

The Use Of M-Payment Services In South Africa: A Value Based Perceptions Approach

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ABSTRACT

Business is transforming at an exponential rate and mobile technology is considered to be a key driver in this economic revolution. Despite the efforts of many businesses in making extensive investments in resources to enhance the service experience, long-term post-adoption of mobile payment services by consumers still remains an elusive dream. In particular, researches that align South African customers' value perceptions of M-payment usage are scarce. It appears then, that if service providers cannot retain users and facilitate continuance usage along M-payment platforms; they might fail to recover the initial development costs and eradicate the valuable gains derived from turning the M-payment story into a winning success. Therefore, since M-payment post-adoption has not been as rapid or widespread as expected, this study aimed to examine consumers' perceptions of M-payment value and the corresponding influence on e-service trust, user satisfaction and continuance intention to use M-Payment platforms. The study followed a quantitative survey approach in which data were collected from a sample of 269 M-payment users in South Africa. Structural Equation Modelling software Smart PLS was applied to ascertain the model fit. The results of this study found strong support for positive and significant relationships between value, trust, satisfaction and continuance intentions. Service providers are challenged to utilise value and trust-formation elements as the central differentiation factors which unsurprisingly impact on satisfaction evaluations and ultimately, the users' willingness to continue enjoying the M-payment service experience into the future. Thus, the confluence between financial institutions, mobile network operators as well as businesses is compelled to give prominence toward creating holistic value-based user experiences along the mobile platform.

Keywords: Continuance Intention; M-Payment; Satisfaction; Trust; Value

INTRODUCTION

The payment systems used in business activities have been altered by the insurgence of novel technologies such as the Internet and social networks. Driven by the kinesis of modern society, a significant growth in mobile telephony has also been noted, followed by a sharp surge in the need for quick, safe and convenient money banking systems. Mobile payments have been suggested as a solution to facilitate micropayments in electronic and mobile commerce environments. This move has been aimed at providing an alternative, for the diminishing use of hard cash. According to the International Telecommunication Union (ITU, 2011), approximately 6 billion mobile subscriptions were reported by the end of 2011, corresponding to a global cellular phone penetration of 86 per cent. This trajectory has been driven by the increased use of mobile phones in the developing countries whereby the growth has accounted for more than 80 per cent of the 660 million new mobile-cellular subscriptions added in 2011. According to a report by the Groupe Speciale Mobile Association (GSMA, 2014), mobile payment revenue is expected to exceed one trillion dollars (USD) by 2017 driven by mobile commerce and proximity payments performed by waving a mobile device at various merchants' point-of-sale outlets. This is because cellphones (particularly smartphones) among other mobile devices present an invaluable, secure and intelligent platform that functions essentially as a mini supercomputer that fits into a pocket (Grubb, 2012). From a business perspective, new card and card-less payment methods are being developed which some

bankers say has predicted the dawn of a cheque-book-free era (Kamhunga, 2012). In South Africa, particularly, despite the extensive growth of M-PESA mobile transfers in 2013 and MTN Mobile Money showing strong growth, the mass adoption of other mobile transacting solutions hasn't been fully realized (Mbiti & Weil, 2011). Seemingly, South Africa is yet to experience some rapid and game-changing innovations in the mobile payments space as the large banks and retailers start investing time and money in mobile transacting. Even cash as a mode of payment could eventually become obsolete as the paths in bank innovation are largely dictated by the rapid convergence between financial services and mobile service companies, thereby transforming the mobile cellular phone into a virtual banking hall.

Mobile payment (thereafter referred to as M-payment) refers to financial business transactions that are operated through a technological device that functions through a mobile network. Different researchers and institutions have defined this concept from different perspectives. For example, Au and Kauffman (2008:152) defined M-payment as "any payment in which a mobile device is utilised to initiate, authorise and confirm a commercial transaction." Liébana-Cabanillas, Sánchez-Fernández and Muñoz-Leiva (2014) suggested that Mobile payment can be defined as any type of individual or business activity involving an electronic device with connection to a mobile network enabling the successful completion of an economic transaction. Dahlberg, Mallat, Ondrus and Zmijewska (2008) specified that M-payment pertains to the adoption of mobile terminals to facilitate the payment for bills, goods and services. However, the definition of Kim, Mirusmonov and Lee (2010) delimited M-payment to banking transactions and money transfers. Other scholars have suggested that M-payment incorporates payments that are made for digital content (ring tones, logos, news, music, or games), tickets, parking fees and transport fares (Dahlberg & Mallat, 2002). Zhou (2013a) hinted that M-payment is a sub-set of mobile commerce (m-commerce) which provides a method for conducting micro payments to facilitate commerce transactions on mobile devices. By contrast, Forrester's and Gartner's definitions of M-payment are much narrower. Forrester (2012) defined M-payment as a fund transaction initiated by a mobile phone without using the voice function while Gartner (2013) defined M-payment as transactions conducted using a mobile phone and payment instruments that include banking mechanisms and stored value accounts, to the exclusion of transactions based on the public network's billing system and interactive voice response system (Telkom). In this paper, a broader definition that was conceptualised by Deloitte (2012:4) is adopted, which specifies that mobile payment is "a form of payment where a mobile device is used to realise monetary information exchanges and complete fund transfers from the payer to the payee by way of accessing communication networks or using short-range communication technologies from a mobile network operator."

Grubb (2012) contended that near universal access to the mobile phone as a technological device has been achieved. This status quo has morphed the mobile devices into an ultimate payment vehicle at virtual point of sale (POS); which enables an intricate one-stop meeting between the consumer, consumer's bank, retailer, retailer's bank and a financial switch (Ondrus & Pigneur, 2007). This confluence enables business entities to establish a universal electronic presence that inspires the development of value-added mobile services (Kuo, Wu & Deng, 2009). This transformation of business payment instruments has provided an added advantage of personalisation (Mallat, 2007), location specificity (Dahlberg *et al.*, 2008) and ubiquity (Zhou, 2013b). In addition, Liébana-Cabanillas *et al.* (2014) have cited increased versatility, considering the large number of existing mobile phones, faster transactions, increased convenience, time-saving and reduced discount rates as some of the benefits of mobile payment use. In that regard, an author has focused on cell phones (Henkel, 2002), while others included all mobile communication devices in their empirical analysis (Zmijewska, Lawrence & Steele, 2004). In this study, a mobile device shall encompass all M-payment tools that allow access to an Internet network (Kaplan, 2011). This includes, inter alia; cellular phones, smartphones, tablet PCs, personal digital assistant and a net book, if it can access different types of wireless networks such as WLAN, 3G and WiMAX (Abdelkarim & Nasereddin, 2010). Moreover, a mobile device should be identified uniquely, as through a built-in SIM card from an existing mobile phone operator. This implies therefore, that mobile devices are highly personalised tools that cannot be commonly shared among users (Antovski & Gusev, 2003). As such, the new mobile channel with integrated mobile payment systems could significantly facilitate the development of new business models in the emerging multi-channel and multi-device environment. Surprisingly, despite the existence of such encouraging enablers, the penetration of mobile payment services has strongly deviated from previous predictions (Porteus, 2006). Furthermore, adoption has not been as rapid or widespread as expected (Ondrus & Pigneur, 2007).

M-Payment Development In International Markets

The phase of M-payment development is currently in transition with numerous markets presenting a history of tried and failed solutions and a future of promising but yet uncertain possibilities through a preponderance of technology innovations. Wider adoption of mobile payments has not been as rapid or widespread as expected (Ondrus & Pigneur, 2007) and there is a long list of discontinued mobile payment services such as the Simpay initiative and Paybox which were launched in several European countries. It has been suggested that this discontinuation of service was due to the mobile operators failing to get sufficient critical mass to succeed. Fragmentation of the European market into unviable proprietary platforms has also been described as one of the biggest risks in the development of this service (Forrester, 2012). However, some success stories are noteworthy to mention. For example, in the Philippines, a middle-income developing country, M-payment development has been accelerated by a company called Competitor Globe which entered the market in 2004 with its G-Cash mobile money offering (Porteus, 2006). Japan has also seen an upsurge of M-payment service providers entering the market since the inception of DoCoMo in 2005, a major mobile operator which added the functionality of a credit card embedded onto the chip of users' mobile phones (Deloitte, 2012). Relatedly, the most visible impact of the convergence between mobile and banking technology has been the success of M-Pesa money transfer service in Kenya, which has been replicated with limited success so far in South Africa by Nedbank (Grubb, 2012). M-Pesa has contributed towards the extensive growth of the Kenyan economy, making it one of the top three contributors to the East African countries' annual gross domestic product (Kamhunga, 2012).

Similarly, PayPal's launch of M-payment service offering in March 2006 in the United States of America and Canada was a significant development which served to accelerate global uptake of M-payment services after reaching a critical mass of 100 million clients (Porteus, 2006). Although these clients are mainly based in the USA, PayPal has clients in 54 other countries, suggesting that diffusion of the service even for international remittances may be rapid, once proven and as regulations allow. The introduction of PayPal into the South African market in 2012 was greeted with cheers as both business entities and consumers assumed that this payment method would provide the long-awaited universal payment solution. However Grubb (2012) asserted that the euphoria has cooled down, as South Africans realised that, in order to conduct a PayPal transaction, they needed to (1) open an FNB bank account; (2) withstand relentless scrutiny from the national Reserve bank and (3) have all the transactions done in American dollars. The last requirement has been observed as the greatest challenge because it practically excludes Paypal transactions for local trade. South Africans have also enjoyed the services of *MTN Mobile Money* which was launched in 2005 as a joint venture between the country's second largest network operator MTN and a large commercial bank, Standard Bank of South Africa. Currently, some supermarkets, restaurants and health centres in South Africa also support the mode of M-payment (Grubb, 2012). Furthermore, Kamhunga (2012) estimated that approximately 14 million of mobile users in South Africa contributed a total of 7 billion Rands on mobile payments.

Relatedly, the state of e-readiness among countries, as measured by the capacity to create, adopt and diffuse mobile technology has been central to the acceptance of M-payment technologies (Grubb, 2012). Some markets are making progress toward attaining the right mix of market forces that will foster technology uptake. However, on a scale ranging between zero (no readiness) to 100 (complete readiness), no market has progressed to an M-payment readiness index (MPRI) of 60 which is believed to be the inflection point; the stage at which mobile devices account for an appreciable share of the country's payment mix. According to the Mastercard report (2012), the most globally advanced market in the Mobile Payments Readiness Index (MPRI) is Singapore (MPRI=45.6). Presently, South Africa (MPRI=29.1) is in fourth position in the continent, alongside its African counterparts, with Kenya leading in first position (MPRI=44.4), followed by Nigeria (MPRI=31.3) and Egypt (MPRI=30.2) in the top three markets, respectively. The results of the report suggested that there is no monopoly country in terms of M-payment success as yet and therefore an opportunity for continued uptake exists in every market.

BACKGROUND TO THE STUDY

Extant research has examined initial adoption and usage of M-payment using Davis' (1989) technology acceptance model (TAM) and Rogers' (1962) innovation diffusion theory (IDT). Factors such as perceived usefulness, perceived ease of use and perceived security were identified as the underlying influencers of user attitude and usage intention in various M-payment studies (Yang, Lua, Gupta, Caoa & Zhang, 2012; Schierz, Schilke &

Wirtz, 2010). Chandra, Srivasta and Theng (2010) suggested that mobile service provider characteristics and mobile technology characteristics affect user trust, which further affects perceived usefulness, perceived ease of use and user adoption. Shin (2010) found that user adoption of mobile payment systems is affected by perceived usefulness, perceived ease of use, perceived risk and trust. Furthermore, Kim, Ferrin and Rao (2009) postulated that individual differences (innovativeness and prior knowledge) as well as system characteristics (mobility, reachability, compatibility and convenience) also affect the intention to use mobile payment through the perceived usefulness and perceived ease of use constructs. In addition, IDT is also used to explore mobile payment user behaviour. The study conducted by Chen (2008) integrated TAM and IDT to examine the factors affecting user adoption of mobile payments, in the future. Mallat (2007) also indicated that relative advantage, compatibility, complexity, costs, trust and perceived risk affect the future adoption of mobile payment.

The author's interest in mobile payments research is motivated by a number of reasons. Academically, the subject of mobile payments is an interesting, yet challenging field of study due to its infancy. It only received wider interest in the middle of the 2000s when an increasing number of peer-reviewed papers were being published (Dahlberg *et al.*, 2008). However, most of these studies focused on user adoption factors and market analyses. Little attention has been given to issues of theoretical models in the context of mobile payment (Pousttchi, Schiessler & Wiedemann, 2008) indicating that there is need for cumulative research that could potentially contribute to theory. On the other hand, empirical researches that align customers' value perceptions with M-payment post-adoption are scarce. Furthermore, deductive studies on mobile based payment systems within a South African context are rudimentary, scantily receiving the warranted research attention. This is the status quo despite the fact that adoption is a key issue which raises the question as to why new mobile payments will or will not continue to be used by the intended users, in the future (Lin & Shih, 2009). As such, the objective of this study is to examine consumers' perceptions of M-payment value and the corresponding influence on e-service trust, user satisfaction and continuance intention to use M-Payment platforms. The study constructs are discussed in the following sections.

Continuance Intentions

Behavioural intention can be defined as the degree to which a person has formulated conscious plans to perform or not to perform some specified future behaviour (Fishbein & Ajzen, 1975). As such, continuance intentions are a type of behavioural intention that is rich as it is correlated with the actual behaviour itself (Zhou, 2013a). Therefore, continuance intention is a measure of one's possible action or intention; which can be used to predict the likelihood of an individual deciding to continue (or not) utilising M-payment services in the future. Users' post-adoption behaviour has been examined in the contexts of mobile Internet (Shin, Lee, Shin & Lee, 2010) mobile data services (Kim, Choi & Han, 2009) and mobile purchases (Zhou, 2013b). Surprisingly, post-adoption usage has seldom been examined within the context of mobile payment, though it involves great uncertainty and risk that may inhibit users' continuance usage. This is the status quo, regardless of the fact that continuance is considered the most significant element as it translates into user' retention rates as well as loyalty towards the service provider and the M-payment service, by and large (Zhao & Kurnia, 2011).

Electronic commerce organisations may achieve competitive advantage through the provision of mobile payments to customers. Therefore the issues associated with continuous usage are of vital importance (Zhou, 2013b; Mallat, 2007; Ondrus & Pigneur, 2007). In particular, the intention to use mobile payment is of considerable interest to both researchers and practitioners because financial institutions, trusted third parties, payment service providers and systems-software service providers can benefit greatly from an understanding of the key factors underlying mobile users' future intentions (Dahlberg *et al.*, 2008). Thus, Zhou (2013a) suggested that it is imperative to conduct empirical researches to identify the factors affecting continuance usage of mobile payment. However, since it is relatively difficult to measure actual continuance usage, this study will examine continuance intention as a substitute variable.

Perceived Value

Perceived value has become a catchy concept used to explain consumer buying behaviour in marketing literature. More so, a growing body of empirical research seems to concur that businesses can actually achieve competitive advantage by delivering superior value to consumers (Sweeney & Soutar, 2001; Lin & Wang, 2006;

Chen, Shang & Lin, 2008; Kuo *et al.*, 2009; Lu & Hsiao, 2010). Thus, according to Kaya and Kahraman (2011), perceived value has become a new strategic imperative among service providers. While there is no general consensus regarding what constitute value in the extant literature, the term has most often than not been defined as extremely ‘abstract and polysemous in nature’ (Gallarza & Saura, 2006:438). This is because different meanings have been attributed to the concept across disciplines, research contexts and approaches in scholarship. Some converging viewpoints present price and quality as the possible indicators of perceived value (Lin & Wang, 2006; Kim, Chan, & Gupta, 2007; Wang, 2008; Lu & Hsiao, 2010). Li, Robson and Coates (2013:491) defined the concept as “the consumer’s anticipation about the outcome of a service based on future benefits and sacrifices”. Conceptions of value suggest that initially the customer benefits from the service and eventually exhibits considerable preference for the service attributes and performance that fosters the attainment of user goals. Bajs (2013) defined value as what the consumer gets for what was paid, which largely gives credence to the functional benefits derived from using the firm’s products and services. Chen and Chen (2010) conceptualised value as the consumer’s overall assessment of the utility of a product (or service) based on perceptions of what is received and what is given. Relatedly, Chen and Dubinsky (2003) examined customer value within an electronic commerce environment and established that value refers to the tradeoff between the net benefits gained in exchange for the costs incurred during a service encounter. This latter definition shall be adopted for this study as it hints at a reciprocal give and get component which has remained the bedrock of significant value studies within the 21st century.

User Satisfaction

In the field of mobile services, literature is awash with a preponderance of debates as to whether satisfaction is an attitude or a relatively transient consumption-specific construct, or whether it is an outcome or an evaluative construct. From a cognitive perspective, satisfaction has been defined using the expectations disconfirmation theory (EDT) (Li *et al.*, 2013). This paradigm suggests that a customer’s feelings of satisfaction result from a mental comparison of the expectations presented at the beginning of the transaction encounter and the actual performance received. If the service performance exceeds the customer’s expectations, then the customer is very satisfied (or delighted) and positively disconfirming (Carpenter, 2008). However, if the service performance falls short of customer expectations, this is referred to as dissatisfaction or negative disconfirming. On the contrary, the second line of research suggests that satisfaction is an affective, rather than cognitive, construct (Gallarza & Saura, 2006; Cronin, Brady & Hult, 2000). Lin (2011) asserted that both approaches are indispensable at aiming to acquire a good definition of the construct. They defined satisfaction as the ‘customer’s fulfilment response’ which is both evaluative and emotion-based. Thus, satisfaction provides an indication of the customer’s beliefs about the probability of a service leading to a positive feeling. This description assesses the customer’s experience on a singular transaction as well as the overall pleasure and satisfaction with service received from a service provider (Cronin *et al.*, 2000). Essentially, feelings of satisfaction represent an emotion-based response resulting from the cognitive and affective appraisal of all relevant aspects of the business relationship (Wang & Liao, 2007). Therefore, in this study satisfaction will incorporate the cognitive evaluation (transaction-specific) and emotional recognition of three main facets: (1) satisfaction with processes and systems used for transactions, (2) satisfaction with the services that has been offered and (3) satisfaction with the information provided and updated through the mobile device platform (Wang & Liao, 2007).

M-Payment Trust

One of the greatest challenges in the growth of e-commerce is improving trust in online services. Accordingly, some studies have sought to identify methods for increasing and accelerating e-commerce trust formation (Verhagen, Meents & Tan, 2006; Pavlou, 2003; Singh & Sirdeshmukh, 2000). Previous scholars have demonstrated that trust strongly affects online purchase intentions (Zhou, 2013b). However, trust is difficult to establish in online business, particularly among emergent service providers. Van Der Heijden, Verhagen and Creemers (2003) defined trust in an online purchasing context as the willingness of one of the parties (the purchaser) to be vulnerable to the actions of a virtual establishment, based on the expectations that this virtual establishment will carry out an important action for the customer or purchaser, regardless of his or her ability to conduct or control the virtual establishment. As such, the received wisdom has labelled this construct knowledge-based trust as it incorporates the cognitive assertion by an individual in the trustworthiness of others as determined by their perceived competence, benevolence and integrity (McKnight, Choudhury & Kacmar, 2002). Therefore, in line with

Lin (2011), when mobile-bank related transactions are conducted the customer is concerned about whether or not the service provider has adequate knowledge and skills (competence) to deliver on promises (integrity) while taking the customers' interests to consideration (benevolence). On the other hand, behavioural trust is based on the user's willingness or desire to follow a particular pattern of behaviour based on the expectation that the trustee will perform a particular action which is important for the trustor, regardless of the capacity of the trustor to survey or control the trustee (Lin, 2011).

Built on mobile networks and terminals, mobile payment involves great risk since the networks may be susceptible to hacker attack, information interception, infection by viruses and Trojan horses. Therefore, mobile platform users require a reliable, trusted, reasonably well-known and relatively widely accepted solution that lets them make online payments without compromising their personal or financial information (Mallat, 2007). Seemingly, trust has been identified as a significant factor enabling user behaviour (Gefen, 2002). Therefore, it remains imperative for vendors to build trust in order to mitigate these perceived risks and facilitate the continuance usage of mobile payments (Siau & Shen, 2003). As such consumers can make a rational decision based on the knowledge of possible rewards for trusting a service provider, since trust enables higher gains while distrust avoids potential losses (Linck, Pousttchi & Wiedemann, 2006; Kousaridas, Parissis & Apostolopoulos, 2008). Akin to this postulation, consumers' trust of m-payment is typically associated with their perceptions of the systems' security. In other words, consumer perceptions of security-enforcement principles augment their beliefs in security and hence contribute to their trust in electronic transactions. Trust in this study shall encapsulate two viewpoints; trust of the service provider and trust in mobile payment technology systems.

Inter-Relationships Among Constructs And Hypotheses Development

A review of marketing literature reveals several confluences in empirical research. Although there are numerous areas of pursuit, these waves seem to begin with perceived value and trust, then carry through to satisfaction studies which have paved the way for research into behavioural intentions (Cronin *et al.*, 2000). The interest in these research avenues is due to the practical significance of the constructs as each has been tied to strategic paradigm shifts such as customer equity (Zeithaml, 1988). However, as both convergent and divergent literature continues to emerge, the consequences and antecedents of these variables continue to present a conundrum for a majority of scholars, thus presenting an opportunity for hypothetical testing in cumulative research. The next section examines the inter-relationships among the constructs used in this study.

Prior research has demonstrated that perceived value is a determinant of user satisfaction (Mbiti & Weil, 2011; Kuo *et al.*, 2009; Reichheld, 1996). This relationship has been verified within the context of mobile commerce (Lin & Wang, 2006), information systems (Wang, 2008; Chiou, 2004), retail (Ha & Jang, 2010) and travel (Chen & Chen, 2010). Kuo *et al.* (2009) conducted a study in the mobile service context and found that customers' perceived value resulted from comparisons of benefits and sacrifices, which represented distributive justice and this perceived value significantly influenced customer satisfaction and post-purchase intention. Eggert and Ulaga (2002) argued that perceived value and satisfaction cannot be substitutes but should complement each other as predictive variables of study. As such, value is an important cognitive judgment during the process of satisfaction formation. Therefore, the following hypothesis is postulated for the study:

H₁: Perceived value of M-payment services positively influences user satisfaction.

Since mobile transactions lack the corporeal presence of a physical branch, as well as face-to-face interaction between bank personnel and the customer, trust remains a key challenge for service providers. This is because trust is necessary to help users cope with uncertainty in a mobile transaction environment by eliminating potential risk. Trust is most often portrayed as the outcome of reflexive considerations of the ability of a firm to meet set obligations (Doney & Cannon, 1997). It is a central attribute in relationship initiation, formation and maintenance in a variety of exchange contexts (Verhagen *et al.*, 2006; McKnight *et al.*, 2002). A strong, positive association has been observed between the perceived value and trust dimensions within online contexts (Harris & Goode, 2004). Research indicates that perceived value is affected by judgements of trust, thereby creating value through relational benefits obtained from the interaction with service providers (Sirdeshmukh, Singh & Sabol, 2002). Similarly, the more dominant view of the perceived value and trust linkage supports the understanding that

“trust is a key and central factor during exchange, after accounting for previously established antecedents, namely; perceived value” (Harris & Goode, 2004:150). In addition, Song, Koo and Kim (2008) found strong evidence for the mediating role of trust between perceived value and loyalty. However, as Harris and Goode (2004) noted, more empirical research would be beneficial to examine the link between perceived value and trust in mobile service contexts. Following on from this discourse, the following hypothesis is proposed for the study:

H₂: Perceived value of M-payment services positively influences user trust.

The importance of trust is emphasised in electronic and mobile commerce because of the spatial and temporal separation between the merchant and the consumer, whereby the latter is required to provide delicate personal information such as telephone or credit card numbers (Lee & Chung, 2009). Consumers’ concerns about the privacy and security of mobile payments are commonly related to authentication and confidentiality issues as well as to concerns about secondary use and unauthorized access to payments and user data (Dewan & Chen, 2005). Previous studies have found trust as a significant determinant influencing customers’ willingness to conduct electronic commerce transactions (Gefen, Straub & Boudreau, 2000; Carpenter, 2008). Similarly, previous research hinted that trust has a positive impact on customer satisfaction and loyalty towards online services (Zhou, 2013a; Cyr, Kindra & Dash, 2008). Perceived security and trust are thus expected to have an influence on the users’ evaluation of the M-payment service. Lin and Shih (2009) suggested that consumer trust of service providers positively affects their satisfaction. Deng, Lu, Wei and Zhang (2010) further confirmed that trust has a positive effect on satisfaction in China’s mobile messaging environment. User trust is thus expected to have an influence on the overall satisfaction evaluation of M-payment service. Therefore, it is against this background that the following hypothesis has been formulated for the study:

H₃: Trust positively influences user satisfaction.

Satisfaction reflects cumulative feelings that are developed through multiple interactions with a service provider (Oliver, 1980). If users are not satisfied with mobile payment systems, they may discontinue their usage. Extant research has found that satisfaction is a strong determinant of continuance behaviour since it measures the congruence between the consumer’s expectations with actual performance (Zhou, 2013a; Kim *et al.*, 2009; Kuo *et al.*, 2009). An integration of the EDT theory suggests that continuance intention is determined by the level of satisfaction with a system or technology, of which the latter is a function of the users’ pre-use expectation on the system and post-use disconfirmation. Similarly, in line with the Information Systems (IS) continuance model that was postulated by Bhattacharjee (2001), satisfaction has a direct impact on users’ continuance intention. User satisfaction is considered as an important element that most intuitively relates to loyalty and continuance usage of M-payment services (Sanayei, Ranjbarian, Shaemi & Ansari, 2011). In addition, satisfaction has been found to be positively related to future Internet usage (Song *et al.*, 2008). Satisfied consumers tend to repeat their purchases and feel comfortable to recommend them to people that they care about (Fullerton, 2011), spread positive word of mouth (Shankar, Smith & Rangaswamy, 2003) and further demonstrate preference (Brown, Barry, Dacin & Gunst, 2005) both in offline and online contexts. If users are not satisfied with mobile payment systems, they may discontinue their usage. Based on this line of empirical evidence, it may be proposed that user satisfaction that is derived from prior usage experience will positively influence continuance intentions. Therefore, it is against this background that the following hypothesis has been formulated for the study:

H₄: User satisfaction positively influences M-payment continuance intentions.

In online service literature, the concept of trust is based on the idea of a relationship between a user and a service provider, which is often perceived as a substitute for human contact between the business and its consumers. Previous scholars have posited that trust plays a pivotal role in predicting the acceptance success rate of new technologies such as mobile payments (Chandra *et al.*, 2010; Chen & Adams, 2005; Misra & Wickamasinghe, 2004). Furthermore, trust has been identified as a significant factor facilitating M-payment user behaviour (Beldad, de Jong & Steehouder, 2010; Benamati, Fuller, Serva & Baroudi, 2010). Therefore, as a reflection on the increasing importance of trust in mobile technology use, trust is proposed in this study as an antecedent of continued M-

payment usage. Therefore, it is against this background that the following hypothesis has been formulated for the study:

H₅: Trust positively influences M-payment continuance intentions.

CONCEPTUAL FRAMEWORK

The foregoing synthesis of the converging literature related to the research constructs helps to present an overview of the typical M-payment user experience and will further assist to create a larger body of scholarly conversations by providing relatable experiences from the perspective of consumers. In the framework, perceived value (PV) is the predictor variable, while M-payment service satisfaction (SAT) and M-payment service trust (TRU) are the mediating variables for the study. Similarly, continuance intentions (CI) are presented as the outcome variable. The proposed linkages among these constructs is as follows: value provides the starting point in the model and directly influences the level with which users will be satisfied with (H₁) or trust (H₂), the M-payment service options. In turn, as security systems increase, the users are expected to gain more confidence, leading to trust of the M-payment services of which the element of trust will serve to enhance the level of satisfaction among users (H₃). Finally, both satisfaction and trust are expected to influence the continuance intentions construct (H₄ and H₅), respectively.

RESEARCH METHODOLOGY

To obtain an impartial perspective, a theoretical foundation was initially established through a literature review. A quantitative research approach was then employed, using the survey method.

Measures And Instrumentation

To measure the constructs in the proposed research model, multi-item scales that were previously validated by other researchers were adapted in the study. All items were modified to fit the mobile payment services context. Eight indicators of perceived customer value were adapted from Kim *et al.* (2009) as well as Sirdeshmukh *et al.* (2002) with items relating to value for money, time, effort, convenience, ease of use, effectiveness of M-payment services, good value and efficiency of mobile transactions. To measure user satisfaction, three items primarily adapted from service marketing literature were employed to measure transaction-specific satisfaction (Olsen & Johnson, 2003; Bhattacharjee, 2001; Smith, Bolton & Wagner, 1999) and an additional four items from mobile services research were adapted to measure cumulative satisfaction, contentment and pleasure derived while using mobile payment services (Oliver, 1993; Smith *et al.*, 1999). Six items were adapted from Pavlou (2003), Chiou and Droge (2006) as well as Lee and Chung (2009) to measure trust. The item measures related to the service providers' ability, integrity and benevolence, honesty, motives and accuracy. Lastly, the four items measuring continuance intention were taken from prior studies on re-purchase intention within mobile services contexts (Zhou, 2013a; Kim *et al.*, 2009). Thus, a total of twenty five items were used to measure the constructs. For each item, a seven-point Likert scale was used with anchors from "1=strongly disagree" to "7=strongly agree". Moreover, a section on the demographic profile of the respondents was included in the questionnaire with variables relating to gender, age, education, marital status, frequency of M-payment use as well as the preferred M-payment service option. These questions were structured on dichotomous, multiple choice and ranking-order closed-ended scales, respectively.

Initially, a qualitative, de-briefing session was conducted so as to ascertain the content validity of the study. The responses from three Marketing professors who were consulted led to some changes on the questionnaire, consistent with the specific characteristics of the mobile payment user and the research setting. The use of experts as judges of a scale's domain is common in value research (Zikmund & Babin, 2007; Sweeney & Soutar, 2001). After a number of amendments were made to the scale item wording, question order and layout; the modified survey instrument was then pre-tested on a conveniently selected sample of 30 respondents after which, there were no substantive concerns and the questionnaire was deemed suitable for final administration during the main survey procedure. The multiple phases of instrument development resulted in a significant degree of refinement and restructuring of the questionnaire, as well as the establishment of the *prima facie* validity of the study measures (Nunnally, 1978).

Sample And Data Collection

A simple random sampling method was used in the study to select qualifying respondents. A sample size of 300 M-payment users was selected for inclusion in the study. The target population comprised both male and female respondents of various age groups (18 years and older) who are actively involved in conducting payments on their mobile devices because it is believed that they can offer valuable contributions to the study (Churchill & Iacobucci, 2002). Primary data was collected using a self-administered, multi-dimensional questionnaire. The survey was conducted in the Southern Gauteng province over a 16 weeks period between February and May 2014 through visiting universities, businesses, research institutes, public spaces and Internet cafes. To ensure that the measured beliefs were based on direct behavioural experience, the respondents were asked if they had previous minimum experience with mobile payment usage (≥ 6 months). In addition, respondents younger than 18 and non-users of mobile commerce facilities were considered non-eligible and therefore, excluded from the study as survey participation was based on usage experience.

The researcher was involved in the fieldwork and played an active role in explaining the purpose of the study to the respondents. The cover letter explained the legitimacy of the study, provided assurance that responses would remain confidential and thanked the prospective participants for their assistance. The respondents were given adequate time to complete the questionnaire (approximately 20 minutes) and were assured of the right to anonymity and informed consent. In addition, voluntary participation, anonymity and aggregation analysis were emphasized on the cover letter, with a view to mitigate the bias effect of social desirability. Furthermore, the respondents were encouraged to respond according to their honest and ethical judgement. Out of the 300 questionnaires that were distributed, 282 were returned and scrutinised with 13 questionnaires then eliminated owing to having too many missing values. As a result, 269 questionnaires were retained as valid responses for the study, giving a response rate of 89 per cent.

DATA ANALYSIS

Data was analysed using the partial least squares (PLS) approach since the study sample size was relatively small (289) and the data were not normally distributed. Smart PLS was found to be more appropriate and befitting because it does not require the data to have a multivariate normal distribution and is less demanding in terms of sample size. Smart PLS has emerged as a powerful approach to studying causal models involving multiple constructs with multiple indicators (Hulland, 1999). Unlike AMOS (IBM, USA) and LISREL (Scientific Software, Mooresville, USA), which are covariance-based approaches, Smart PLS is a component-based method which has the ability to model latent constructs that are uncontaminated by measurement error under conditions of non-normality through path analysis (Ringle, Wende & Will, 2005).

Demographic Profile Of The Respondents

The sample distribution revealed that 63 per cent of the respondents were males ($n=170$) while 37 per cent were females ($n=99$). A majority of the respondents were in the 31-40 years age cohort (33.4 per cent; $n=90$) while nearly half of the sample group were in possession of a university Diploma as the highest qualification (42.2 per cent; $n=113$). Approximately, 64.1 per cent of the participants were single ($n=172$) while 35.9 per cent ($n=97$) purported to be married. The most frequently used service was reported as the mobile prepaid payment service (38.4 per cent; $n=103$) which encapsulates payments made for airtime, electricity, tickets and the lottery. Relatedly, a majority of users indicated that they use M-payment services at least once a week (45.1 per cent; $n=121$).

The respondents were asked to rank in order of frequency of use; the m-payment service that they had consumed within the past 6 months. The respondents reported that they had previously utilised their mobile devices to purchase additional services such as prepaid electricity, data, SMS and lotto ($n=162$; 60.1 percent); pay bills and accounts ($n=49$; 18.2 percent); perform money transfers through mobile wallet services ($n=33$; 12.2 percent) as well as corporate banking that includes checking statements and making transfers to registered banking beneficiaries ($n=25$; 9.5 percent), respectively.

Structural Equation Modeling Approach

A dual-step analytical procedure was followed in this study. Firstly, the psychometric properties of the measurement model were examined through confirmatory analysis, while the second step focused on testing the research model and hypotheses. The Smart PLS method provided a convenient approach for the simultaneous analysis of the measurement indices, structural model and interaction effects.

Reliability And Validity Analysis

Prior to the inferential statistics, the measurement instruments were evaluated for reliability. Cronbach's alpha test was performed with a view to determine the degree to which the observed variables measured the "true" value of each construct and whether they were "error free." Nunnally (1978) suggested that the score for each construct should be greater than 0.70 to be considered reliable. Table 1 indicates that the Cronbach's alpha values for the constructs (reliability) ranged between 0.747 and 0.907 while the overall scale reliability was set at 0.831, which is considered adequate. In addition, both convergent and discriminant validity were assessed using confirmatory factor analysis. Convergent validity measures whether the scale items can effectively reflect their corresponding factors whereas discriminant validity measures whether any two factors are statistically different from each other. Table 1 lists the descriptive statistics for each factor, standardized item loadings on each factor; the average variance extracted, composite reliability (CR) values, Cronbach alpha values and the corresponding item-to-total correlations.

According to Chin (1998), research variables should have a composite reliability (CR) of more than 0.70 to infer high convergence among the constructs that have been identified in the conceptual framework. Composite reliability is a SEM-generated estimate of internal consistency analogous to coefficient alpha (Fornell & Larcker, 1981). The CR values for the study constructs ranged between 0.77 and 0.88 suggesting that each reflective construct in the proposed research model demonstrated high levels of convergent validity that more than met the standard thresholds. Table 1 also reveals estimates of the average variance extracted (AVE), which assess the amount of variance captured by a construct's measure relative to measurement error. Since an AVE estimate of 0.50 or higher indicates validity for a construct's measure, the results demonstrated that this study achieved the required criterion for convergent validity by reporting AVE estimates ranging between 0.53 and 0.55.

Table 1: Analysis Of The Measurement Instrument

Research Constructs		Descriptive Statistics*		Cronbach's Test		C.R.	AVE	Measurement Item Loadings
		Mean	SD	Item-total correlations	α Value			
Perceived Value (PV)	PV1	4.27	.62	.63	.883	.87	.54	.731
	PV2			.69				.706
	PV3			.72				.662
	PV4			.69				.658
	PV5			.69				.575
	PV6			.62				.684
Trust (TRU)	TRU1	4.31	.48	.69	.907	.85	.53	.827
	TRU2			.73				.768
	TRU3			.66				.710
	TRU4			.64				.679
	TRU5			.51				.657
Satisfaction (SAT)	SAT1	3.92	.51	.63	.786	.88	.55	.688
	SAT2			.70				.598
	SAT3			.73				.761
	SAT4			.75				.687
	SAT5			.70				.841
	SAT6			.62				.725
Continuance Intention (CI)	CI1	4.16	.47	.62	.747	.77	.53	.836
	CI2			.62				.795
	CI3			.59				.740

Mean Scores: Strongly Disagree (1); Neutral (3); Strongly Agree (7).
 C.R.: Composite Reliability
 AVE: Average Variance Extracted.

The standardised item-loadings ranged from 0.575 to 0.731 for perceived value (PV); 0.657 to 0.827 for trust (TRU); 0.598 to 0.841 for satisfaction (SAT) and 0.740 to 0.836 for continuance intention (CI). Item-to-total correlation values were above the recommended 0.50 after deleting 5 items during the scale refinement process. In addition, the remaining items maintained acceptable individual item validity as more than fifty percent of each item's variance was shared with its respective construct (Anderson & Gerbing, 1988). As such, these results confirmed that all the measurement items converged well on their respective constructs and therefore are acceptable measures for this study.

Table 2: Inter-Constructs Correlation Matrix

Construct/Dimension	Value	Trust	Satisfaction	Continuance Intention
AVE SQUARE ROOT	.735	.728	.742	.728
Perceived value	1.000			
Trust	.712*	1.000		
Satisfaction	.621**	.652*	1.000	
Continuance intentions	.686**	.640*	.713**	1.000

* Correlation is significant at the 0.05 level (2-tailed)
 ** Correlation is significant at the 0.01 level (2-tailed)

Upon assessing the discriminant validity of the study, two established techniques were employed. Firstly, the latent variables were correlated against each other. Secondly the square root of the AVE estimates for each construct was computed. The rule of thumb is to have correlation coefficients of less than 0.80 between the research constructs and also the square of the parameter estimate between two constructs should be less than the average variance extracted (Fomell & Larcker, 1981). These criteria were adequately met across all possible pairs of constructs as indicated in Table 2. The square-root of the lowest AVE estimate is 0.728 which is greater than the highest inter-construct correlation value ($r=0.713$). In addition, the correlation coefficients fell below the recommended limit of 0.80 suggesting that there are no multicollinearity problems while indirectly corroborating the existence of discriminant validity in this study.

Assessing Measurement Model Fit

The second phase of the analysis comprised of making an estimate of the recommended and actual values of some fit indices for the measurement model prior to examining structural model relationships. The four research constructs were modeled as correlated first-order factors that corresponded to a six-item value factor, a five-item trust factor, a six-item satisfaction factor and a three-item continuance intention factor. The results of the measurement model fit indices are shown in Table 3.

Table 3: Measurement Model Fit

Fit indices	chi χ^2 /df	GFI	AGFI	CFI	IFI	NFI	RMSEA
Recommended value	≤3	≥0.90	≥0.80	≥0.90	≥0.90	≥0.90	≤0.080
Structural model	2.9524	0.911	0.889	0.920	0.966	0.960	0.079
<i>Data fitting the model</i>	<i>Good fit</i>	<i>Good fit</i>	<i>Good fit</i>	<i>Good fit</i>	<i>Good fit</i>	<i>Good fit</i>	<i>Good fit</i>

The goodness-of-fit index (GFI) and the adjusted goodness-of-fit index (AGFI) values were 0.91 and 0.89, respectively, which indicate marginal model fit. Since Hoyle and Panter (1995) suggested that GFI and AGFI might suffer from inconsistencies due to sampling characteristics, this study reports on four other fit indices that have been viewed as robust to sampling characteristics (Hair, Black, Babin, Anderson & Tatham, 2006). The comparative fit index (CFI=0.92), incremental fit index (IFI=0.97), Normed fit index (NFI=0.96) and the root mean square error of approximation (RMSEA=0.079). Values in the range equal or above .90 have been noted as designating adequate fit for CFI, IFI, NFI indices and less than 0.080 for the RMSEA (Byrne, 2001; Hair *et al.*, 2006). The fit for all these indices were adequate as reported in Table 3 suggesting that the data were fitting the model.

Structural Model Results

The structural model was tested using path coefficients (β) which indicate the strengths of relationships between dependent and independent variables. Furthermore, the R² values which show the amount of variance explained by independent variables were also established in this study. The statistical significance of each path coefficient was tested using a bootstrapping method utilizing 300 re-samples to obtain the *t*-values for each path estimate (Chin, 1998). Table 4 presents the results of the PLS analysis on the structural model along with the path estimates and *t*-values. Support for the study hypotheses could be ascertained by examining the directionality (positive or negative) of the path coefficients and the significance of the *t*-values. The standardised path coefficients are expected to be at least 0.2 and preferably greater than 0.3 (Chin, 1998). The R² value for the path model was established at 0.639. This result revealed that, on the overall value, trust and satisfaction altogether explained about 64 per cent of the variance in intention to continue using mobile devices for making payments. This suggests that these variables marginally explained the variations in M-payment continuance intentions while the remaining 36 per cent is accounted for by other extraneous variables which did not constitute part of this study.

Smart PLS software does not provide goodness-of-fit measures for the full path model as like LISREL and AMOS, but it provides only R² values for the dependent variables therefore, the formula provided by Tenenhaus, Vinzi, Chatelin and Lauro (2005) for estimating the global goodness-of-fit (GoF) statistic for the research model was calculated using the equation:

$$GoF = \sqrt{AVE * R^2}$$

Where, AVE represents the average of all AVE values for the study while R² represents the average of all R² values in the full path model. The calculated global goodness of fit (GoF) is 0.586, which exceeds the threshold of GoF > 0.36 suggested by Wetzels, Odekerken-Schröder and van Oppen (2009). Thus, this study concludes that the research model has a good overall fit.

RESULTS

As the baseline requisite condition for a model to be a candidate for the presence of a mediator and to be tested for mediation, all standalone paths (H₁, H₂, H₃, H₄ and H₅) were statistically significant when analysed

separately. Standalone path H₁ between PV and SAT had a β of 0.508 and was significant at the $p < 0.10$ level ($t = 17.506$) thus indicating the existence of a positive and statistically significant relationship between the users’ value perceptions and service satisfaction. Standalone path H₂ that tested the influence of PV on TRU had a β of 0.471 and was significant at the $p < 0.10$ level ($t = 14.558$) thus indicating the existence of a positive and statistically significant relationship between the M-payment users’ value perceptions with trust. Given that the model was an appropriate candidate for the potential presence of mediation, the path H₃ between TRU and SAT had a β of 0.272 and was significant at the $p < 0.05$ level ($t = 7.271$) thus indicating the existence of a positive and statistically significant relationship between trust and overall satisfaction with the M-payment service. Standalone path H₄ between SAT and CI had a β of 0.796 and was significant at the $p < 0.01$ level ($t = 7.015$) thus indicating the existence of a strong, positive and statistically significant relationship between satisfaction and continuance intentions. Standalone path H₅ between TRU and CI had a β of 0.623 and was significant at the $p < 0.10$ level ($t = 5.412$) thus indicating the existence of a positive and statistically significant relationship between trust and continuance intentions. The effects reported in Table 4 and Figure 1 of this study, are fully consistent with and support the study’s overall predictions.

Table 4: Results Of The Path Model Analysis

Path	Hypothesis	t-value	Path Coefficient (β)	Support/Reject hypothesis
Perceived Value (PV) → Satisfaction (SAT)	H ₁	17.506*	.508	Support
Perceived Value (PV) → M-payment Trust (TRU)	H ₂	14.588*	.471	Support
M-payment Trust (TRU) → Satisfaction (SAT)	H ₃	7.271**	.272	Support
Satisfaction (SAT) → Continuance Intention (CI)	H ₄	7.015***	.796	Support
M-Payment Trust (TRU) → Continuance Intention (CI)	H ₅	5.412*	.623	Support
*Significance Level $p < 0.10$ **Significance Level $p < 0.05$ ***Significance Level $p < 0.01$ n/s not significant				

DISCUSSION

From the findings, it emerged that value is a fundamental topic for M-payment research because it plays a role in creating satisfied users and an expected outcome as a result of the transaction process (Gefen & Straub, 2003; Pavlou, 2003). The results indicate that if users of M-payment services perceive greater value from the services, then their level of satisfaction with the firm and its payment services will also increase. In addition, the direct influence of value on consumers’ trust of M-payment services was established in this study. This finding is in accordance with the thesis that consumers who receive high value from a service provider should be more satisfied than those who receive low value (Liu, Marchewka, Lu & Yu, 2004). Within the same vein, the direct relationship between value with both trust and satisfaction has been validated in previous studies. Some scholars have cited both trust and user satisfaction as the behavioural outcomes associated with customer perceived value (Cronin *et al.*, 2000; Oh, 2000; Petrick & Backman, 2002; Sanchez-Fernandez & Iniesta- Bonillo, 2007; Chen, Shang & Lin, 2008). Similarly, previous research proposes that perceived security and trust in vendors and payment systems is a significant determinant of mobile commerce success (Siau, Sheng & Nah, 2004; Xu & Gutierrez, 2006). As such, the path coefficient between trust and satisfaction was found to be positive and significant. These results denote that trust has a positive impact on customer satisfaction and loyalty towards mobile payment services (Zhou, 2013a; Cyr *et al.*, 2008; Lee & Chung, 2009).

Notably, the results of this study indicated that the standalone path between satisfaction and continuance intentions had the highest predictive relationship strength in the entire model ($\beta = 0.796$), significant at the $p < .01$ level. User satisfaction is considered to be a transient factor which should be scrutinised due to its importance in determining the success and the continued existence of specified mobile services. Lin and Wang (2006) identified satisfaction as a strong predictor for users’ intention to continue using M-commerce while the article of Sanayei *et al.* (2011) addressed the notion that users’ satisfaction had a significant influence on users’ loyalty towards using M-payment services. User satisfaction has been validated as a significant predictor of future intention to use a service i.e. re-purchase intention (Bhattacharjee, 2001; Oliver, 1980). This path has been found to be significant in a number

of e-commerce studies (Lin, Wu & Tsai 2005). As such, satisfied customers tend to purchase the same service again and use it more frequently than dissatisfied customers do. It appears then, that when a user is satisfied with the usage experience, there is a higher chance that he/she will continue to use M-payment services in the future. Satisfaction will make the customers buy again and increase the frequency with which they utilise the mobile devices to make subsequent payments, thus developing a culture of M-payments which is usually accompanied by increased tolerance to price changes (Grubb, 2012).

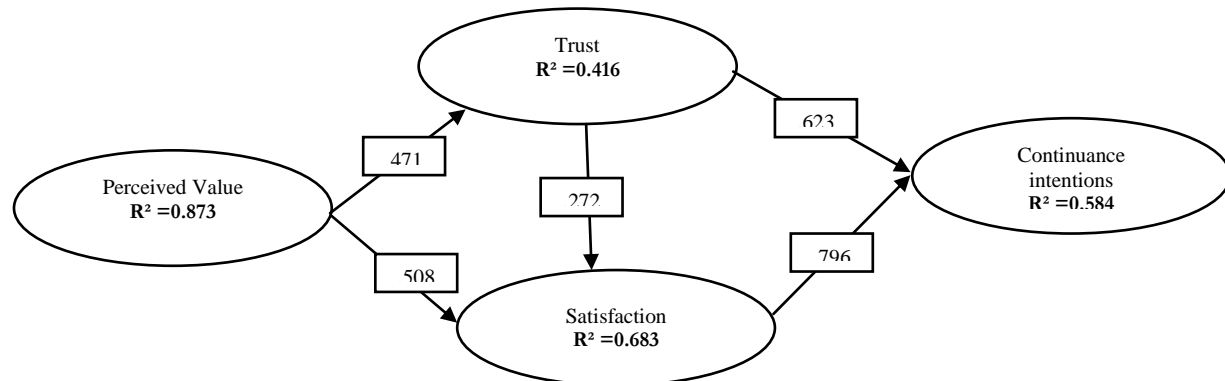


Figure 1: Standardised Structural Model For M-Payment Post Adoption

In addition, the positive association that was observed between trust and continuance intentions lends the author to posit that individuals who continue to use M-payment services do so because they have developed trust towards the service provider. Mobile payment is built on wireless networks and this involves great uncertainty and risk. Consequently, users need to build trust to ensure secure payment and good usage experiences in the future. Zhou (2013a) pointed out that trust has a significant effect on the intention to use M-payment services. The results of this study have also been corroborated in previous mobile banking studies of Kim *et al.* (2010); Koo and Wati (2010) as well as Lin (2011). Therefore, in order to attract and keep customers loyal, M-payment service providers should allay the security concerns of their customers' by promote the trustworthiness of their mobile based services since trust performs a crucial function in promoting M-payment usage.

The implications of this study are that value perceptions take the precedence in predicting whether users will both trust the M-payment service platform and further acquire satisfaction from such channels of payment transactions. Therefore, it is important for mobile software developers to balance the security function of mobile devices for performing payment transactions. In predicting customers' m-payment continuance intentions, value, trust and satisfaction were found to contribute substantially to variance in usage intentions. As such, service providers should focus their efforts of value-creation strategies and trust-formation solutions as this can go a long way to re-shape consumers' attitudes and overall satisfaction while choosing mobile over other alternative payment options.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Self-ratings of the study variables were collected from a limited sample size of 269 users located within the Gauteng province of South Africa. This implies that caution must be exercised when generalising the results to other geographical locations and upon deriving subsequent conclusions from this study. Moreover, the efficacy of M-payment continuance was solely assessed from the perspective of urban users, while considerable adoption has also been reported among rural dwellers in South Africa. The results would be more informative if data from both sides of the dyad were compared. For example, future studies may be conducted by using paired data from both rural and urban users of M-payment services situated across different provinces of the country. Furthermore, increased studies of this nature are encouraged among dissimilar cultures, in order to establish the robustness of the scale as well as its cultural invariance. More studies can also study the effects of a larger set of variables, other than those incorporated in this study.

CONCLUSION AND RELEVANCE OF THE STUDY

The current study proposes a framework for understanding post-adoption factors within the context of M-payment services in South Africa. Another differentiation from this work to other M-payment studies is that dependent variables in recent studies have been attitude (Benamati *et al.*, 2010), behaviour changes (Gefen & Straub, 2003; Liu *et al.*, 2004), satisfaction (Yeh & Li, 2009) and acceptance (Dewan & Chen, 2005). However, in Cheung, Zhu, Kwong, Chan and Limayem (2003)'s meta-analysis of consumer-technology interactions (as quoted from Cyr *et al.* (2008), they emphasised the scarcity of long-term relationship building in mobile commerce research, as compared to other over-emphasised topics such as technology adoption. More succinctly, Siau and Shen (2003) suggested customer trust, as one of long-term relationship builders, while Zhou (2013a) opined that continuance usage is a better estimator for the growth of M-payment services as well as the successful transition from initial adoption to continuous service patronage. Thus, being one of the few studies to consider continuance intention to use M-payment through value, trust and satisfaction convergences in the mobile payment domain, the current study added to extant knowledge. The study also offers a foundation that guides future research on mobile services and technologies. The findings also support strategic organisational decision-making by providing insights into areas where equity can be enhanced. Furthermore, the study findings indicate that the business models of mobile payment service providers need to evolve from limited proprietary solutions towards holistic and standardized solutions that infuse elements of trust, in order to succeed. Thus, industry players are challenged to develop and offer mobile payment solutions in a way that consumers regard them as valuable for their individual use experiences.

AUTHOR INFORMATION

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