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Research Article



Consumer Adoption of Mobile Payment Services in Mauritius: The Mediating Effect of Attitude

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ABSTRACT

Customers in Mauritius have become increasingly reliant on Mobile Payment Services (MPS). This study examined an integrative theoretical framework that researchers can use to firstly conclude the relative significance of various constructs [such as Subjective Norm (SN), Compatibility (COM), Perceived Risk (PR), Perceived Trust (PT), and Intention (INT)] in the adoption of a MPS, and secondly the eventual mediating effect of the consumer's attitude (ATT) toward the tool's use. To evaluate a set of study hypotheses, responses from MPS users from a customer's perspective were experimentally examined using Statistical Package for the Social Sciences (SPSS) software. According to the findings, respondents who used MPS were more likely to be young males between the ages of 25 and 34 who worked full-time. Analysis for reliability and descriptive statistics for all the individual items (COM, PR, PT, SNs, INT to use, ATT and E-payment adoption) showed a satisfactory degree of reliability with a Cronbach's alpha coefficient ranging from 0.720 to 0.930. Normal p-p plots also seemed to be in line with the expectation and therefore had not caused the violation of the assumptions.

Keywords: Mobile Payment Services, Mauritius, Attitude

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INTRODUCTION

The section introduces the study's background, scope, problem statement, research questions, significance of the study, limitation and organization of the research.

BACKGROUND OF STUDY

The rapid advancement of mobile (MOB) technology, as well as the widespread use of mobile phones for a variety of functions and tasks, has resulted in a tremendous increase in mobile phone ownership



around the world. Mobile phones' usage to pay for products and services without the use of cash or the participation of banks is one of these commonplace duties (Liébana-Cabanillas and Lara-Rubio 2017; Dahlberg et al. 2015; Chandra et al. 2010).

SCOPE OF THE STUDY

Previous research has revealed only a partial picture of the major factors influencing adoption of MPS (Schierz et al., 2010). As a result, the goal of this research is to first analyse relationship between the independent variables: COM, SN, PR, PT, and INT and MPS adoption, and then to look at any existing relationships and see if attitude can act as a mediator between the independent variables in the context of MPS adoption. The research was conducted across Mauritius, in several regions. Customers' sample population was geographically diversified over urban and rural locations in the country's northern, southern, eastern, western, and central regions. Technology acceptance theories, as mentioned in the literature review, led the research theoretically.

STATEMENT OF THE PROBLEM

No current studies have been conducted to identify or explicitly examine the relationship between the independent variables COM, SN, PR, PT, and INT and MPS adoption, as well as any existing relationships in which attitude has been explored as a mediator between the independent variables in the context of MPS adoption in Mauritius. This has created a research gap, which this study tries to fill by examining the extent to which various variables influence MPS adoption from the customer's perspective.

OBJECTIVES OF THE STUDY

First, the study will look at the primary elements that drive MPS adoption from the customer's perspective. The study's objectives, as seen through the eyes of the customers, are as follows.

- To determine whether consumers who possess high SN more likely to adopt MPS
- To determine whether consumers who find it easier to integrate technology with banking services more likely to adopt MPS
- To determine whether consumers who perceive MPS as a high-risk payment method less likely to adopt MPS
- To determine whether consumers who trust MPS more likely to adopt MPS
- To determine whether consumers who have an INT to use MPS are more likely to adopt MPS
- To determine whether consumers who possess high SN are more likely to have a positive ATT towards adoption of MPS
- To determine whether consumers who find it easier to integrate technology with banking services are more likely to have a positive ATT towards adoption of MPS
- To determine whether consumers who perceive MPS as a high-risk payment method are more likely to have negative ATT towards adoption of MPS
- To determine whether consumers who trust MPS are more likely to have positive ATT towards adoption of MPS
- To determine whether consumers who have an INT to use MPS are more likely to have positive ATT towards adoption of MPS
- To determine whether consumers who have a positive ATT towards MPS are more likely to adopt MPS
- To determine whether consumers who have a negative ATT towards MPS are less likely to adopt MPS

The goal of this study is to provide information on adoption of MPS from a customer's perspective and more specifically in a Mauritian context. This study will help the world of academia and businesses to understand MPS from a customer's perspective.

RESEARCH QUESTIONS FOR CUSTOMERS

The objective of the study was to find responses to the following questions in order to meet the defined objectives;

- Are consumers who possess high SN more likely to adopt MPS?
- Are consumers who find it easier to integrate technology with banking services more likely to adopt MPS?
- Are consumers who perceive MPS as a high-risk payment method less likely to adopt MPS?
- Are consumers who trust MPS more likely to adopt MPS?
- Do consumers who have an INT to use MPS more likely to adopt MPS?
- Are consumers who possess high SN more likely to have a positive ATT towards adoption of MPS?
- Are consumers who find it easier to integrate technology with banking services more likely to have apposite ATT towards adoption of MPS?
- Do consumers who perceive MPS as a high-risk payment method more likely to have negative ATT towards adoption of MPS?
- Do consumers who trust MPS are more likely to have positive ATT towards adoption of MPS?
- Do consumers who have an INT to use MPS are more likely to have positive ATT towards adoption of MPS?
- Do consumers who have a positive ATT towards MPS are more likely to adopt MPS?
- Do consumers who have a negative ATT towards MPS are less likely to adopt MPS?

SIGNIFICANCE OF THE STUDY

Prior research has revealed only a partial picture of the fundamental factors influencing consumer adoption

of MPS. The present study aims to create and test an integrative framework consisting of factors influencing consumers' adoption of MPS, given the high practical importance and paucity of earlier empirical studies. A model will be built that is based on many theoretical domains that are important to the consumer motivations for adopting MPS. In comparison to earlier studies, this allows the researcher to construct a larger and more complete picture of the determinants of consumer acceptance of MPS. From an empirical viewpoint, we will make a contribution by testing our model to determine which of the different variables (SN, COM, PR, PT, INT and ATT) is more significant in explaining consumer adoption of MPS in Mauritius and we will examine how the different variables (SN, COM, PR, PT and INT) interplay among each other, in particular attitude as a mediating role in explaining consumer adoption of MPS in Mauritius.

LITERATURE REVIEW AND EMPIRICAL REVIEW

Theory Background and Research Hypotheses

The theoretical background of the study is developed in this section, which includes a literature assessment of technological acceptance theories and MPS uptake. The research hypotheses were generated based on these theories.

Technology Acceptance Theories

The study builds a conceptual framework based on the theories of the Technology Acceptance Model (TAM), TAM 2, e-Commerce Adoption Model (e-CAM), Planned Behaviour Theory (PBT) and the Diffusion Theory of Innovation (DOI). These theories are applied and tested empirically among MPS consumers in Mauritius.

Research Model and Hypotheses

Allport (1935) defined attitude as a mental and neurological state of preparedness acquired through experience that has a dynamic or directional effect on

a person's reaction. Previous research has discovered a positive link between attitude and adoption intention (Yang & Yoo, 2004; Schierz et al., 2010). We hypothesize that firstly consumers who have a positive attitude toward MPS are more likely to adopt MPS, and secondly consumers who have a negative attitude toward MPS are less likely to adopt MPS.

Compatibility, according to Rogers (1962), is extent to which an innovation is judged to be compatible with an individual's values, past experiences, and requirements. Existing research also shows that perceived compatibility has a favourable impact on attitudes toward technology (Hardgrave et al., 2003). As a result, it is possible to hypothesize that consumers who find it easier to integrate technology with banking services are more likely to adopt MPS, and consumers who find it easier to integrate technology with banking services are more likely to have a positive attitude toward MPS adoption.

SN is defined as a perceived social pressure to perform or not perform a given conduct (Ajzen, 1991). Friends, family, or a member of one's social group can impose this pressure (Püschel, et al., 2010). Nysveen et al., (2005) investigated SN in the setting of a mobile internet application and discovered that it had a positive substantial impact on attitude. According to Pederson (2005), SN is a key aspect in forming attitudes and intentions toward mobile commerce. According to the above-mentioned literature, we hypothesize that consumers with high subjective norms are more likely to embrace MPS, and consumers with high subjective norms are more likely to have a positive attitude toward MPS adoption.

PT is in general linked to one's level of trust. PT in e-commerce activities is defined by Pavlou (2003) as consumers' willingness to assume risks in online transactions. According to the literature, the hypothesis that is developed is consumers who trust MPS are more likely to embrace MPS, and consumers

who trust MPS are more likely to have a positive attitude toward MPS adoption.

PR which is defined by consumers' expectation of losses associated with purchases acts as a deterrent to purchase behavior (Peter and Ryan, 1976). PR is frequently exacerbated by feelings such as uncertainty, discomfort/anxiety, concern, psychological discomfort, and cognitive dissonance (Featherman and Pavlou, 2003). As a result, it can be hypothesized that consumers who perceive MPS as a high-risk payment method are less likely to use them, and consumers who perceive MPS as a high-risk payment method are more likely to have a negative attitude about using them.

Consumer intent to utilize an online system is the definition of the behavioural intention. (Diamantopoulos et al., 2006). Purchase intention, word of mouth, loyalty, price sensitivity and complaining behaviour are among the few examples of the criteria that can be used to identify intention. (Hair et al., 2014). There is a consistent and reliable causal relationship between behavioural intention and the targeted desired behaviour, according to numerous research (Sheppard et al., 1988; Venkatesh and Davis, 2000). Accordingly, this research formulates the following hypotheses: Consumers who intend to use MPS are more likely to adopt MPS in the future and consumers who intend to use MPS will have a positive attitude towards MPS.

RESEARCH METHODOLOGY

The methodology and research methods utilized in the thesis are described in this chapter. This part will focus on the research methodologies used as well as the approaches to data collection, analysis, and interpretation.

Research Design

This study uses a quantitative methodology, meaning a survey approach, to collect data from consumers using a questionnaire, which is then used to explain the link between the various factors. The study

employs the previously indicated design to acquire numerical measures in order to investigate the factors that influence MPS adoption in Mauritius. A quantitative method was chosen because it has the ability to solve a problem using mathematical tools and numerical data collection (Aliaga and Gunderson, 2002).

Research Approach Adopted

The link between various independent variables (SN, COM, PR, PT, and INT) and the dependent variable MPS adoption among customers in Mauritius is best studied through a quantitative research approach. A quantitative method is used with a self-administered questionnaire (Roland & Bee, 1999). The questionnaire survey instrument was created after doing a literature study in order to collect empirical data for the purpose of testing the research conceptual model.

Study Area

This study is carried from different regions in Mauritius. The sample population for customers is geographically spreaded in the northern, Southern, Eastern and Western and Central region of the country. These include Triolet, Mapou, Riviere Du Rempart, Centre De Flacq, Maherbourg, Souillac, Curepipe, Vacoas-Phoenix, Quatre-Bornes, Quartier Militaire, Bambous, Beau Bassin Rose-Hill and Port Louis. The regions are selected because they are densely populated and are representative of the population.

Study Population

Firstly, users of MPS of various ages and educational levels were surveyed and questionnaires were distributed over the island. The survey was also shared on Facebook and WhatsApp, among other social media channels. "Consumer-generated media" is defined as "a wide range of new online sources of information created and used by consumers intent on sharing information with others about any topic of interest" (Kohli et al., 2014).

3.5. Sampling technique

The non-probability sampling technique was utilized in this study to pick respondents from the consumer community. Respondents who utilize MPS are chosen using convenience and purposive or judgmental sampling. It is an appropriate way for obtaining a big number of completed questionnaires in a timely and cost-effective manner. Purposive sampling is when you decide why you want informants to help you and then go out and locate them (Bernard, 2004). The target population for both customer strategies included students, working professionals, retirees, businessmen, and housewives.

3.6 Sample size

In this study, a sample of users of a MPS was used. A sample, or a smaller portion of the population, is chosen to reflect the population's most essential characteristics and attributes (Graziano and Raulin 1997).

According to Sekaran and Roger (2012), an acceptable sample size is between 30 to 500 participants, however Haque et al., (2017) argue that any sample size more than 200 is sufficient to derive a reliable and reasonable conclusion.

In this study, for the quantitative technique, 550 questionnaires were distributed among users of MPS out of which 250 were printed questionnaires and the rest were drawn from Google -forms to reach out the target population.

Data collection

Types of data

Data was gathered using a quantitative approach. Questionnaires were used for data collection in the research, which were delivered to individuals across Mauritius. By studying a population sample, the survey questionnaire technique provides a measurable or numerical description of a population's trends, ATTs, or thoughts (Creswell, 2009).

The process of data collection took place between 01 September 2021, and 31 December 2021. The projected distribution and collection process took four months, and it was impossible to rely solely on face-to-face data collection. Following the onset of the COVID-19 pandemic and the resulting constraints, the use of remote data collection has increased.

It is estimated that approximately 250 individuals received an invitation to fill in a printed questionnaire. In addition, the online questionnaire was developed through Google-forms and the responses were managed by its report platform. A total of 411 people replied to the survey. The completeness of all surveys obtained was checked. Then all of the forms were evaluated, and any responses that were illegible, inconsistent, or unclear were discarded. Cleaning the data improved accuracy and precision, allowing for a more complete evaluation of replies. In the end, 249 questionnaires were used in the empirical study.

RESULTS OF DATA COLLECTION - FOR CUSTOMERS ADOPTION OF MPS

The below section provides an analysis on the results of the data collection for customers over a four consecutive month period. In the first step of the data analysis process, data which were in Excel format were converted into SPSS for further analysis. Data cleaning was done for correction and removal of all errors. Errors were values of each item in the questionnaire, which fell outside the range. A total of 54 items were identified and the frequency was first run to identify the errors. Errors were counted as missing item.

Basically, of the 249 respondents who completed the questionnaire, 45.0% were males and 39.4% were females. Experience in the use of mobile technologies was a necessary precondition to participate in the survey in order to satisfy basic understanding of MPS.

Moreover, the majority of respondents were between 25-34 years old (34.1%), followed by 18-24 years old (28.9%). This might be due to the author's network that largely consists of these age groups. Also, they represent a group that quickly adapt and are able to use smartphone devices well. Furthermore, the sample showed a high share of full-time employees (70.7%) and the majority of them (30.1%) possess a high school diploma /equivalent degree.

Item Analysis and Scale Reliabilities

The scale's internal consistency and reliabilities were evaluated. The reliabilities of measuring scales were assessed using Cronbach's alpha coefficient, which is an indicator of internal consistency. A coefficient alpha of at least 0.50 was required to keep an item on a scale (Churchill, 1979).

The reliability analysis and descriptive statistics for individual items of COM, PR, PT, SNs, INT to use, ATT and E -payment adoption displayed an acceptable degree of reliability with a Cronbach's alpha coefficient ranging from 0.720 to 0.930. This indicate that the questionnaire distributed by the researcher declared consistent or can also be called reliable. Therefore, the proposed model is reliable as well as valid for further analysis.

Testing the Assumption of Multivariate Analysis

The test of assumptions was necessary as the violations of the assumptions affected subsequent use of multivariate statistical techniques. This study performed assumption testing based on two commonly applied requirements namely normality, and linearity.

Test of normality

The distribution of data for this variable was platykurtic (i.e., flatter than a normal distribution) whilst the remaining variables namely COM, SN, PT, INT and ATT with positive kurtosis value were leptokurtic (i.e., more peaked than a normal distribution). With regards to skewness of data, it

was found that all variables (with the exception of COM and INT) were negatively skewed.

Test of Linearity

Linearity, in the current research was assessed by running series of simple linear regression analysis and to examine the residuals using Normal Probability P-P Plot. In this case, the normal p-p plots seemed to conform to the expectation and thus had not resulted in the violation of the assumptions.

RECOMMENDATIONS AND CONCLUSION

The research offers help in getting knowledge about behaviours related with the MPS and in understanding the implications for developing effective MPS ecosystem by taking into account the ever-changing nature and rapidly evolving pace of the MOB environment. MPS might become an application which is embedded for the next generation of MOB platform applications as users accept MPS as a new means of commerce and as organisations provide enabling platforms for users. Nevertheless, with the aim of becoming popular, MPS has to overcome numerous challenges and user acceptance is undoubtedly the most significant one. Service developers require a better overview of individual perceptions regarding the security level and the implications of social influence on usage. By examining consumer needs and creating market profiles, the unified framework in this study might be a useful tool for determining market potential.

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