

Exploring the Factors Influencing the Adoption of Mobile Payment in Cote D'Ivoire; Evidence from the University of Cocody

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Abstract— Mobile payment currently posits as an extremely interesting paradox in the world of mobile telecommunications where many people have access to powerful mobile devices. The acceptance of mobile payment has now become a decisive factor. This study was initiated to have a fair understanding of factors influencing the adoption of mobile payment in Cote D'Ivoire using students at the University of Cocody as a population of the study. The study resorted to the Theory of Planned Behavior and the Unified Theory of Acceptance and Use of Technology and modeled out factors such as trust, perceived risk, attitude, performance expectation, and social influence as factors influencing the adoption of mobile payment. Using an online survey, a questionnaire was sent across to the population of the study. A sample size of 172 was deduced from the survey, data were coded, processed, and analyzed using SPSS version 26. The results of the study show that trust, attitude, performance expectation, and social influence have a positive and significant impact on the intention to adopt mobile payment. The perceived risk however did not have any impact on the intention to adopt mobile payment. This study, therefore, contributes to the understanding of factors that makes users have the intention of using mobile payments relative to Cote D'Ivoire.

Keywords— Mobile payment, trust, perceived risk, attitude, performance expectation, social influence.

I. INTRODUCTION

The emergence of various mobile devices and wireless technologies have affected almost every activity that goes on in the world. People can now communicate, send messages across, make payments, order items among others at anywhere, at any place, and at any time. The evolution of mobile technologies which are incorporated in mobile phones serves as a medium of payment which is used to address two main issues simultaneously; firstly, it is a means of creating financial inclusion for the unbanked population i.e. solving issues of demand and secondly providing the avenue for financial entities to deliver essential services of wider span at a minimum cost especially to people in areas who have been denied the access to banking i.e. solving issues of supply (Aker & Mbiti, 2010; Diniz et al., 2011).

The numerous mobile devices that span across the globe have brought into place several value-added services, new technologies, and mobile transactions that seek to create room for commerce which began from mobile banking through to mobile payments (m-payments). The payment solutions that are done with the use of mobile devices and are emerging to be a realistic alternative for many countries who are still

driven by physical cash is regarded as the mobile payment systems (Liu et al., 2015). The mobile payment system is explained as “paying for a product or service through the use of a mobile device and technology, including Near Field Communication (NFC), Short Messaging Services (SMS) and Wireless Application Protocol (WAP)” (Bamasak, 2011). It is also often asserted that mobile payments have maximized service opportunities for people, businesses, and various countries notably among them are the developing nations who are currently investing hugely into mobile payment services to achieve the objectives of financial inclusion. Furthermore, mobile payments have helped in curing the challenges of space and time associated with financial activities such as payments for goods and services, transfer of cash, mobile airtime top-up among others on behalf of individuals in a country (Odia, 2012). Dahlberg et al., (2008) indicate that many services that are offered currently such as easy access to information, entertainment, and permission to transact for example buying tickets, tracking an order made, banking services, and records verification among others, are evidence to a trend known as mobile payment. The pattern aims at buying, paying, or transferring values through the use of mobile devices without the need for cash or the involvement of a bank. Mobile devices such as cell or smartphones serve as the conduit through which payments begin, enabled and completed (Diniz et al., 2011).

Several companies who saw the prospects of mobile payments invested hugely into developing applications that could help people transact businesses in the shortest possible time. Samsung Pay which was generated by Samsung to facilitate mobile payments, Apple Pay by Apple in 2014, PayPal (an online payment system) by Paydiant, Soft card, and Android pay owned by Google in 2014 and 2015 respectively to facilitate mobile payments. Due to the emergence of these various applications as evident in the examples given above, many people have shifted their preference for the traditional payment system to the mobile payment systems (Daştan & Gürler, 2016).

A world bank report indicates that there has been a sharp rise in mobile phone penetration in Sub-Sahara Africa to up to 109% in 2015. Notwithstanding the majority of the countries in this part of Africa have financial systems that are not robust and therefore the majority of the citizens have taken to the new mode of making payment and receive money which is mobile payment popularly termed as mobile money (World

Bank, 2014). Furthermore, many African nations are exploring means of adopting mobile communications technologies to make up for inadequate financial infrastructural developments and enhance economic conditions by initiating global mobile payment systems. This was mostly targeted at financial inclusion for all citizens, improve the standard of living, and create conveniences in

making transactions. This focus is what has brought into place the element of mobile money where monies are sent through phones at any day, anytime, and anywhere (Must & Ludewig, 2010). Fig.1 below gives a fair idea about the rate at which people have mobile money accounts to facilitate and receive payments within the sub-region which includes Cote D'Ivoire.

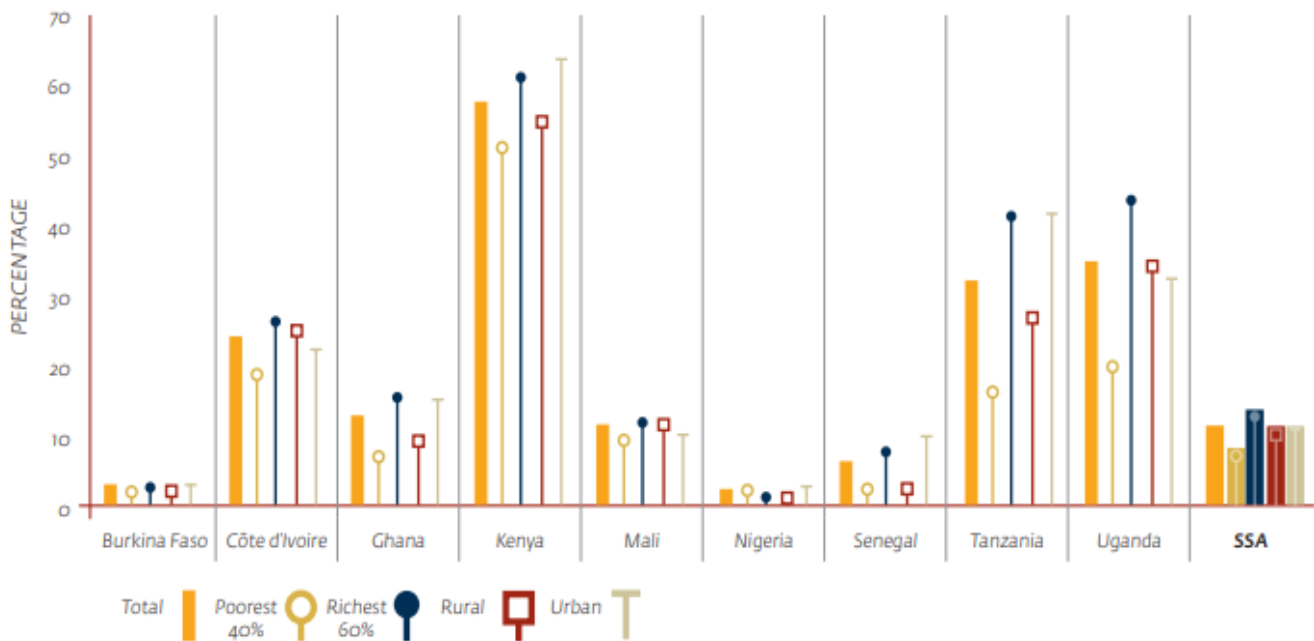


Fig. 1. Mobile money account ownership in Sub-Saharan Africa.

Source: World Bank Global Findex database.

Despite the fast-growing mobile payment systems in various parts of the world and specifically in Cote D'Ivoire, there are still challenges associated with how and why people should embrace this mode of making a payment or engaging in exchange. It is also important to look at factors that have caused the majority of the people in the country to accept this mode of payment. The research relies on certain factors such as trust, perceived risk, attitude, performance expectations, and social influence which was deduced from some underlying theories to help ascertain if these factors facilitate the adoption of mobile payments in the country.

Purpose and Objectives of the Study

The purpose of the research is to explore the factors which influence the adoption of mobile payment in Cote D'Ivoire using evidence from students at the University of Cocody. Specifically, the research would test for the relationship between trust, perceived risk, attitude, performance expectation, social influence, and the intention to adopt mobile money payment among these students. The objectives of this study were:

- i. To establish the relationship between trust and the intention to adopt mobile money payment.
- ii. To establish the relationship between perceived risk and the intention to adopt mobile money payment.
- iii. To establish the relationship between attitude and the intention to adopt mobile money payment.

- iv. To establish the relationship between performance expectations and the intention to adopt mobile money payment.
- v. To establish the relationship between social influence and the intention to adopt mobile money payment.

II. LITERATURE REVIEW

Mobile Payment System

Mobile payment belongs to the family of electronic payment which uses mobile or communication technologies that gives room for mobile users to conduct payment using mobile devices that are connected to the internet. Several studies previously have stated that the fundamental feature that causes people to adopt mobile technologies and services is their independence of time and location (de Reuver et al., 2015). Mobile devices used to undertake mobile payments include mobile phones, tablets, or other devices that can connect to mobile telecommunication networks which help to facilitate payment and receive money from another end (Mulupi, 2012). According to Kim et al., (2010), payments or receipts are made through SMS message, PIN transmission, Mobile Web, WAP online billing, direct-to-subscriber bill, and direct to credit card transaction through the use of mobile devices and with the help of wireless and communication technologies. Due to the convenience and ease of use of mobile payment systems, mobile users are said to be

increasingly opting for mobile payments in doing transactions (Ting et al., 2016).

Classification of Mobile Payments

The discussions made relating to mobile payment are mostly saturated by its classifications. Mobile payment systems are classified as follow: the business model which defines when the actual payment is done, the kind of payment validation (Karnouskos, 2004), the amount of transaction undertaken, the type of device, the nature of relationships and means employed, and conclusively, the method used in transferring the money during the transaction (Abrazhevich, 2001; Schwiderski-Grosche & Knospe, 2002). Table I summarizes the different types mentioned.

TABLE I. classification of mobile payment systems.

Criteria	Classification
According to the business model	Prepayment (payment in advance), debit (instant payment), and credit (future payment)
According to the transaction amount	Micro-payments and macro-payments
According to the type of payment validation	Offline, online, and semi-online payment systems
According to the type of device	Connected to a physical network (e.g., ADSL POS-Point of sales- in any establishment) or to a mobile network (GPRS or wireless POS in some establishments)
According to the type of relationships and the means of payment	With the participation of financial institutions and cards [Traditional payments completed with cards linked to the owner’s account balance (pay now) or to a pre-established spending limit (pay later)] or mobile phones [Payment performed by charging the acquired services/purchases to the bill issued by the telephone company or by paying an SMS (usually for small purchases, such as songs downloaded on mobile phones)]
According to the transfer method	Systems based on token or electronic money and systems based on a bank account or credit/debit

Source: (Liébana-Cabanillas et al., 2017).

Intention to use Mobile Money Payment

Previous studies such as Wang et al., (2009) indicated that several factors inform attitude and behavioral intention. The intention is also used to explain how attitude can affect real behavior. A negative or positive intention would invariably result in an unfavorable or favorable intention and behavior. Previous research has also suggested empirical proof of mobile users' positive intention to use mobile technology when they are optimistic(Au & Kauffman, 2008). A study conducted on the market in Malaysia shows that 4 out of 10 online customers are prepared to make a transaction through their mobile phones. It is therefore imperative that we know what makes local mobile users eager to use them-payment service (Goh, 2011).

Underlying Theories

The study is grounded on some selected theories which would help to achieve the objectives of the study. The theory of planned behavior (TPB) which was expunged from (TRA) and the unified theory of acceptance and use of technology (UTAUT) have been employed to determine and give meaning to the factors that influence the adoption of mobile payment. This because the various factors such as trust, perceived risk, attitude, performance expectations, and social influence were deduced from these theories to determine whether they contribute to the adoption of mobile payment in the jurisdiction under study. Furthermore, these theories were taken into consideration because of their validated elements and relevance in understanding the rationale behind the intention to adopt mobile payments or electronic payments (de Sena Abrahão et al., 2016; Ting et al., 2016).

Mobile Payment Methods

In times past, the various network operators used the player-centric models to manage mobile payment services. Notwithstanding, we find ourselves currently using more appropriate billing models that permit consumers to access payment services independent of who the owner of the service is (Au & Kauffman, 2008). The various types of payment approach also inform the intention to adopt mobile payment system. The most common payment methods include the following: mobile wallets, card-based payments, carrier billing (Premium SMS or direct carrier billing), contactless payment NFC (Near Field Communication), direct transfers between the payer and payee bank accounts and person-to-person (Venkatraman, 2018).

Theory of Planned Behavior (TPB)

In the move to make predictions of how humans behave and react, Icek Ajzen came up with the TPB in 1991 which was modeled out of the theory of reason action. The theory of planned behavior indicates that attitude toward a behavior, subjective norm, and perceived behavioral control tend to impact behavioral intention (Ajzen, 2015). Ajzen, (1991) posits behavioral intention as the construct within the model which focuses on the inspiring factors which influence behavior. When the intention is shown is stronger, there is a higher possibility of engaging in that behavior.

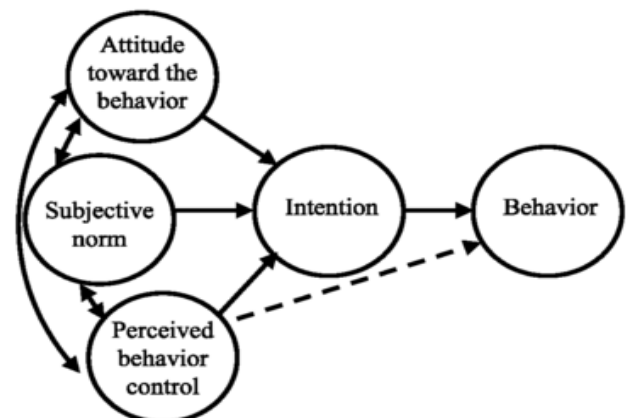


Fig. 2. Theory of Planned Behavior (TPB) (Icek Ajzen, 1991)

Attitude towards the behavior constituted the second element of the theory. Attitude measures the degree to which one has a favorable or unfavorable evaluation of a given behavior.

According to the theory, attitude encompasses behavioral beliefs that emanate from an assessment made. The third element of the theory is the subjective norm which looks at whether an individual is to perform or refuse to perform the behavior based on the social pressure at hand. The motivation to conform to the behavior and the normative beliefs make up the subjective norm. Lastly, perceived behavioral control is also regarded as a principal aspect of the theory which speaks to the fact that an individual's perception about how easy or challenging a behavior could be performed. Summarily, these elements in the theory are predicted by separated beliefs which are behavioral beliefs, normative beliefs, and control beliefs (Ting et al., 2016).

Unified Theory of Acceptance and Use of Technology.

There have been several models that have been propounded that come with several determinants to explain what causes them to accept the technology they have been introduced to. Through empirical studies, Venkatesh et al., (2003) came up with a unified theory that tried to combine elements in eight popular different theories that sought to explain the factors that make people adopt the technology. The eight models revisited by Venkatesh et al., (2003) are the Theory of Rational Action (TRA), the Technology Acceptance Model (TAM/TAM2), the Motivational Model (MM), the Theory of Planned Behavior (TPB/DTPB), a model agreement between the Technology Acceptance Model and the Theory of Planned Behavior (C-TAM-TPB), the Model of PC Usage (MPCU), the Innovation Diffusion Theory (IDT) and the Social Cognitive Theory (SCT). This theory was what they termed as unified theory of acceptance and use of technology.

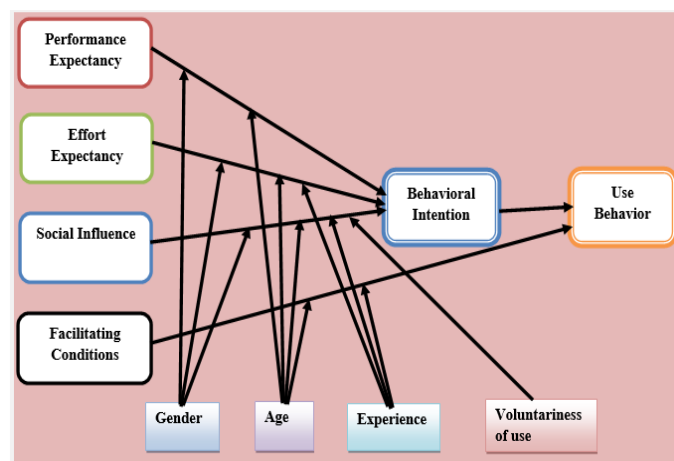


Fig. 3. Unified theory of acceptance and use of technology (Venkatesh et al., 2003)

According to Venkatesh et al., (2003) variables such as expected performance, expected effort, social influence, and facilitating conditions are elements that influence the intention to use information technology (IT).

According to the theory, the intention to adopt or use has a significant impact on the actual behavior when it comes to opting for technology in favorable situations. According to UTAUT, performance expectancy, effort expectancy, and

social influence were theorized and found to influence behavioral intention to use technology, while behavioral intention and facilitating conditions determine technology use. Variables such as age, gender, experience, and voluntariness were employed as moderators according to the theory which related to predicting behavioral intention to use technology and actual use of technology basically in organizational contexts (Venkatraman, 2018).

III. CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Countless factors have been tested by previous studies to determine if they influence the decision to use technology and, in many cases, applied to the adoption of electronic payment, electronic commerce, mobile payment among others. This study adopted five main predictors namely trust, perceived risk, attitude, performance expectation, and social influence based on the theories TPB and UTAUT to determine if they influence the intention to adopt mobile payment among the population under study. To be able to explore the power of TPB in explaining the intentions towards adopting mobile payment system, the three important elements element such as trust, attitude, and perceived risk are employed to be antecedents in the model of this study which is also following previous studies (Jeong & Yoon, 2013; Kim et al., 2009; Ting et al., 2016). These antecedents are deduced from the three important constructs of the theory which are the behavioral, normative, and control beliefs. Additionally, performance expectations and social influence were also adopted as antecedents for the study emanating from the four constructs indicated under the UTAUT theory. Intention to adopt mobile payment was treated as the dependent construct in the conceptual framework of the study.

Trust and Intention to adopt mobile payment systems

In the research work of Demircan & Ceylan, (2003) trust was explained to be an element of belief in a person's behavior, an event that occurs, or an object when confronted with a challenging situation to achieve the intended purpose. Kim et al., (2010); Mallat, (2007) undertook a study on mobile payment and employed perceived trust as a predictor of the reasons consumers have a belief in the them-payment system and therefore decides to adopt. The study concluded that due to the uncertainty and operational deficiencies, consumers lacked trust in mobile payment. Trust was found to negatively influence the adoption and the intention to use a mobile payment system. Hiram et al., (2016) investigated the intention to use mobile payment using a case of developing market by ethnicity. Reference to the theory of planned behavior, the study employed trust as one of the antecedents to predict the intention to use mobile payment. The study concluded that trust has a significant relationship and impact on the intention to use mobile payment. Notwithstanding the differences in the conclusions of previous studies on trust, this study proposes that;

H1 – Trust will have a positive impact on the intention to adopt mobile payment.

Perceived Risk and Intention to adopt mobile payment.

Pavlou, (2003) researched consumer's acceptance of electronic commerce by adopting trust and risk regarding the Technology Acceptance Model. The study concluded that perceptions of consumers relating to the risk associated with adopting any electronic commerce were negative. The risk was borne out of the uncertainty and other environmental factors. From the perspective of the populace in India, Roy & Sinha, (2017), opted to discover the factors which influence the adoption of electronic payment with perceived risk belonging to the predictors. Conclusively, perceived risk was determined to have an insignificant relationship with the intention to adopt electronic payment. Omol et al., (2016) research aimed at determining factors influencing acceptance of mobile applications in enterprise management specifically testing whether a relationship exists between demographic features, Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Perceived Risk (PR); and acceptance of mobile money payment among micro and small enterprises in Kisumu City, Kenya. The outcome revealed that perceived risk on MMP was the major hindrance of users accepting the technology with a negatively strong relationship of r value = -0.548 and p -value = 0.003. Based on the above empirical evidence, this study hypothesizes that;

H2 – Perceived risk will have a negative impact on the intention to adopt mobile payment.

Attitude and Intention to adopt mobile payment.

Liébana-Cabanillas et al., (2018) investigated the global approach to the analysis of factors that affects user behavior in their acceptance of mobile payment systems. The attitude was found to be a significant element in determining the adoption of mobile payment. In the study of Küçük, (2012), an individual's tendency feelings toward an object, idea, or behavior are referred to as attitude. The study concluded that attitude is a good predictor of a behavior i.e. the intention to adopt the technology introduced. Kalkan, (2011) concludes that attitude beings into place behavior, and the study established a strong, positive, and significant relationship between attitude and intention to use. The attitude was regarded as a strong predictor of other factors not mentioned. A study was undertaken to investigate factors affecting the adoption of the mobile payment system by consumers using 225 people as the sample size. The empirical findings indicated that perceived trust, perceived mobility and attitudes positively affect the adoption of mobile payment systems among the population of study (Daştan & Gürler, 2016). In light of these findings and discussion, the H3 hypothesis is developed as:

H3 – Attitude will have a positive impact on the intention to adopt mobile payment.

Performance Expectations and Intention to adopt mobile payment.

An academic work conducted by Oye et al., (2014) and ascertained the impact of the UTAUT in an anticipation of the acceptance and use of information and communication technologies using the staff in the University of Nigeria as a

reference point. The results of the study showed that performance expectation affects the intention to use or adopt a technology. This is because the population believes the technology should make them efficient and effective. The research work of Deningtyas & Ariyanti, (2017) focused on affecting the adoption of e-payment on the transportation service application using the UTAUT model which included performance expectation as a predictor. The results of the study showed that performance expectation affects the adoption of electronic payment (m-payment). In an article written by Abrahão et al., (2016) to evaluate the intention of adopting mobile payment services reference to consumers in Brazil who uses mobile phones, the study adopted the UTAUT to ascertain the objectives. Using a sample of 605 participants, performance expectations were determined to affect the adoption of mobile payment as the results showed. Based on the above evidence, this study also proposes that;

H4 – Performance expectations will have a positive impact on the intention to adopt mobile payment.

Social Influence and Intention to adopt mobile payment

Schierz et al., (2010) ascertained that an individual's social environment affects their decision to adopt mobile payment systems. Additionally, empirical evidence from studies such as Liébana-Cabanillas et al., (2014); Oliveira et al., (2014), even though the studies used a separate population also ascertained that social influence is a component of the UTAUT model significantly affects the intention to adopt mobile payment system. Muhammad et al., (2011) explored the reasons for which people refuse to adopt social networking sites using Technology Acceptance Model regarding the population in Malaysia concluded that social influence was a predictor of the adoption of technology. Hu et al., (2011) also supported the assertion that social influence positively affects the intention to opt for technology. Deningtyas & Ariyanti, (2017), a survey was carried out with mobile customers of a telecommunications company that operates in southeastern Brazil, with a valid sample of 605 respondents. The analysis of the social influence factor (IS) also proved to be relevant and with a positive relationship in the prediction of behavioral intention. In line with the evidence above, this study proposes that;

H5 – Social influence will have a positive impact on the intention to adopt.

IV. METHODOLOGY

As one of the growing economies in Sub-Saharan Africa, Cote D'Ivoire was the destination of the study. The targeted population is people who use mobile devices in Cocody University, Cote D'Ivoire. The study employed the non-probability sampling i.e., random sampling approach was used to sample out students in Cocody University who owned mobile devices. A sample size of 200 participants was predetermined based on the kind of analysis, the number of constructs, and the adequacy of effect size (Hair et al., 2006). A quantitative approach was adopted to help analyze the data obtained. An online questionnaire was prepared and forwarded to the population of the study. To check the reliability and

validity of the questionnaire, a pre-test was initiated to validate the questions. 200 questionnaires were sent across to students to the selected university student in Cocody University to administer the questionnaire. The response rate was 86%. After the initial assessment, 172 of the responses were deemed to be appropriate which was subsequently used for analysis.

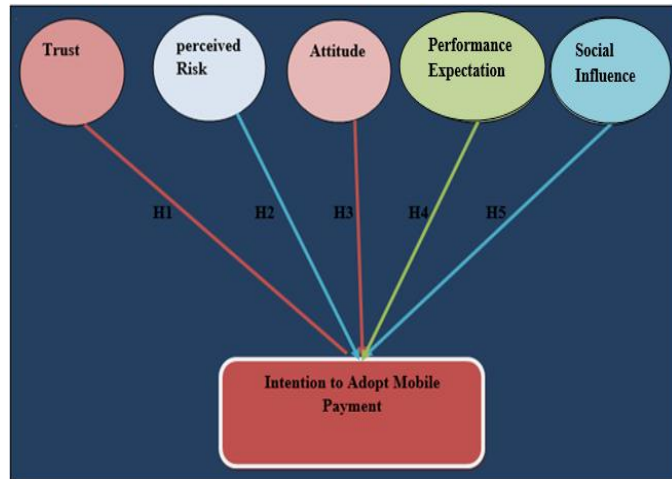


Fig. 4. Conceptual framework of the study.

Aside from the demographic part of the questionnaire, it also contained questions on general information about the use of mobile payment and questions on the six variables as indicated in the conceptual framework i.e. figure 4. Each of the elements was measured using a 5-point Likert scale. This was to allow participants to respond to the questions based on their assessment. The data gathered was then coded, errors corrected, and processes using the Statistical Package for Social Sciences (SPSS version 26). The demographic features of respondents, Multiple linear regressions, the ANOVA, and Cronbach Alpha were all determined to give meanings to the objectives of the study. This approach was also to help establish the effect of the predictors on the dependent variable relative to people in Cote D'Ivoire.

Model Specification.

The multiple linear regression models used for this research is indicated in mathematical terms as follows:

$$INT = \beta_0 + \beta_1T + \beta_2PR + \beta_3ATT + \beta_4PE + \beta_5SI + \mu_i \quad \text{Equ (1)}$$

Where INT = Intention to Adopt Mobile Payment System (DV), T= Trust (IV), PR = Perceived Risk (IV), ATT = Attitude (IV), PE = Performance Expectation (IV) and SI = Social Influence (IV), $\beta_1 - \beta_5$ =Coefficients of the model, μ_i = Error term.

V. RESULTS AND DISCUSSIONS

Table II captures the demographic details of 172 participants of the study who are university students in Cocody. The table stipulates the gender, age, educational qualification, and marital status of respondents.

The fig. 5 stipulates the frequency at which participants used mobile payment. 88(51.16%) indicated they use M-

payment very often, 59(34.30%) showed they use m-payment often and 25(14.53%) indicated they do not often use mobile payment. These statistics gives a reflection of the usage of mobile payment system among the participants

TABLE II. Background information of respondents.

Demographics		Frequency(n=172)	Percentage (%)
Gender	Male	94	54.7
	Female	78	45.3
Age	18- 25years	67	39.0
	26-30years	77	44.8
	31-35years	18	10.5
	Above 36years	10	5.8
Education	HND	-	-
	Diploma	15	8.7
	First Degree	127	73.8
	Others not stated	30	17.4
Marital Status	Single	145	84.3
	Married	27	15.7

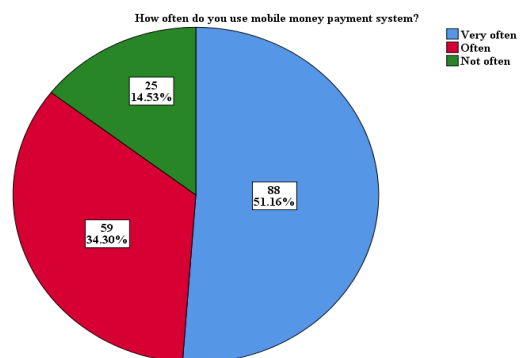


Fig. 5. Frequency of using mobile payment.

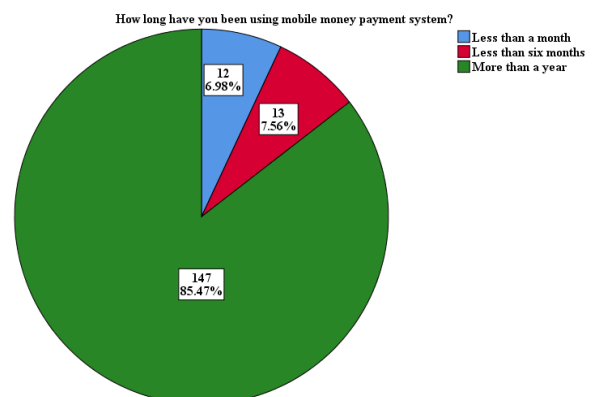


Fig. 6. Duration of using mobile payment.

The fig. 6 gives a reflection of how long respondents have been using mobile payments. 147(85.47%), 13(7.56%) and 12(6.98%) have been using mobile payment for more than a year, less than six months and less than a month respectively.

The fig.7 shows what respondents used mobile money for. 35(20.35%) indicated they use it to purchase products. 27(15.70%) of respondents indicated the use m-payment to pay for a service. 19(11.05%) said they use it to pay bills and

finally 91(52.91%) use mobile payment to undertake money transfer.

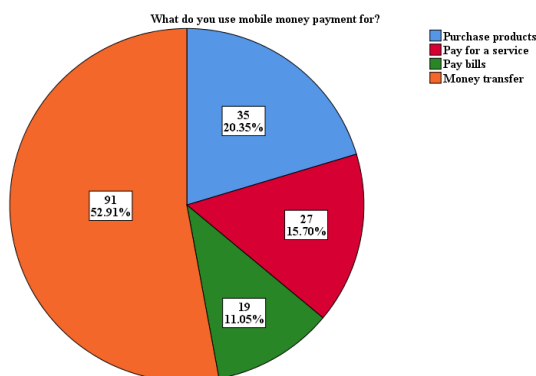


Fig. 7. Uses of mobile payment

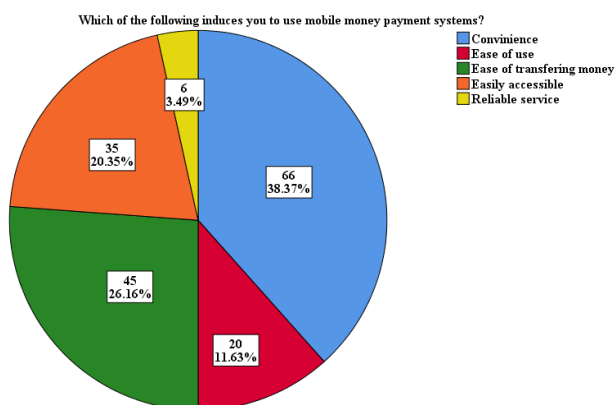


Fig. 8. Factors influencing the use of mobile payment

The figure 8 indicates some factors which induces participants to use mobile payment. 66(38.37%), 20(11.63%), 45(26.16%), 35(20.35%) and 6(3.49%) of respondents use m-payment because of convenience, ease of use, ease of transferring money, easily accessible and reliable service respectively

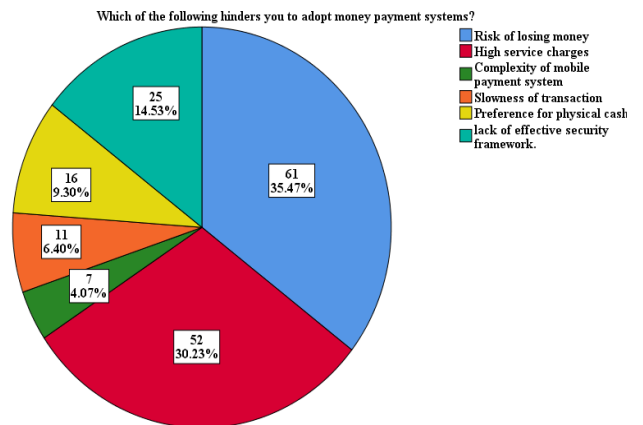


Fig. 9. Hindrances to the use of mobile payment.

The fig. 9 also indicates the challenges that hinders participants in using mobile payment. 61(35.47%), 52(30.23%), 7(4.07%), 11(6.40%), 16(9.30%) and 25(14.53) of respondents are faced with the risk of losing money, high service charges, complexity of mobile payment systems, slowness of transactions, preference for physical cash and lack of effective security framework respectively.

Descriptive and Reliability Statistics

Mean and standard deviation (S.D.) values are presented as shown in Table III. Social influence records the highest mean value of 4.2575 and intention to adopt mobile payment reporting a mean value of 3.2259. The attitude in table III reports the highest standard deviation of 0.84852 with trust indicating the lowest standard deviation value of 0.57753.

To measure the reliability of the data used for the study, the Cronbach alpha approach was employed. According to Streiner & Norman, (2008), is mostly used to measure the reliability of a data set when using the Likert scale. When the (α) value is above 0.7, it is an indication that there is a high internal reliability of the measurement instruments. Based on the Cronbach alpha values in table III, the study concludes that the data gathered for each construct are reliable and therefore could be used for further analysis.

TABLE III. Mean, Standard deviation, and Reliability statistics.

Variables	No. of items	Mean	S. D	Cronbach Alpha
Trust	8	4.1762	0.57753	0.719
Perceived risk	8	3.4352	0.65939	0.739
Attitude	8	3.5828	0.84852	0.859
Performance Expectations	8	4.0828	0.74335	0.880
Social Influence	8	4.2575	0.60392	0.703
Intentions (AMP)	4	3.2259	0.84083	0.816

N= 172 respondents, Intention (AMP - adopt mobile payment).

Regression Analysis

The coefficient of correlation examines only the linear association between the variables which shows the degree to which the variables move together. Therefore, it is important to do a regression analysis to explain how an independent variable is arithmetically related to the dependent variable and to show the effect of a unit change in the dependent variable as a result of a unit change independent variable. Moreover,

regression analysis is critical for validating the study's hypothesis.

It was also relevant the study determines the goodness fit of the model used for the study. The ANOVA is estimated to give a clear indication of how good a model (Pallant, 2005). The model used for the regression analysis is

$$INT = \beta_0 + \beta_1T1 + \beta_2PR2 + B3ATT3 + B4PE4 + B5SI5 + \mu_i \quad \text{Equ (1)}$$

The model of this study hence proves to be statistically significant by showing .000 significance in table IV. This also

explains the correlation between the model and the dependent variable is statistically significant as the F-test is significant. Furthermore, since the P-value of this model is less than the significance level, it can be said that the sample data of the study provides sufficient evidence to conclude that the regression model fits the data.

Table IV stipulates the model summary which reports $R=0.631$ and $R^2= 0.598$. The R^2 is used to ascertain the

strength of the relationship between the model and the dependent variable. The value of the R^2 therefore means 59% of the variations in the dependent variable is explained by the model. The adjusted R Square for the model is 57%, which is the adjustment of R square when the size of the sample is small and the R square tends to be optimistic in overestimating the actual value of the population.

TABLE IV. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	21.893	5	4.379	21.140	.000 ^b
	Residual	33.140	160	.207		
	Total	55.034	165			

A. Dependent Variable: Intentions

B. Predictors: (Constant), Social influence, Performance expectations, Trust, Perceived risk, Attitude

TABLE V. Model summary and the correlation coefficient between independent variables and dependent variable.

Variables	Beta	t-value	Sig.
(Constant)	1.327	4.358	0.000
Trust	0.149	2.450	0.001**
Perceived Risk	-0.019	-0.375	0.708
Attitude	0.079	1.304	0.001**
Performance Expectations	0.467	6.575	0.000**
Social Influence	0.031	0.625	0.003**
$R=0.631$ $R^2= 0.598$	Adj. $R^2=0.579$	F-value =21.140	Sig=0.000

* indicates $p < 0.05$; ** indicates $p < 0.01$ (one-tailed), dependent variable: Intention to adopt mobile payment.

After estimating the ANOVA and model summary, the study determined the contributions of the predictors to changes in the dependent variable. Using a confidence level of 95%, a 5% significant level, the study computed the correlation coefficients of the independent variables to determine their relationship and impact on the dependent variable. The following justify the hypothesis proposed:

Trust and intention to adopt mobile payment.

The outcome in the coefficient table V shows that trust has a beta coefficient of 0.149 with a significant value of 0.001. This shows that trust does contribute to the prediction of the adoption of mobile payment in Cote D'Ivoire. This is also an indication that the adoption of mobile payment is dependent on trust as proposed by the study. A 14.9% change in the trust will result in a 14.9% change in the intention to adopt mobile payment. The outcome of the study is in line with studies made on the factors influencing the adoption of mobile payment relative to merchants in Ethiopia where trust records a beta value of 0.235 and a p-value < 0.05 (Abebe & Lessa, 2020). The outcome of the study is also in conformity with results from the study made relative to factors influencing the intention to adopt mobile where trust records a beta value of 0.190 with p-value < 0.05 (Tobbin, 2010). This also indicates that mobile payment systems are perceived as trustworthy by customers.

Perceived risk and the intention to adopt mobile payment.

Reference to table V, perceived risk records a beta value of -0.019 and a p-value of 0.708. This means that perceived risk has a negative impact on the intention to adopt mobile payment. It is also not a predictor of the intention to adopt mobile money. The outcome means a unit increase in

perceived risk will result in a 1.9% decrease in the intention to adopt mobile payment. The decision to opt for mobile payment is not affected by the risk associated with it in Cote D'Ivoire. The outcome of the study conforms with studies from Roy & Sinha, (2017) on factors affecting customer's adoption of mobile payment with perceived risk reporting $B=-0.052$ and $p>0.05$. However, the study from Omol et al., (2016) though establishes a negative B value of -0.052 on the relationship between perceived risk and intention to adopt but statistically significant with a p-value < 0.05 which is contrary to the outcome of the study.

Attitude and the intention to adopt mobile payment.

The results in table V show that attitude records a beta value of 0.079 with a p-value of 0.001. This means that the attitude of consumers has a positive relationship with the intention to adopt mobile payment, its impact is significant. Attitude contributes 7.9% to the variance explained in the intention to adopt mobile payment. The outcome of the research is in line with the one conducted by Abebe & Lessa, (2020) where attitude reported a beta value of 0.522 with a p-value > 0.05 . The result is also supported by the finding of a study made on determinants of customers' acceptance of electronic payment system in India by (Roy & Sinha, 2017).

Performance expectations and intention to adopt mobile payment.

Reference to table V, the coefficient value for performance expectation is 0.467 with a p-value of 0.000. This means performance expectation has a positive and significant impact and predict intention to adopt mobile payment. Therefore, controlling the variance explained by all other variables in the model, performance expectation contributes 46.7% to the

variance explanation of the dependent variable i.e., intention to adopt. Evidence from Yoboue et al., (2018) conforms with the outcome of this study. Reports from the study indicate performance expectation with a beta value of 0.581 and a p-value of 0.000. The study indicates performance expectancy positively and significantly influences the intention to adopt mobile payment. Deningtyas & Ariyanti, (2017) study reveals that performance expectancy has a positive and significant impact on intention to adopt mobile payment with performance expectation showing a beta value of 0.140 and a p-value of 0.000. This is an indication that customer's expectations about how mobile payment should work are a critical contributing factor in adopting mobile payment.

Social influence and intention to adopt mobile payment.

The outcome of this study in table V reveals that social influence records a coefficient value of 0.031 with a

significant value of 0.003. The outcome means a 3.1% increase in social influence results in a 3.1% change in intentions to adopt mobile payment. It also means the adoption of mobile payment by respondents is dependent on how socially they are influenced. This outcome is supported by a study conducted by Lim, (2018) on factors affecting the adoption of mobile payment in Malaysia. The coefficient value of social influence for the study was 6.793 which was significant at 0.000. Another study that is also in line with the outcome of this study is Ting et al., (2016) which also investigated the intention to use mobile payment concluded with social influence reporting a beta value of 0.321 and a significant value of 0.000. Operators of mobile payment services cannot rule out the role the social system plays in making people adopt mobile payment systems in Cote D'Ivoire.

TABLE VI. Hypothesis results summary.

Hypothesis		Results
H1	Trust will have a positive impact on the intention to adopt mobile payment.	Accepted
H2	The perceived risk will have a negative impact on the intention to adopt mobile payment.	Accepted
H3	Attitude will have a positive impact on the intention to adopt mobile payment.	Accepted
H4	Performance expectations will have a positive impact on the intention to adopt mobile payment.	Accepted
H5	The social influence will have a positive impact on the intention to adopt.	Accepted

VI. CONCLUSIONS

The general purpose of this research was to explore the factors influencing the adoption of mobile payments in Cote D'Ivoire using students from the University of Cocody as a population of the study. Falling on the Theory of Planned Behavior (TPB) and the Unified Theory of Acceptance and Use of Technology, the study extrapolated five variables which are trust, perceived risk, attitude, performance expectation, and social influence to justify the reason to which people adopt, use or have the intention to adopt mobile payment in the country. Data analysis, results of the study, and interpretations of the outcome give justification to the objectives of the research.

The first objective of the research was to establish the relationship between trust and the intention to adopt mobile payment. The descriptive and regression analysis showed that respondents have trust in the mobile payment system and therefore the intention to adopt. There was a positive and significant relationship between trust and the intention to adopt. The outcome also confirms the hypothesis for the study relative to the relationship between these two variables.

The second objective aimed at establishing the relationship between perceived risk and the intention to adopt mobile payment. The findings showed there is an inverse relationship between perceived risk and the intention to adopt mobile payment. It presupposes that respondent's intent to use mobile payment systems are not affected by the risk that the system poses. The risk does not deter customers to use mobile payments. The outcome confirms the hypothesis of the study relative to these constructs.

The third objective sort to establish the relationship between attitude and the intention to adopt mobile payments.

Results from the study reveal that the attitude of respondents is a major contributing factor relative to the intention to adopt mobile payment. The relationship between these constructs was positive which then confirms the hypothesis made by the study.

The fourth objective focused on establishing the relationship between performance expectations and the intention to adopt mobile payment. Analysis from the study gives a true indication that the respondent's expectations relative to how mobile payment systems should perform adds to the reason for which they use the system. Performance expectations posit to be one important predictor of behavioral intentions. The outcome of the study conforms to the hypothesis made in the study.

Lastly, the research sort to establish the relationship between social influence and the intention to adopt mobile payment. The outcome of the study clearly shows the respondent's decision to use mobile payment is influenced by their social status or class. The outcome however conforms to the hypothesis stated in this research.

VII. THEORETICAL AND PRACTICAL IMPLICATION

Some numerous theories and models have been propounded to give meaning to the reasons why people or users adopt and use new technologies that have been introduced and are being used with varying degrees of challenges and strength. Variables from the Theory of Planned Behavior (TPB) and the Unified Theory of Acceptance and Use of Technology used throughout the research show to justify their relationship to adopt mobile payment. The outcome of the study indicates these theories could be employed to effectively explain issues relative to mobile or electronic payments and any form of technology introduced.

The results of the research bring into place critical implications for the practical context of managing the mobile payment sector in Cote D'Ivoire and increasing the population who uses mobile payment systems to undertake their daily transactions. First of all, service providers should have a critical look at issues of trust and risk relative to mobile payment services with Ivorian consumers. The promotion of mobile payment services would continue to see growth if a consumer's trust in the system is built and held in high esteem. It is the trust that makes consumers have faith in the mobile payment system. Cote D'Ivoire is saturated with different categories of people with different cultures and perceptions with the majority of people especially those in rural areas without a formal bank account. Therefore, people are likely to adopt mobile payment services when they believe the system is reliable, efficient, and trustworthy. Once the consumers are certain of not losing their monies, investment and transactions not tainted by the mobile payment system, they are likely to use mobile payment and even recommend to others. Arguably, service providers should make sure the services they offer to customers meet their expectations, demands, needs, lifestyle and seamlessly integrate into the consumer buying process without requiring stress to be able to use the service. Finally, the significant factor of social influence in behavioral intention suggests that individual social connections and the social status of group affiliation, such as family members, friends, and colleagues, lead to the adoption of M-payment services in Cote D'Ivoire. The service providers potentially need to consider people's social connections and status to increase the degree of adoption of M-payment services.

VIII. LIMITATIONS AND RECOMMENDATIONS

Although this research brought out promising and desired objectives, it has its limitations. The first of the limitation has to do with the sample size which is deemed to be small in light of this research. Additionally, the unwillingness of some respondents to participate in the survey by refusing to answer questions sent to them limited the intent of the study relative to the sample size. Finally, the focus of the study was centered on students at the University of Cocody and all other respondents in other parts of the country were not considered. Due to this, it makes generalizing the outcome of the study to mean all customers adopt mobile payment because of the factors indicated in this study somehow arguable.

A comparative study could be initiated to cover people who intend to adopt the usage of mobile payment and non-adopters within the jurisdiction. This would inform stakeholders about the factors which influence these categories of users. Furthermore, future researchers could resort to other forms of theories that inform the acceptance of technology and justify the factors which influence people to adopt mobile payment in Cote D'Ivoire. Lastly, future researchers could expand the sample size or alter the population of the study to have a fair idea about factors affecting the adoption of mobile payment in Cote D'Ivoire.

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