashless and paperless. It plays a vital role as in this digital world, the users have their phones and in just a few clicks, users can easily transfer money without the constraints of geographical distance between payer and payee, access to paper bills, and time (Grover et al., [9]). As there is speed in transactions, Kar [22] stated that higher system responsiveness means less time and effort for the user. This will likely improve the user's satisfaction with the service encounter. He further added that the responsiveness of the customer's service is also essential especially when there are technical issues with the application. Thus, quick human intervention at these times results in positive usage satisfaction.

The respondents strongly agreed with the first indicator that using mobile money apps will improve the speed of transactions having a weighted mean of 3.73. Users can utilize their spare time to meet their objectives and are more likely to be satisfied with the service encounter. The speed of the mobile money apps is also recognized if an electronic transaction cannot fulfill intended results and requires human involvement due to technical or process-related problems. Some delays

cannot be predicted while using mobile money apps. This is due to crowded transactions hence, there will be a waiting time or delay in getting a response. Users would always want a fast and less hassle way of transacting; the faster the transaction is done, the lesser the time and effort for the user, which leads to the users' satisfaction. The respondents believed that using mobile money will improve the speed of transactions and will save their time, this is because unlike the traditional payment method there is no need to fall in line and wait until it's their turn or until their number is called. According to Kar [22], users believe that doing transactions electronically is faster than other traditional payment methods.

Item number 2, transactions will be faster compared to traditional payment methods, ranked second with a weighted mean of 3.70 interpreted as Strongly Agree. Item number 3, "will save my time for using the mobile money payment system," tied and got the same weighted mean. Using mobile money is believed to provide faster service compared to traditional payment methods since it can be done with just one click in your mobile phone app. Unlike the traditional way of paying where the cashier needs to do multiple small activities before the transaction can be completed, mobile money apps only need the user to input the important information and click one button to complete the transaction. According to the findings of Akinyemi and Mushunje [23], mobile money is perceived to be faster and easier along with other factors (safe, trustworthy, convenient, cost-effective, and easy) compared to other methods of payment and this perception highly affects the user's adoption of mobile money. Additionally, Haonga [24]

_____

concluded that using mobile financial transactions provided SMEs to reduce operating costs as well as increased the ability of SMEs to expand their networks, thus increasing their performance.

Item 5, "no waiting time/delay," has the lowest weighted mean of 3.45 interpreted as Agree. The delay and waiting time experienced by the users can be associated either with a poor internet connection or a technical issue within the app. Nonetheless, it can highly affect the intention to use the users and potential users. This is supported by Otieno et al. [25], where the researchers found that users who experienced delays were irritated due to being forced to wait for a long time. Some users who experienced delays with the mobile money app went back to using cash-based transactions. For them, it is preferable especially, in times of emergency, where money is required more urgently. Thus, they concluded that the delays experienced during transactions can lead to the users' and potential users' subjective views of the mobile money app. Therefore, this demotivates them and negatively influenced their behavioral intention to use.

Table 5. *Internet Affiliation as a Factor Affecting the Mobile Money Apps Utilization*

	Indicators	WM	VI	Rank
1.	The wireless networks are safe.	3.33	Agree	2
2.	There are network communication problems when using mobile money apps.	3.27	Agree	3.5
3.	Immediate response is given in case of network failure.	3.27	Agree	3.5
4.	The transactions are usually completed successfully.	3.54	Strongly Agree	1
5.	Transactions are often completed even with a poor internet connection.	2.96	Agree	5
	Composite Mean	**3.27**	**Agree**	

Legend:3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 = Strongly Disagree

Table 5 presents the internet affiliation factor in the utilization of mobile money apps. The composite mean of 3.27 with a verbal interpretation of Agree signifies that the respondents have an average level of agreement. The fourth item, "transactions are usually completed successfully," has the highest weighted mean score of 3.54 with a verbal interpretation of Strongly Agree. Internet connection is needed for mobile money apps to function and deliver their services. It is why the availability or the strength of the connection of the internet in the area where the individual is located can affect their adoption of mobile money. According to the findings of Llanto et al. [26], users of mobile money are concerned about the weakness and intermittent mobile network signal because of poor internet infrastructure. Though there are improvements, the internet infrastructure in the Philippines is still lacking when compared to the number of internet users; with only 16,500 base stations all over the country which means there are 1.5 4G sites for every 10,000 people, and these results are 75% lower than the needed capacity [2].

On the other hand, "transactions are usually completed successfully," garnered the highest weighted mean of 3.54 interpreted as Strongly Agree, ranking first out of all the items. One major concern when it comes to the internet is its speed. The completion of one transaction is related to the speed of the internet and problems arise when the connection is slow. Because of this, a lot of mobile money users and potential users are often discouraged to use mobile money apps. But the internet connectivity in the Philippines is gradually improving. According to DICT [27], as of March 2021, the internet speed has increased compared to past performances with an average download speed of 44.25 Mbps (fixed broadband) and 25.43 Mbps (mobile internet). This is still low compared to the global average of 98.67 (fixed broadband) and 48.40 (mobile internet) however, we can see a steady improvement. Hence, the respondents strongly agree that transactions are often completed. With this, the usage of mobile money is likely to increase. Transacting will be faster, with fewer issues with the connection. Especially now that the pandemic increased the internet usage of Filipinos, more people are doing transactions online. BSP [28] has stated that the pandemic has affected the drastic increase in e-commerce transactions and even before the pandemic, e-money account penetration showed a remarkable growth compared to all types of accounts in 2019, increasing to 8% from 1.3% in 2017.

It is followed by Item 1, "the wireless networks are safe" which ranked second with a weighted mean of 3.33 interpreted as Agree. Another major concern when it comes to the internet is its safety. Since there has been a lot of news about information leaks regarding digital financial services, plenty of potential users and even current users are uncertain about mobile money apps.

This is supported by Baganzi and Lau [3] who found that the perceived risk of mobile money users, the perception that they may incur financial losses and loss of personal information, can negatively impact their usage of mobile money apps. However, the respondents agreed that the wireless connection is safe. With technology being more prominent with the new generation, called the digital generation, it is likely that the respondents, who belong to this generation, will therefore have a sense of trust in the technology. Davies [29] has attributed mobile money usage to age and generation. Compared to the older generation who resisted the use of cashless payment, the younger generation is likely to embrace a cashless society. This is due to the younger generation having a lot of know-how concerning the internet, debit cards, and other cashless systems via mobile phones.

Last is Item 5, "transactions are often completed even with a poor internet connection," which has the lowest weighted mean of 2.96 interpreted as Agree. Internet connection has always been an issue in the Philippines. This is because the country is still lacking when comes to infrastructure. Though the Philippines has shown remarkable growth in internet connectivity seen from the report of Speedtest Global Index, it still has a long way to go. As of March 2021, the Philippines ranks 86 and 81 in mobile and fixed broadband [30]. This shows that more improvements are needed. Even though the respondents strongly agree that transactions are usually completed, they only have an average level of agreement regarding the poor connection. Persisting problems with an internet connection can affect the continued usage of mobile money.

Table 7. *Proposed Action Plan to Improve the Utilization of Mobile Money Apps of the Students in Batangas City*

Key Result Areas (KRAs)	Strategies/ Activities	Persons Involved
CONVENIENCE *Ensures access to accounts when abroad.*	• Do an advertising strategy that informs users about using mobile money when abroad.	Mobile Money Operators
	• Partner with more global stores to offer services in more countries worldwide.	Mobile Money Operators
SOCIAL INFLUENCE *Using mobile money apps is considered a status symbol among my friends.*	• Employ more marketing tactics that use social influence marketing and at the same time promote the benefits of using mobile money services to urge consumers to become users.	Mobile Money Operators
	• Encourage the use of mobile money by developing its use in daily transactions (payment in transportation, food, etc.) of consumers.	Mobile Money Operators, BSP
SECURITY *Mobile money apps ensure protection against the risk of fraud and financial loss.*	• Have a strong customer authentication procedure when accessing the mobile money app.	Mobile Money Operators
	• Engage in enhancing customer understanding to provide information on security issues related to the use of mobile money apps.	Mobile Money Operators
	• Strictly monitor mobile money providers to make sure that they are properly complying with the Data Privacy Act.	BSP (Regulating Agency)
SPEED *No waiting time/delay.*	• One-touch access to customer support on the homepage of the app to easily contact customer service when there are issues with the app.	Mobile Money Operators
	• Have a lightweight version of the mobile money app so users can have the option to choose between the lightweight version of the app (faster performance in poor connection but fewer features) or the normal version (full features).	Mobile Money Operators
INTERNET AFFILIATION *Transactions are often completed even with a poor internet connection.*	• Allow users to access the mobile money app and its services even with no internet connection.	Mobile Money Operators
	• Develop the internet infrastructures more, especially in rural areas where most don't have a proper internet connection.	Government

_____

CONCLUSION AND RECOMMENDATION

Based on the findings of study, the following conclusions were drawn. Most of the respondents are female, 3rd-year BSBA students having an average annual income of PHP 40,000 and below, favored GCash, learned about the services from friends, send/received money from family members, friends, workmates, or other acquaintances for regular support/allowance as transaction/reason for using mobile money apps. The respondents signify a high level of agreement on speed and convenience, while they generally agreed on social influence, security, and internet affiliation as factors affecting the utilization of mobile money apps. It was observed that there were significant differences in responses on factors affecting the utilization of mobile money apps (convenience, social influence, security, speed, and internet affiliation) when grouped according to profile. Males have a greater assessment of social influence and internet affiliation. BSA students have a greater assessment of security while BSCA students are of internet affiliation. Students whose average annual family income was 250,000 – 499,999 have a greater assessment of convenience and speed. On the other hand, those students whose average annual family income was 60,000 to 99,999 are greatly affected by social influence. Also, it was observed that students who deposit money/withdraw money have a greater assessment of convenience, social influence, security, and internet affiliation. A proposed action plan to improve the utilization of mobile money apps of the students in Batangas City was formulated.

The following recommendations were formulated to contribute to the studies that are of the same field or scope. Existing mobile money providers may consider innovating more cost-effective services to further enhance the mobile money user experience. The government and telecommunication operators may exert efforts to enhance the usage of mobile money apps by strengthening Internet networks. Other mobile money providers may expand their range of products and services to increase their ability to compete. Incentives, promos, and discounts can contribute to attracting users and potential users. From a technical standpoint, it is significant developing stronger solutions such as laws and amendments for mobile money app systems to be as secure as possible. Mobile money providers may further understand the financial profile of the users to designate more effective marketing and demand for service offerings. In collaboration with the government, mobile money providers may produce additional services to encourage users to save and invest. The proposed action plan may be used for further discussion and assessment of the utilization of mobile money apps. Future researchers may attempt to show how efficient the mobile money apps are in different cultures and geographical settings to incorporate diverse responses. This study is conducted through descriptive statistics hence, the researchers recommend that inferential statistics, such as multiple regression analysis, be used for further research.

REFERENCES

[1] Schellhase, J., & Garcia, A. (2019). *FinTech in the Philippines: Assessing the State of Play*. Retrieved from https://milkeninstitute.org/

[2] Massally, K. N., Ricart, R. M., Bambawale, M., Totapally, S., & Bhandari, V. (2019). *The State of Digital Payments in the Philippines*. Retrieved from https://responsiblefinanceforum.org

[3] Baganzi, R. and Lau, A. K. W. (2017). Examining trust and risk in mobile money acceptance in Uganda. *Sustainability*, 9(12), 2233; https://doi.org/10.3390/su9122233

[4] Koloseni, D. and Mandari, H. (2017). *Why Do Mobile Money Users Keep Increasing? Investigating the Continuance Usage of Mobile Money Services in Tanzania.* Journal of International Technology and Information Management: 26(2) Article 6. Retrieved from https://scholarworks.lib.csusb.edu/jitim/vol26/iss2/6

[5] Chaves, S.M., Iturralde, E., King, N.M., Mate, M.C., & Riano, J.C., Rosendo, R.J. (2019*). Industry Study of Electronic Money.* Technology Management Center, University of the Philippines, Diliman, (Masteral Thesis) 10.13140/RG.2.2.18567.21925

[6] Chern, Y.X., Kong, S.Y., Lee, V.A., Lim, S.Y., & Ong, C.P. (2018). *Moving into Cashless Society: Factors Affecting Adoption of E-wallet.* http://eprints.utar.edu.my/3089/1/fyp_BF_2018_CYX.pdf

[7] Babbie, Earl R. *The Practice of Social Research.* 12th ed. Belmont, CA: Wadsworth Cengage, 2010; Muijs, Daniel. Doing Quantitative Research in Education with SPSS. 2nd edition. London: SAGE Publications, 2010.

[8] Dudovskiy, J. (2015). *Business Research Methodology.* Retrieved from research-methodology.net

[9] Grover, P., Kar, A.K., Janssen, M., & Ilavarasan, P.V. (2019). Perceived usefulness, ease of use, and user

acceptance of blockchain technology for digital transactions—insights from user-generated content on Twitter. Enterp. Inf. Syst. 13, 771–800.

[10] Yang, M., Mamun, A.A., Mohiuddin, M., Nawi, N.C., & Zainol, N.R. (2021). *Cashless Transactions: A Study on Intention and Adoption of e-Wallets.* Retrieved from https://doi.org/10.3390/su13020831

[11] Rosenberg, E. (2021). *The 6 best payment apps of 2021.* Retrieved from https://www.thebalance.com/best-payment-apps-4159058

[12] Wulandari, D., Soseco, T., & Narmaditya, B. (2016). Analysis of the Use of Electronic Money in Efforts to Support the Less Cash Society. *International Finance and Banking*. 3(1) 1-10

[13] Express Money. (2019). *Advantages of mobile banking.* Retrieved from https://www.xpressmoney.com/blog/industry/the-advantages-of-mobile-banking/

[14] Caldwell, M. (2020). *5 reasons to do your banking online.* Retrieved from https://www.thebalance.com/three-advantages-of-online-banking-2385804

[15] Chaouali, W., Ben Yahia, I., & Souiden, N. (2016). The interplay of counter-conformity motivation, social influence, and trust in customers' intention to adopt Internet banking services: The case of an emerging country. *J. Retail. Consum. Serv.*, 28, 209–218.

[16] Cheng, J., Liu, Q., Lu, H., Yuan, T., & Zhang, X. (2015) *How do friends affect user behaviors? An exploration of social relation analysis for a recommendation.* 10.1016/j.knosys.2015.08.005

[17] Koenig-Lewis, N., Morgan, M., Palmer, A. & Zhao, A. (2015). *Enjoyment and social influence: predicting mobile payment adoption.* Retrieved from http://orca.cf.ac.uk/

[18] Gharaibh, N.K. (2018). *Using the UTAUT2 Model to Determine Factors Affecting Adoption of Mobile Banking Services: A Qualitative Approach.* Retrieved from https://online-journals.org/

[19] Haderi, S. & Aziz, A. (2015), 'The Effect of Social Characteristic in the Acceptance and Continue Usage for Information Technology in the Public Sector, *International Journal of Business and Social Science*, 6(7), 186-192.

[20] Junadi, J. & Sfenrianto, S. (2015). A Model of Factors Influencing Consumer's Intention to Use E-payment System in Indonesia. *Procedia Computer Science*. 59. 214-220. 10.1016/j.procs.2015.07.557.

[21] Traynor, P. & Butler, K. (2015). *Mobile Money in Developing Countries: Study Reveals Security Flaws in Apps.* Retrieved from https://www.theguardian.com/

[22] Kar, A.K. (2020) *What Affects Usage Satisfaction in Mobile Payments? Modeling User Generated Content to Develop the Digital Service Usage Satisfaction Model.* Retrieved from https://link.springer.com/

[23] Akinyemi, B. E., & Mushunje, A. (2020). Determinants of mobile money technology adoption in rural areas of Africa. *Cogent Social Sciences,* 6(1), 1815963. DOI: doi.org/10.1080/23311886.2020.1815963

[24] Haonga, J. (2015). *Effectiveness of Mobile Banking on Customers' Satisfaction in Banking Services: The Case of KCB Bank Morogoro Branch, Tanzania.* Retrieved from http://docplayer.net/

[25] Otieno, O. C., Liyala, S., Ondongo, B.C., & Abeka, S. (2016). *Challenges Facing the Use and Adoption of Mobile Money.* Retrieved from https://citeseerx.ist.psu.edu/

[26] Llanto, G. M., Rosellon, M. A., & Ortiz, M. K. (2018). *E-Finance in the Philippines: Status and Prospects for Digital Financial Inclusion.* Retrieved from https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps1822.pdf

[27] DICT. (2021). *March 2021 marks continued improvement in PH fixed broadband internet speed.* Retrieved from https://dict.gov.ph/march-2021-marks-continued-improvement-in-ph-fixed-broadband-internet-speed/

[28] Bangko Sentral ng Pilipinas (BSP). (2020). *BSP Digital Payments Transformation Roadmap 2020-2023.* Retrieved from https://www.bsp.gov.ph/

[29] Davies, A. E. (2017). *To study university students' perceptions towards their cashless financial transactions.* Retrieved from https://repository.cardiffmet.ac.uk/handle/10369/8654

[30] Speedtest (2021). *Speedtest Global Index.* Retrieved from https://www.speedtest.net/global-index/philippines

COPYRIGHTS