

## The Value Perspective to Adopt Mobile Banking

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### ABSTRACT

Customer's value perception is a subjective concept in banking services. Value perception varies among bank customers. Despite the availability of technologically advanced mobile devices, mobile banking services, which use these devices, have not been widely accepted by the customers. Thus, the objective of this study is to investigate various factors affecting the value held by bank customers in driving their behavioural intention to use mobile banking services. The findings from this study may enable banks which seek to promote competitive advantage to examine all factors related to perceived value in order to improve customer value of mobile banking service and consequently their intention to adopt.

*Keywords:* Mobile banking, Mental Accounting theory, perceived value, UTAUT

### INTRODUCTION

Mobile phones are more pervasive than personal computers, as there are three times more mobile phone users than online PC users (Riivari, 2005). Moreover, the capacity of the modern-day mobile phone shifts from being a device for transmitting voice to a device that also carries data and money (Puschel *et al.*, 2010). Accordingly, this newly defined commercial portal has opened doors for industrialists and other

providers of goods and services such as financial service providers to redefine their operations. Various financial institutions have been producing fresh and novel products and services that are founded on the platform of mobile application, which is known as Mobile Banking Service (also known as M-banking, SMS banking, m-banking, etc).

M-banking provides customers with the opportunity to carry out banking transactions using their mobile phones. Indeed, the ubiquity of mobile devices, coupled with the swift data transmission technologies, enable users to transform their mobile phones into banking units anywhere at any time (Cruz *et al.*, 2010). The intention to

#### ARTICLE INFO

*Article history:*

Received: 30 April 2012

Accepted: 30 September 2012

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use mobile banking among customers can be linked to mobile phone usage behaviour to establish how likely it is for customers to adopt mobile banking. From the literature, many scholars (Ajzen, 1991; Davis, 1989) have proven that individual behaviour can be explained by using behavioural intention.

In spite of the availability and accessibility of technologically advanced mobile devices, mobile banking services which use these devices have not been widely accepted by the customer. Technically, statistics-based analyses point to the chasm that exists between technical advancements in the telecommunications sector and the apparent scepticism among potential customers of mobile financial services (Laukkanen & Kiviniemi, 2010; Cruz *et al.*, 2010). As such, it is imperative to delve into the causes of this slow rate of customer adoption and to understand the adoption behaviour processes of different customers who are perceived as adopters. This has led to calls for more academic research on adoption behaviour in mobile commerce context. Some researchers (Kim *et al.*, 2007; Zhou *et al.*, 2010) have called for further studies on customer value perceptions to examine its importance in driving customer behaviour intention in m-banking. Thus, this paper aims to answer that call by examining customer behaviour in the mobile banking service era, and particularly on the influence of perceived value on the adoption of intention behaviour.

## **THEORETICAL BACKGROUND**

Thaler's (1985) proposed Mental Accounting Theory is based on the prospect theory by Kahneman and Tversky (1979) that explains human decisions from the perspective of value maximization under conditions of uncertainty. Thaler (1999) suggested mental accounting as the set of "cognitive operations used by individuals and households to organize, evaluate and keep track of financial activities." Mental accounting theory is considered as an improvement over prospect theory that incorporates compound outcomes, while the value function under prospect theory is defined based on a single one-dimensional outcome. Value in mental accounting is defined as the net benefit of an overall assessment that is based on the comparison between benefits and sacrifices (Thaler, 1985). Mental Accounting Theory also explains online purchasing decisions and the adoption of other technological applications by examining customer's behaviour towards the value of such technologies (Gupta & Kim, 2010). As customers tend to make decisions based on multiple elements, Mental Accounting Theory is, therefore, more appropriate for the analysis of mobile banking services adoption.

Customers' approval of technology to a significant level is related to decision making where customers are expected to use a particular technology. The adoption is also depending on the value brought by the technology. The Unified Theory of Acceptance and Use of Technology

(UTAUT), proposed by Venkatesh *et al.* (2003), was basically developed as a technology acceptance model with the idea of creating information technology (IT) acceptable to users, thus promoting unity of view. UTAUT identified four determinants in the users' adoption intentions and their behaviour. Users' decisions in usage intentions and usage are the key to what results to expect, the influence of other people, the persisting conditions as well as the effort to be applied in usage. In addition to these determinants, gender, experience, age and the interests of the potential users have strong indirect influence on users' behaviour for use of information systems. Other important factors that benefit the usage of new technology are performance expectancy and effort expectancy (Venkatesh *et al.*, 2003; Zhou *et al.*, 2010).

UTAUT has no construct, which represents an overall estimation of the adoption service such as attitude. Attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour. However, attitude is hypothesized not to have a direct effect on behavioural intention on UTAUT. In the final UTAUT, Venkatesh *et al.* (2003) conclude that attitude construct is significant only when specific cognitions (performance expectancy and effort expectancy) are not included in the model. Thus, this study incorporates perceived value from the Mental Accounting Theory into UTAUT model.

## **DETERMINANTS OF PERCEIVED VALUE**

The most widely accepted definition of the perceived value is Zeithaml's (1988, p. 14) definition, that is, "the overall assessment on the product (or service) utility determined by customer's perceptions of what is received and what is given". In services, perceived value involves the comparison of what he has to give up (i.e., sacrifices) and what one is getting (i.e., benefits) to receive the service (Choi *et al.*, 2004). Therefore, perceived value of mobile banking service in this study involves the customers' overall perception of the benefits and sacrifices required to use the particular technology. The benefits include the value desired by the customer from m-banking service. Sacrifices, on the other hand, include monetary and non-monetary considerations (Thaler, 1985). As such, this study will measure performance expectancy and effort expectancy based on UTAUT model as benefit factors while perceived cost and perceived risk as sacrifice factors.

## **THE PROPOSED MODEL**

The proposed model of this study integrates UTAUT with the Mental Accounting Theory in interpreting adoption intention behaviour. The proposed construct of perceived value from Mental Accounting Theory will add to the existing body of knowledge. To illustrate this, many studies on customer behaviour have used the concept of value in a fixed context. These studies did not consider the risk which influences customer behavioural

intention within the scepticism environment such as mobile electronic services (Gupta & Kim, 2010). Therefore, this study aims to present a better understanding of the intention behaviour of mobile banking adoption using benefit factors (performance expectancy and effort expectancy), in agreement with sacrifice factors (cost and risk). In the next section, we describe several propositions as presented in Fig.1.

**RESEARCH PROPOSITIONS**

*A. Perceived Value in Relation to Explain Adoption Intention*

Sirdeshmukh *et al.* (2002) observed that customer value is a super ordinate goal which is likely to regulate subordinate goals such as behavioural intentions. Perceived customer value is considered highly imperative as far as the purchase intention is concerned (Dodds & Monroe, 1985). Furthermore, various studies (Dodds *et al.*, 1991; Monroe, 1990; Zeithaml, 1988) have established a positive influence of perceived

value on the willingness or intention to purchase. A study by Pura (2005) indicates that multidimensional perceived value of customers has a significant influence on the behavioural intentions and that shopping behaviour of customers is shaped by the perceived value of the product or service. Customer perceived value is usually an interactive, preferential and relative experience and easing of customer perceived risk may also enhance customer perceived value. The same is applicable in online-based market.

Value maximization is an essential principle of decision-making for mobile value-added service users. A study by Kleijnen *et al.* (2007) indicates that customers' attitude could not be a determining factor of adoption intention of mobile services, whereas perceived value might play a more important role. The research by Dodds and Monroe (1985) initially investigates the relationship between perceived value and purchase intention, in which, price

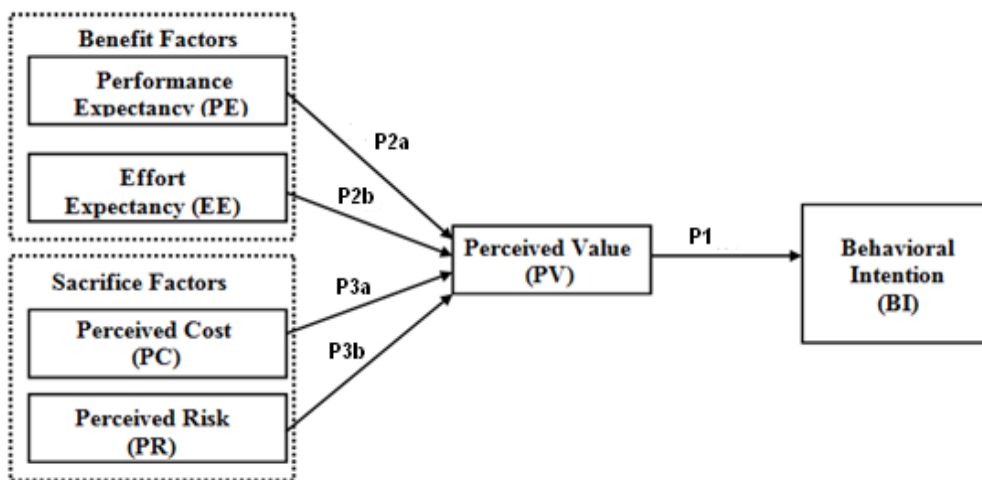


Fig.1: The Suggested Model

and perceived quality were used as two antecedents of perceived value. Later on, Wood and Scheer (1996) study improved the model, which integrates perceived risk as an external variable into the model. In Kleijnen *et al.*'s (2007) research, the value model depended on costs and benefits to explain the acceptance of mobile services, which investigated the positive effects of time convenience, user control on perceived value, and the negative effects of perceived risk and cognitive effort on perceived value. Perceived value has strong effects on intentions to purchase a commodity and the willingness of a customer to adopt the service (e.g., Chen & Dubinsky, 2003; Kim *et al.*, 2007). Therefore, a link between adoption intentions and perceived customer value may be established. Hence, this current study proposes that:

P1: Perceived value has positive effect on behavioural intention to adopt mobile banking services.

#### *B. Benefit Factors, Sacrifice Factors, and Perceived Value*

Banking institutions can maximize customer's perceived value by either enhancing the perceived value like quality, and/or by decreasing their sacrifices such as price paid and risk to take. Customer's satisfaction, on the other hand, can be improved by creating customer value through various ways. For instance, customer's value can be enhanced by improving the effectiveness, efficiency, flexibility, convenience and differentiation of services that can be delivered using

mobile technology. These are the benefit factors that are more likely to increase customer's perceived value, hence induce them to adopt mobile banking. There are other important dimensions of customer's perceived value which are the usefulness and ease of use of the service delivery. If the banking institutions are able to improve these elements, it will be highly beneficial for customers.

Performance expectancy and effort expectancy can be defined based on the mobile banking services adoption context. In particular, performance expectancy, according to Knutsen *et al.* (2005), is the degree to which mobile banking could extend benefits to customers in their banking activities. Effort expectancy, on the other hand, is the degree of effort a customer believes he or she needs to spend in using mobile banking services (Yeow *et al.*, 2008). Some previous empirical studies by Kim *et al.* (2007) reported that usefulness and technicality, as determined by users' perceptions regarding the ease of use (particularly performance expectancy and effort expectancy in UTAUT), are important deciding factors in enhancing customer value in mobile internet service settings. In addition, there is a study by Han and Yang (2010) that examined consumer's switching intention from using internet banking to mobile banking services based on the consumer perceived value perspective. Han and Yang (2010) reported that the relative advantage of mobile banking service and the improvement of satisfaction in internet banking positively affect perceived value.

As long as the service provider is able to offer superior benefits to the customers, their perceived value will be enhanced. Therefore, this present study proposes that:

P2: Perceived Value is positively affected by benefit factors.

Specifically:

P2a: Perceived Value of mobile banking services is positively affected by Performance Expectancy.

P2b: Perceived Value of mobile banking services is positively affected by Effort Expectancy.

Service value, on the other hand, has been consistently modelled as the contrasts between service quality attributes and sacrifice (Brady *et al.*, 2005; Sweeney *et al.*, 1999). In this context, sacrifice is construed as a broad composition that comprises monetary and nonmonetary costs. Brady *et al.* (2005), in their research, reported sacrifice to be a strong predictor of value across multinational and multiservice settings. In the study, perceived sacrifice comprises all costs the consumer has to undertake when using a service. There are particularly economic and non-economic costs involved. Economic costs comprise the purchase cost of the device and the payment billed to the mobile service provider. On the other hand, the non-economic costs include the possible risk of using the facility.

The economic costs are considered as an important determinant of adoption for users when evaluating the mobile banking services. Users will perceive lower

values for the service if in their opinion the economic cost is high. This is likely to give a negative influence on the service usage. Han and Yang (2010), in their study, indicated that perceived value is negatively affected by the perceived costs of mobile banking service. Perceived risk, on the other hand, is another form of perceived sacrifice. A study by Gupta and Kim (2010) reported on the effect of perceived value on online purchase decision making like online bookstore. In the study, perceived risk and perceived cost negatively influence perceived value. Therefore, this present study also proposes that:

P3: Perceived Value is negatively affected by sacrifice factors.

Specifically:

P3a: Perceived value of mobile banking services are negatively affected by perceived cost.

P3b: Perceived value of mobile banking services are negatively affected by perceived risk.

## CONCLUSION

Perceived customer value is considered as one of the most imperative factors in the study of customer intention to adopt. In this respect, perceived value is a powerful predictor in attracting new customer and retaining new ones and should thus be perceived with great importance by e-marketers. Creating customer value is considered an important consideration for companies which seek to promote competitive advantage. All the factors



related to perceived value, either they are qualitative or quantitative (subjective or objective), should be analyzed in order to effectively evaluate perceived value and consequently the intention to adopt. With this knowledge companies will be able to improve the perceived value of their products and services and consequently are more likely to influence the customer's intention to adopt.

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