

Price Perceptions of Mobile Money Users in Uganda

GW SSONKO *

Nelson Mandela University & Bank of Uganda, School of Management Sciences & Communications Department

ssonkowilson@yahoo.com

*corresponding author

M TAIT

Nelson Mandela University, School of Management Sciences

madele.tait@mandela.ac.za

Abstract

Demographic attributes such as gender, educational attainments, and income amongst others are often used as a basis for market segmentation on account of the assumption that these variables influence price sensitivity and perception (Munnukka 2008:189). In contrast to price which is the quantity of payment or compensation given by one party to another in return for one unit of goods or services (Asmundson 2013:43), price perception is the mental schema of a consumer's perspective about a price and how it influences one's reality .

The purpose of this paper is to assess how demographic attributes of gender, marital status, educational level and income influence price perceptions amongst mobile money users (MMU) in Uganda. The study gathered data from Kampala where 70-75% of national taxes are collected and the bulk of mobile money transactions emanate. A multinomial logistic regression model was specified and tested using SPSS version 20 to provide an explanation of the likelihood of MMU subjectively categorising price of mobile money services (MMS).

Results of the data analysis show that none of the demographic attributes of sex, marital status, educational level and income have a statistically significant influence on price perceptions in agreement with (Munnukka 2008:193). The lack of statistical significance may be on account of the high education attainments and urbanite nature of the sample. Increase in education gives rise to more efficient consumer behaviour as consumers are more knowledgeable making it easier to undertake an objective deeper analysis of mobile network operator (MNO) pricing of MMS. Urban dwellers have more experiential learning from their environment which may further enhance awareness and knowledge.

This study is a harbinger for marketers of MMS in Uganda in particular and the East African region in general. It provides an opportunity for marketers to reflect on the key determinants of market segmentation and drivers of price perception.

Key phrases

Mobile money services (MMS); mobile money users (MMU); mobile network operators (MNOs); multinomial logistic regression; price perception and Uganda

1. INTRODUCTION

Organisations are always looking at ways of being ahead of the competition to establish an edge – competitive advantage. There are several attributes that organisations may assess as sources of that competitive advantage. Management literature has the three generic strategies for achieving above average performance in an industry deriving from the works of Micheal Porter, namely cost leadership, differentiation, and focus. (Porter 1985 cited in IfM 2016:Internet).

As part of the cost leadership strategy, the operational efficiency of an entity ought to be high to ensure that one can sell at relatively low prices and still break even. The consumer industry around the world has resorted to prices as a tool of obtaining an edge over competitors (Heda, Mewborn & Caine 2017:Internet). Companies across various sectors of the global economy stretching from Fast Moving Consumer Goods (FMCGs), Telecommunications companies to airlines and hedge funds are using price to position themselves against competitors in their markets (Heda *et al.* 2017:Internet). Telecommunications companies “compete fiercely on price as they try to win new customers” (Heda *et al.* 2017:Internet). Cost leadership strategies have become critical in Telecommunications companies as their voice and data revenue streams reduce with more operators joining the market.

Heda *et al.* (2017:Internet) opine that when companies cut prices, the management team believes that the company’s perceived value by consumers is boosted. Kashyap and Bojanic (2000:45) note that “customer value has become the focus of firm strategies in recent years”. Nonetheless, managers seldom seek to address the issue of whether consumers will notice, how consumers respond when they do notice, and consequently the entire reduced price influence on competitive advantage (Heda *et al.* 2017:Internet).

Mobile money service (MMS) providers in developing countries are not any different from other global players. With about 150 mobile money service providers (MMSPs) in developing

countries (Lal & Sachder 2015:3), price wars might be an inevitable weapon in the marketers' tool kit. Uganda's situation with six MMSPs, namely MTN mobile money, Airtel money, M-Sente, Africell money, Vodafone money, and Ezee money, the competitive nature of the market is not any different. Indeed, anecdotal evidence from the mobile money websites and pricing list suggests that companies attempt to utilise price as a tool for competitive advantage. Whether the pricing translates into increased positive perception of the company's prices and therefore perceived value is not known with certainty.

Consumers' perceptions of price are a key determinant of shopping behaviour and product choice (Bishop 1984 cited in Khan & Ahmed 2012:124). In addition, a detailed knowledge of the consumers' perceptions and characteristics is needed when making pricing decisions for new products and services (Munnukka 2008:188). Despite the importance of price perception in influencing perceived value of a brand and by extension consumer buying behaviour, there is a dearth of research focusing on consumer perceptions of price as a dependent variable especially in developing country contexts. The existing literature is largely focused on the advanced economies yet "consumers' price perceptions vary across different cultures" (Dickson & Sawyer, 1990 cited in Meng 2011:526).

Consumer perceptions of price have been studied as an explanatory / independent variable for a number of constructs such as shopping behaviour and product choice (Zeithaml 1988:2) and customer satisfaction (Kyriazopoulos & Roumli 2007:11; Adebisi, Shitta & Olonade 2016:1) among others. Nevertheless, price perception and pricing strategy is one of the most understudied subjects in marketing (Meng 2011:526). The conceptualisation and operationalisation of the perceived price construct has focused on the monetary and non-monetary price as the sacrifice that must be made to obtain a service or product (Zeithaml 1987:87). Given the relevance of consumer perceptions of prices on a number of dependent variables, it is imperative to understand the drivers of perceived prices. In order to underscore the relevance of research in consumer price perceptions, Munnukka (2008:188) who studied the Finnish consumers of mobile phone services noted that little is known of how consumers perceive the charged prices and the dynamics shaping price perceptions.

It is important to analyse perceptions because it is the "process by which people translate sensory impressions into a coherent and unified view of the world around them" irrespective of the veracity of their premises (Business Dictionary 2017:Internet). Perception entails the choosing, interpreting and organising of information to create a meaningful picture of the

world (Lindsay & Norman 1977 cited in Munnukka 2008:189). Consequently, people equate perception to reality for most practical purposes and guides human behaviour in general (Business Dictionary 2017:Internet).

Perception or lenses through which we evaluate stimuli from the environment can be shaped by internal and external factors. Confluence Media (2013:Internet) identifies four internal factors, namely mental positioning (whether one has a positive or negative outlook to life); mental limits (state of mind); associated memories; and assumptions. Chirimubwe, Nyengerai, Mukucha, Musikwa & Masamha (2013:482) assessed how external factors like age, gender, income and education level influenced consumers' perceptions in Zimbabwe. These external factors can be generalised to a group of people and in such a case are termed as demographics. As indicated in studies such as Chen and Sadique (2007:iv), Rouhani and Hanzae (2012:1054), as well as Koparal and Calik (2015:234), demographics can influence customer perceptions in general and price perceptions specifically.

Scholars such as Meng (2011:526) have explored the influence of cultural factors on price perceptions. Others like Bolton, Keh and Alba (2013:Internet) have examined the effect of culture and market place on perceived price fairness comparing consumers of the United States and China. Puccinelli, Chandrashekavan, Grewal and Suri (2013:115) examined the influence of colour in which prices are displayed on price perceptions.

The purpose of this paper is to assess the price perceptions of mobile money users in Uganda. Specifically, the study sought to find out whether demographic attributes of gender, marital status, income, and educational level attained have an influence on consumers' perceptions of price for mobile money services in Uganda.

2. LITERATURE REVIEW

2.1 Mobile Money Services

Mobile money is a term used to refer to money stored using the SIM (Subscriber Identity Module) as an identifier as opposed to an account number in the conventional banking sense (Ndiwalana, Morawczynski & Popov 2012:1). Jenkins (2008:5) describes mobile money as money that can be accessed and used via a mobile phone. Mobile money and mobile banking services are different (Mallat 2007:414). Mobile banking services utilise a mobile device such as a mobile phone as a delivery channel or intermediary between the

conventional banking account and the final beneficiary of the financial transaction such as a merchant (with electronic Point of Sales – POS).

In contrast, mobile money entails the transfer of monetary value across a technological platform of a Telecommunications Company also known as Mobile Network Operator (MNO). Two business models are common in mobile money namely, bank-led and telecom-led with the latter being the most prevalent in Uganda (Ssonko 2011:Internet). Mobile money also known as mobile money services (MMS) consists of various stakeholders such as the end financial user (Mobile Money Users - MMU), mobile money agent who links MMU to the MNO, the MNO that provides the technology platform for monetary value transfer, and the financial institution where the trust account that stores the physical cash is maintained.

2.2 Theoretical framework

2.2.1 Price

Pricing is one of the seven “Ps” of marketing alongside product, promotion, place, packaging, positioning, and people (Tracy 2004: Internet). Price is one of the most important cues in the market place (Lichtenstein, Ridgway & Netemeyer 1993:234). Lichtenstein *et al.* (1993:234) points out that price have both positive and negative signals to users. When perceived as the monetary value or economic outlay that an individual must forego to acquire goods or service (Nagle & Holden 2002 cited in Munnukka 2008:189; Lichtenstein *et al.* 1993:234), it has a negative connotation (Lichtenstein *et al.* 1993:234). This negative connotation is reflected in the law of demand in Economics which states that there is an inverse relationship between price and quantity demanded. In other words, the higher the price, the lower the quantity demanded. In addition to its negative connotation, price can serve as a positive cue. Many consumers use price as a signal to indicate product quality (Lichtenstein *et al.* 1993:234; Agyekum, Haifeng & Agyeiwaa 2015:25).

Despite the importance of price as a signal of a latent product characteristic such as quality, consumers may use the subjective value of the price (perceived price) rather than the absolute value represented by the price in purchasing decisions. Agyekum *et al.* (2015:25) observe that price like other attributes associated with a product is a type of stimuli that reaches our senses and is assessed based on our world view. The derived response which reflects the way consumers feel about a given price is shaped by the framing effect (whether

the price presented as a gain or loss) and pain of paying (marginal benefit or value derived from an extra unit of money spent) (University of Virginia 2018:Internet).

2.2.2 Price Perception

Closely related to the absolute prices are issues of price perceptions – the mental schema of a consumer’s perspective about a price and how it influences one’s reality. Price perception is the “consumers’ subjective interpretation of the objective price (observable price in numerical form) and is a cognitive representation of the objective price” (Jacoby & Olson 1977:74 cited in Ollila 2011:19). Price perception is a key determinant of purchasing decisions (Shirai 2017:82; Quigley & Notarantonio 1992:469) and is closely related to one’s perception of quality, value and other beliefs (Munnukka 2008:188). The key to understanding how price influences purchase decisions lies in determining how buyers perceive price (Monroe 1977 cited in Quigley & Notarantonio 1992:469). In most scenarios, the consumer brings to the purchase situation a starting point of either past prices paid or an expected price (Quigley & Notarantonio 1992:469), what most marketing literature refers to as reference price. While price perceptions and pricing strategy are important (Meng 2011:526), comprehensive research in the area is a recent phenomenon that grew out of studying price as a standalone variable in Economics to examining it in conjunction with other attributes of the marketing mix (Mendoza 2016:18). Price perceptions will influence an individual’s financial behaviour (Ranyard, Missier, Bonini, Duxbury & Summer 2008:380).

2.2.3 Formation of Price Perception Frameworks

A framework is a set of ideas, rules or beliefs on which decisions are based (Longman Dictionary of Contemporary English 2018:Internet). Price perception frameworks are an abstraction of interlinked latent variables that explain how consumers react and feel about a price. They provide a foundation on which researchers can decipher consumer perceptions. Despite the broad nature of the field of price perception, in marketing price perception frameworks allow the researchers and practitioners to focus on the purchase process. The iterative cyclical price perception framework guided by the purchasing process involves a number of latent constructs like price perception, willingness to pay, intention to purchase, and purchase behaviour (Mendoza & Baines 2012:Internet). Nevertheless, price perception studies are complex on account of the heterogeneity of consumers and the fact that consumers use different price formation strategies influenced by numerous determinants.

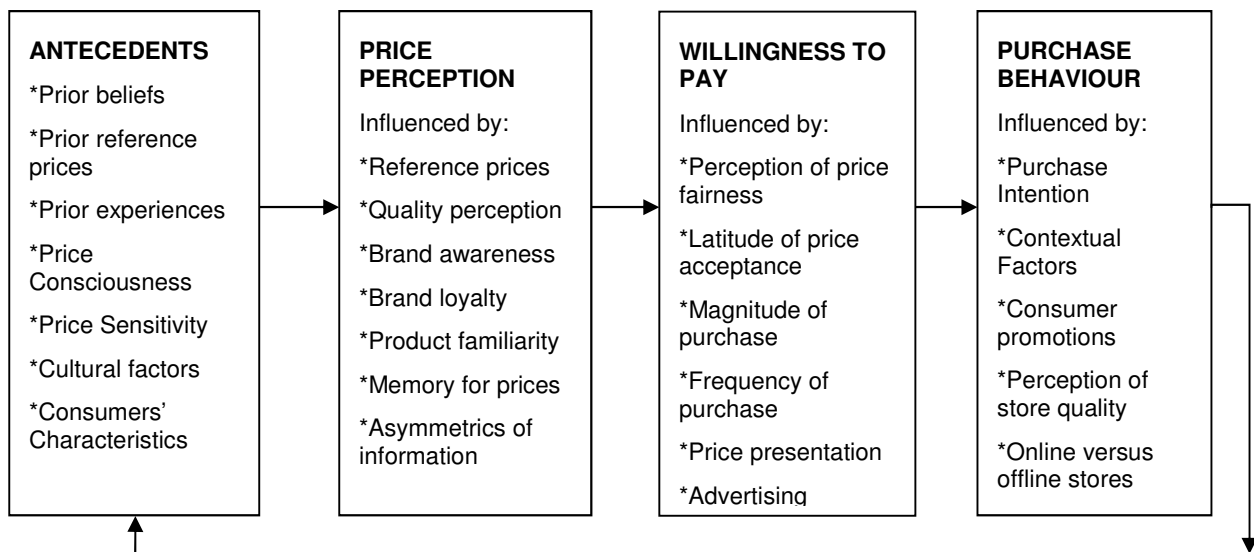
The theoretical frameworks used to explore consumer price perceptions arose from Social Psychology, Social Anthropology, and Human Perception (Varki & Colgate 2001 cited in Mendoza 2016:18). Some of these theoretical frameworks such as Geert Hofstede's cultural model (Hofstede 1980 cited in Meng 2011:527) have focused on the macro-level of analysis using the country as a unit of analysis. For example, Meng (2011:526) used Lichtenstein *et al.* (1993)'s study to derive measurements of price perception and explanatory variables.

These macro-level studies had two strands, namely (i) testing differences among cultural groups regarding consumers' price perception drivers and reactions to pricing strategies, as well as (ii) assessing the facets of price perception as a construct. The latter revealed that price perception is a multidimensional construct with both negative and positive aspects composed of the following dimensions – value consciousness, coupon proneness, price consciousness, sales proneness, price mavenism, price-quality schema, and prestige sensitivity (Lichtenstein *et al.* 1993 cited in Meng 2011:526). The former studies revealed that consumers' price perceptions vary across cultures (Sternquist, Byun & Jin 2004 cited in Meng 2011:526).

Macro-level studies have been more popular in marketing literature on account of the fact that "individual behaviour of a particular consumer is unimportant to marketing managers" (Ollila 2011:48). Marketing managers are more interested in finding distinguishable subgroups based on behavioural patterns considered to be of value (Ollila 2011:48). This may partly explain why the bulk of price perception research has not specifically considered the effects of contextual variables such as product types on price perception (Quigley & Notarantonio 1992:469).

The article is underpinned by the price perception framework developed by Mendoza and Baines (Mendoza & Baines 2012:Internet; Mendoza 2016:20). The choice of the framework is influenced by its axiomatic nature and its incorporation of a diversity of theories in explaining price perception. The framework was supported by various theories, namely mental accounting, prospect theory, range theory, anchoring theory, adaptation-level theory and range-frequency (Mendoza 2016:26). The theoretical framework is shown in Figure 1.

Figure 1: Framework on the formation of Price Perception



Source: Mendoza (2016:21)

As shown in Figure 1, there are internal and external factors that influence the formation of consumer price perception. These include, among others, reference point, quality perception, brand awareness, brand loyalty, product familiarity, memorisation of prices, and asymmetric information (Mendoza 2016:36). The relationship between consumers' characteristics and price perception is not comprehensively examined and provides an opportunity to make important contributions to the theory and practice of price perception (Mendoza 2016:58). Based on the foregoing literature review, the article relies on the framework in Figure 1, which considers consumers' characteristics as explanatory variables for price perception. The article employs a unidimensional conceptualisation of consumer's perceived price that has been used in studies such as Shirai (2017:84). The unidimensional assessment of perceived price even though employed in a few empirical studies in Marketing Literature, may negatively influence validity. In addition, the article utilises a multinominal logistic regression in contrast to structural equation modelling (SEM) that has been deployed in several previous studies.

2.3 Relationship between Price Perception and Demographic Characteristics

Demographics are socio-economic characteristics of a population or a group of people expressed statistically such as age, sex, educational level, income level, marital status,

occupation, religion, birth rate, death rate, average size of a family, and average age of marriage etc. (Business Dictionary 2018:Internet). Leonard (2018:Internet) argues that demographics are key in getting a competitive edge as they allow a marketer find the group of people who fit the mould of the ideal customer. The Upfront Analytics Team (2015:Internet) argues that it is important to use demographics in marketing for five (5) reasons, that is, understanding the ideal customer; lowering marketing costs; identifying new opportunities; creating unique selling points; and increasing sales. For a relatively young sub-sector (mobile money services) of the telecommunications industry that seeks to wrestle away market share from the traditional brick & mortar or conventional financial institutions, market segmentation using demographics is a cost effective approach to start the identification of an ideal customer around whom the marketing strategy would be built.

2.3.1 Educational Level and Price Perception

Price cues are signals that are used by consumers to make a decision on the price level. For example Puccinelliet *al.* (2013:115) undertook a study in which colour was used as a price cue. In the study, cues are usually used by consumers who have limited time to undertake a detailed analysis of a price. Educational level would ideally influence the extent to which a consumer is likely to undertake analysis of the pricing prior to purchase. Individuals with a higher educational attainment are more knowledgeable and have greater awareness (Quah & Tan 2010:49) and the increase in education gives rise to more efficient consumer behaviour (Government of Canada, Office of Consumer Affairs 2011:Internet). Therefore, individuals with higher educational levels have the capacity to undertake analysis of the pricing easily compared to those with lower educational attainments. Consequently, those with higher educational attainments should have a price perception in sync with the actual absolute price.

2.3.2 Gender and Price Perception

According to Mendoza and Baines (2012) cited in Mendoza (2016:21), price perception can be influenced by both a consumers' characteristics and cultural factors among other attributes. Gender is a social construct which is dependent on the individual / consumer's sex as well as the societal / cultural aspirations of a particular sex. In developing countries such as those in Africa, society is still largely patriarchal. In studies such as Puccinelli *et al.* (2013), carried out in developed countries, gender is a mediating variable in the investigation

of the effect of colour of price display on price perception. The expectation of the role of gender in influencing price perception in a patriarchal developing country like Uganda is that women are less likely to perceive prices as high since they do not pay the final absolute price using their own resources. The final absolute price is usually borne by the male who is the head of the household and in most cases the sole bread winner in the family. In Puccinelli *et al.* (2013:115) the study found that “male consumers perceived greater savings when prices were presented in red than when presented in black.”

2.3.3 Income and Price Perception

Contextual effects of income or wealth may affect perception of prices (Monroe 1977 cited in Quigley & Notarantonio 1992:470). From an Economics perspective, income influences price and quantity demanded, depending on the nature of the goods, that is normal goods, Giffen goods, and inferior goods. For normal goods, there is a positive (direct) linkage between a consumer's income and the amount of the goods consumed. According to Ollila (2011:48), economically, “consumer differences are mainly related to price sensitivity”. “Price sensitivity means that a person reacts to price changes and reduces buying intentions if the price increases” (Ollila 2011:48).

Income is often assumed to affect one's price perception and used as the basis for market segmentation (Munnukka 2008:189). According to Nagle and Holden (1995:77) cited in Ollila (2011:49), the relationship between income and price perception is represented by the expenditure effect, one of the ten (10) effects on consumers' price sensitivity. The expenditure effect alludes to consumers being more sensitive to prices if the total expenses are high in relation to income or the household budget (Ollila 2011:49).

The expectation is that individuals who earn high incomes are least likely to perceive prices as high since the price is unlikely to constitute a huge proportion of their disposable income or household budget. In contrast, those who earn low incomes are more likely to perceive prices as high since the price could constitute a large proportion of their disposable income and / or household budget.

2.3.4 Marital Status and Price Perception

Marital status has been studied as an explanatory variable in the service sector in a number of researches. For example Melkis, Mustapha and Hilmi (2014:33) examined how marital status and age influence perception of satisfaction and price in the fast food industry in an

emerging market. The authors found a significant influence of age and marital status on price perception and consumer satisfaction. The expectation in this article is that a single consumer is least likely to categorise the pricing of mobile money as expensive given that their disposable income is likely to be less encumbered with other obligations compared to that of a married person.

3. METHODOLOGY

3.1 Research design

A cross-sectional study was carried out to assess the effect of demographic factors, namely educational level, gender, income and marital status on price perception. The survey was undertaken to collect data for a Doctor of Business Administration thesis project undertaken at the Nelson Mandela Metropolitan University (NMMU), South Africa.

3.2 Study population and sample size

The target population was composed of all the citizens of Uganda 15 years of age and above who are most likely to own cellular phones and transact such. As at 2013, the number of people in Uganda 15 years and above was 19,393,907 people (World Bank Database 2014:Internet). Of these 19.4 million people, the accessible population consisted of all the people in Kampala City who are 15 years and above. Based on the day time population of Kampala City, the accessible population of this study was 1,578,133 people. The age of 15 years and above was benchmarked on the World Bank's Global Findex survey carried out in over 140 countries and targets a population age of 15 years and above.

Using a sample computation formula by Fox, Hunn and Mathers (2009:17) and considering a confidence level of 95 percent, a confidence interval (margin of error) of ± 5 and a total accessible population of 1,578,133 people aged 15 years and above. A sample size of 400 people was obtained.

The mobile money space has six providers namely, MTN Mobile Money, Airtel Money, M-Sente, Africell Money, M-Cash, and Ezee Money. Of these M-Cash and Ezee Money are not mobile network operator (MNO) based electronic money providers. In this study the price perceptions of individuals regarding the four MNO mobile money services are examined.

3.3 Sampling techniques

The sampling technique used was non-probability sampling design known as snow ball sampling. The use of non-probability sampling introduces an element of bias in the sample which is a limitation of this technique of sampling.

Data for the study was collected using SoGoSurvey an online survey software (SoGoSurvey 2015:Internet), from Kampala City dwellers. A total of 404 questionnaires were returned fully completed.

The likely shortcoming of an online survey is the level of internet penetration in the country in question. For Uganda, internet penetration measured as the percentage of individuals using the internet stood at 17.71 percent as at 2014 (International Telecommunications Union 2016:Internet). The implication for the data collected is that there is a higher likelihood of having responses from people who have easy access to the internet compared to those who do not readily have access to internet such as less educated, poorer and unemployed people. Nonetheless, the focus of the study was Kampala City with a relatively higher internet coverage compared to the national average. The choice of Kampala City was based on Ndiwalana, Morawczynski and Popov (2012:4)'s study that found that most mobile money transactions in Uganda emanate from the city.

3.4 Data collection methods

The survey method using questionnaires was primarily used in data collection. The questionnaire focused on three main issues, namely demographic characteristics, adoption of mobile money and financial inclusion.

3.5 Measurement of variables

The perception of the pricing structure of the mobile money service was assessed with four options to choose from, namely "very expensive", "expensive", "average", and "cheap". The questionnaire contained two questions that addressed the perception of pricing structure. These included: (i) How would you characterise the cost per transaction of sending money to others using MMS? and (ii) How would you characterise the cost per transaction of withdrawing money?

The explanatory variables were assessed at two levels, that is, nominal and ordinal. The independent variables measured at the nominal level included gender and marital status while those assessed at the ordinal level included educational level and income.

3.6 Data analysis

A multinomial logistic regression econometric model was developed and tested to investigate the likelihood of the pricing structure of mobile money being perceived as very expensive, expensive, average or cheap (dependent variable) explained by educational level, gender, income, and marital status.

The equation is:

Perception of the pricing structure of mobile money

$$(PRICE) = b_1EDUC + b_2SEX + b_3INCOME + b_4MARITAL + e \dots\dots\dots (1.2)$$

The dependent variable (perception of the pricing structure of mobile money) is polynomial in nature where an individual is offered four options to categorise the pricing structure of mobile money. The parameters of the model were estimated using the Maximum Likelihood (ML) technique using SPSS (Statistical Package for Social Sciences) version 20.

3.7 Ethical considerations

In this study, the provisions for ethical considerations suggested in Uganda National Council for Science and Technology(UNCST) (2014:2), and Sekaran (2003:260), namely respect for the autonomy of persons, beneficence (maximise benefits and minimise harm), non-maleficence (do no harm), and justice (fair treatment).

In the study, the researcher ensured informed consent, privacy, justice, sensitivity to human dignity and anonymity of the respondents. The researcher ensured that all information that was given by the respondents was treated with a high level of confidentiality.

In addition, the introduction to the questionnaire provided information to respondents about the essence of conducting the research and the need for them to give correct responses to the questions posed. The researcher designed the questions in such a manner as to avoid any embarrassing questions that could negatively impact on the self-esteem and self-respect of the respondents. The data provided by the respondents was dealt with in a professional manner without any misrepresentations or distortion during the analysis and / or reporting.

4. FINDINGS

4.1 Summary of Sample Demographic Characteristics

Table 1 shows the summary of the frequencies and percentages of the demographic characteristics. The sample had more women (51.24%) than men (48.76%); 54.95% were married compared to 44.05% who were not; 80.20% were educated with at least a degree compared to 19.80% without a degree; and 66.58% earned above UGX1million in contrast to 33.42% who earned UGX1million and below.

Table 1: Demographic Characteristics of the Sample (N=404)

Demographic Attribute	Frequency	Percentage
Gender		
Female	207	51.24%
Male	197	48.76%
Marital Status		
Married	222	54.95%
Not Married	182	44.05%
Education Level		
No Degree	80	19.80%
Degree & Above	324	80.20%
Income		
UGX1million & below	135	33.42%
Above UGX1 million	269	66.58%

4.2 Perception of pricing structure of mobile money

4.2.1 Descriptive statistics of the primary data

As shown in Table 2, most respondents (40.10%) reported that the cost of sending money was average while 33.91 percent perceived it to be expensive. Similarly, most respondents (35.15%) perceived the cost per transaction of receiving money to be expensive while 33.91 percent reported that cost of receiving money was average.

Ndiwalana, Morawczynski and Popov (2012:7) cited Mas and Morawczynski (2009) and suggested that the perception of the cost of sending and / or receiving money via mobile money platforms is on account of the fact that traditional informal money transfer techniques such as bus or human carriers though risky did not have cost implications for the recipients. Nevertheless, in an exploratory study carried out in Uganda (Ssonko 2011:17), it was found that the cost per transaction of mobile money services compared to traditional brick and mortar provisions were higher.

TABLE 2: Cost per transaction of sending and receiving money

Categorisation of cost	Sending money		Receiving money	
	Number of respondents	Percent	Number of respondents	Percent
Cheap	45	11.14%	36	8.91%
Average	162	40.10%	137	33.91%
Expensive	137	33.91%	142	35.15%
Very expensive	57	14.11%	83	20.54%
Not applicable / no response	3	0.74%	6	1.49%
Grand total	404	100.00%	404	100.00%

Source: Primary data from survey questionnaire

4.2.2 *Multinomial Logistic Regression of the price of sending money using mobile money*

A multinomial logistic regression was performed to model the relationship between the predictors (educational level, gender, income and marital status) and categorisation of price perceptions of sending money across mobile money platforms (cheap, average, expensive, and very expensive). The traditional $p=0.05$ criterion of statistical significance was employed for all tests.

Table 3 shows the model fitting information for the multinomial logistic regression of the price perception of sending money across mobile money platforms. It indicates the parameters of the model for which the model fit is calculated. The “intercept only” describes a model that does not control for any predictor variables and simply fits an intercept to predict the

outcome / dependent variable. The “final” describes a model that includes the specified predictor variables and has been arrived at through an iterative process that maximises the log-likelihood of the outcomes seen in the outcome / dependent variable.

Addition of the predictors to a model that contained only the intercept did not significantly improve the fit between model and data, $\chi^2(16,404) = 15.738$, Nagelkerke $R^2 = 0.041$, $p > 0.05$ (Table 4).

TABLE 3: Model fitting information of the multinomial logistic regression of the price perception of sending money

Model	-2 Log likelihood	Chi-square	Degrees of freedom	Significance
Intercept only	189.883			
Final	174.146	15.738	16	0.471

Source: Primary data from survey questionnaire analysed using SPSS; Link function: Logit

TABLE 4: Pseudo R-Square of the multinomial logistic regression of the price perception of sending money

Pseudo R-Square Measure	Value
Cox and Snell	0.153
Nagelkerke	0.174
McFadden	0.079

Source: Primary data from survey questionnaire analysed using SPSS; Link function: Logit

Table 5 shows that none of the predictors have p-values more than $p=0.05$ suggesting that none of the explanatory variables have a significant overall association with the outcome / dependent variable.

TABLE 5: Likelihood Ratio Tests of the multinomial logistic regression of the price perception of sending money

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log likelihood of Reduced Model	Chi-square	Degrees of freedom	Significance
Intercept	174.146 ^a	0.000	0	
Educational Level	180.358	6.212	4	0.184
Sex	176.977	2.831	4	0.587
Income	177.818	3.673	4	0.452
Marital Status	177.167	3.022	4	0.554

Source: Primary data from survey questionnaire analysed using SPSS; Link function: Logit

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

a. The reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom

As indicated in Table 6 the reference group was “Not Applicable / No Response”. Therefore SPSS has estimated a model for “Cheap” relative to “Not Applicable / No Response”; “Average” relative to “Not Applicable / No Response”; “Expensive” relative to “Not Applicable / No Response”; and “Very Expensive” relative to “Not Applicable / No Response”. Therefore, since the parameter estimates are relative to the referent group, the standard interpretation for the multinomial logit is that for a unit change in the predictor variable, the logit of the outcome relative to the referent group is expected to change by its respective parameter estimate (which is in log-odds units) given the variables in the model are held constant. The p-value is more than the p-critical value of 0.05, the association between the predictors and outcome variable is statistically non-significant.

TABLE 6: Model fitting information of the multinomial logistic regression of the price perception of sending money

PP	Level of PP	B	SE	Wald	D F	Sig.	Exp (B)	95% CI for Exp (B)	
								Lower Bound	Upper Bound
Cheap	Intercept	3.163	1.279	6.118	1	0.013			
	Edu: No Degree	0.455	1.341	0.115	1	0.735	1.576	0.114	21.821
	Edu: Degree & above	0 ^b			0				
	Sex: Male	0.735	1.265	0.338	1	0.561	2.086	0.175	24.873
	Sex: Female	0 ^b			0				
	Marital: Married	-0.323	1.327	0.059	1	0.808	0.724	0.054	9.754
	Marital: Not Married	0 ^b			0				
	Income: UGX1m/= & below	-1.446	1.370	1.114	1	0.291	0.235	0.016	3.454
	Income: Above UGX1m/=	0 ^b			0				
Average	Intercept	4.768	1.255	14.437	1	0.000			
	Edu: No Degree	-0.481	1.312	0.135	1	0.714	0.618	0.047	8.082
	Edu: Degree & above	0 ^b			0				
	Sex: Male	0.440	1.239	0.126	1	0.722	1.553	0.137	17.603
	Sex: Female	0 ^b			0				
	Marital: Married	-0.627	1.298	0.234	1	0.629	0.534	0.042	6.799
	Marital: Not Married	0 ^b			0				
	Income: UGX1m/= & below	-0.945	1.335	0.501	1	0.479	0.389	0.028	5.320
	Income: Above UGX1m/=	0 ^b			0				

PP	Level of PP	B	SE	Wald	D F	Sig.	Exp (B)	95% CI for Exp (B)	
								Lower Bound	Upper Bound
Expensive	Intercept	4.549	1.257	13.097	1	0.000			
	Edu: No Degree	-0.034	1.315	0.001	1	0.979	0.966	0.073	12.722
	Edu: Degree & above	0 ^b			0				
	Sex: Male	0.796	1.241	0.411	1	0.522	2.216	0.194	25.247
	Sex: Female	0 ^b			0				
	Marital: Married	-0.838	1.302	0.414	1	0.520	0.433	0.034	5.548
	Marital: Not Married	0 ^b			0				
	Income: UGX1m/= & below	-1.319	1.340	0.969	1	0.325	0.268	0.019	3.696
	Income: Above UGX1m/=	0 ^b			0				
Very Expensive	Intercept	3.726	1.268	8.628	1	0.003			
	Edu: No Degree	-0.491	1.349	0.132	1	0.716	0.612	0.043	8.614
	Edu: Degree & above	0 ^b			0				
	Sex: Male	0.711	1.258	0.320	1	0.572	2.036	0.173	23.951
	Sex: Female	0 ^b			0				
	Marital: Married	-0.918	1.320	0.484	1	0.487	0.399	0.030	5.306
	Marital: Not Married	0 ^b			0				
	Income: UGX1m/= & below	-0.991	1.358	0.532	1	0.466	0.371	0.026	5.319
	Income: Above UGX1m/=	0 ^b			0				

Source: Primary data from survey questionnaire analysed using SPSS; Link function: Logit

Key: PP -Price Perception; B - Coefficients of the models; SE - Standard Error; DF - Degrees of Freedom; Sig. - Significance; CI - Confidence Interval; Edu - Educational Level; Marital - Marital Status

- a. The reference category is: Not Applicable / No Response
- b. This parameter is set to zero because it is redundant

4.2.3 Multinomial Logistic Regression of the price of receiving money using mobile money

A multinomial logistic regression was performed to model the relationship between the predictors (educational level, gender, income and marital status) and categorisation of price perceptions of receiving money across mobile money platforms (cheap, average, expensive, and very expensive). The traditional $p=0.05$ criterion of statistical significance was employed for all tests.

Table 7 shows the model fitting information for the multinomial logistic regression of the price perception of receiving money across mobile money platforms. Addition of the predictors to a model that contained only the intercept did not significantly improve the fit between model and data, $\chi^2 (16,404) = 18.745$, Nagelkerke $R^2 = 0.049$, $p>0.05$ (Table 8).

TABLE 7: Model fitting information of the multinomial logistic regression of the price perception of receiving money

Model	-2 Log likelihood	Chi-square	Degrees of freedom	Significance
Intercept only	200.118			
Final	181.373	18.745	16	0.282

Source: Primary data from survey questionnaire analysed using SPSS; Link function: Logit

TABLE 8: Pseudo R-Square of the multinomial logistic regression of the price perception of receiving money

Pseudo R-Square Measure	Value
Cox and Snell	0.045
Nagelkerke	0.049
McFadden	0.017

Source: Primary data from survey questionnaire analysed using SPSS; Link function: Logit

Table 9 shows that none of the predictors have p-values more than $p=0.05$ suggesting that none of the explanatory variables have a significant overall association with the outcome / dependent variable.

TABLE 9: Likelihood Ratio Tests of the multinomial logistic regression of the price perception of receiving money

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log likelihood of Reduced Model	Chi-square	Degrees of freedom	Significance
Intercept	181.373 ^a	0.000	0	
Educational Level	183.446	2.073	4	0.722
Sex	192.256	10.883	4	0.028
Income	182.976	1.602	4	0.808
Marital Status	184.930	3.557	4	0.469

Source: Primary data from survey questionnaire analysed using SPSS; Link function: Logit

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

a. The reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom

As indicated in Table 10 the reference group was “Not Applicable / No Response”. Therefore SPSS has estimated a model for “Cheap” relative to “Not Applicable / No Response”; “Average” relative to “Not Applicable / No Response”; “Expensive” relative to “Not Applicable / No Response”; and “Very Expensive” relative to “Not Applicable / No Response”. The p-value is more than the p-critical value of 0.05, the association between the predictors and outcome variable is statistically non-significant.

TABLE 10: Model fitting information of the multinomial logistic regression of the price perception of receiving money

PP	Level of PP	B	SE	Wald	D F	Sig.	Exp (B)	95% CI for Exp (B)	
								Lower Bound	Upper Bound
Cheap	Intercept	1.286	0.829	2.407	1	0.121			
	Edu: No Degree	-0.103	0.998	0.011	1	0.918	0.902	0.128	6.376
	Edu: Degree & above	0 ^b			0				
	Sex: Male	0.650	0.894	0.528	1	0.467	1.916	0.332	11.059
	Sex: Female	0 ^b			0				
	Marital: Married	1.089	0.986	1.221	1	0.269	2.972	0.431	20.511
	Marital: Not Married	0 ^b			0				
	Income: UGX1m/= & below	-0.656	0.973	0.455	1	0.500	0.519	0.077	3.493
	Income: Above UGX1m/=	0 ^b			0				
Average	Intercept	3.571	0.762	21.950	1	0.000			
	Edu: No Degree	-0.577	0.946	0.372	1	0.542	0.561	0.088	3.588
	Edu: Degree & above	0 ^b			0				
	Sex: Male	-0.412	0.842	0.240	1	0.624	0.662	0.127	3.449
	Sex: Female	0 ^b			0				
	Marital: Married	0.560	0.938	0.357	1	0.550	1.751	0.279	11.001
	Marital: Not Married	0 ^b			0				
	Income: UGX1m/= & below	-0.772	0.916	0.711	1	0.399	0.462	0.077	2.780
	Income: Above UGX1m/=	0 ^b			0				

PP	Level of PP	B	SE	Wald	D F	Sig.	Exp (B)	95% CI for Exp (B)	
								Lower Bound	Upper Bound
Expensive	Intercept	3.370	0.764	19.465	1	0.000			
	Edu: No Degree	-0.638	0.946	0.455	1	0.500	0.528	0.083	3.374
	Edu: Degree & above	0 ^b			0				
	Sex: Male	0.085	0.841	0.10	1	0.920	1.088	0.209	5.657
	Sex: Female	0 ^b			0				
	Marital: Married	0.679	0.937	0.525	1	0.469	1.972	0.314	12.371
	Marital: Not Married	0 ^b			0				
	Income: UGX1m/= & below	-0.838	0.915	0.838	1	0.360	0.433	0.072	2.602
	Income: Above UGX1m/=	0 ^b			0				
Very Expensive	Intercept	2.775	0.775	12.833	1	0.000			
	Edu: No Degree	-0.714	0.964	0.548	1	0.459	0.490	0.074	3.243
	Edu: Degree & above	0 ^b			0				
	Sex: Male	0.262	0.853	0.094	1	0.759	1.300	0.244	6.910
	Sex: Female	0 ^b			0				
	Marital: Married	0.360	0.950	0.143	1	0.705	1.433	0.223	9.223
	Marital: Not Married	0 ^b			0				
	Income: UGX1m/= & below	-0.539	0.928	0.337	1	0.561	0.583	0.095	3.594
	Income: Above UGX1m/=	0 ^b			0				

Source: Primary data from survey questionnaire analysed using SPSS; Link function: Logit

Key: PP - Price Perception; B— Coefficients of the models; SE - Standard Error; DF - Degrees of Freedom; Sig. - Significance; CI - Confidence Interval; Edu— Educational Level; Marital - Marital Status

- a. The reference category is: Not Applicable / No Response
- b. This parameter is set to zero because it is redundant

4.2.4 Discussion of multinomial regression model results for sending and receiving money via mobile money platforms

Arango and Taylor (2008:iii) observe that the final outcome of what retail payment system will be used at the point of sale is largely influenced by the consumer's choice. The authors argue that this finding points to the two-sided nature of payments. Penz and Sinkovics (2013:293) who studied perceptions of Austrian consumers regarding payment systems using social representations theory found that a consumer's social background influenced the value they attached to means of payment.

The results of the multinomial logistic regression model estimating the perception of the cost of sending or receiving money via mobile money platforms using socio-economic characteristics namely, educational level, gender / sex, income, and marital status, did not show that any of the explanatory variables were statistically significant predictors of price perception.

The statistical non-significance of social demographic characteristics on price perception is in agreement with Munnukka (2008:190). Munnukka (2008:190) opines that the role of demographics on price dynamics remains open for further empirical inquiry. The probable explanation for the results may be on account of the high level of education attainment in the sample that allows for an objective deeper analysis of Mobile Network Operator (MNO) pricing of MMS. In addition, the cosmopolitan nature of urban culture is likely to reduce the effect of stereotypes such as that woman is insensitive to high prices because they are not the ultimate payers of the bill.

Overall as suggested by Boyanov and Vasileva (2016:ii), social demographic factors have a varying impact on the preference of mobile money services, depending on the context of the country. In addition, consumer's perception of costs may be influenced by other explanatory factors such as security and privacy, convenience, ease of use, and mobility (Boyanov & Vasileva 2016:ii).

5. IMPLICATIONS

The article set out to address the likelihood of an individual categorising the mobile money costs of sending and receiving monetary value as cheap, average, expensive, and very

expensive. The study is a harbinger for marketers of MMS in Uganda in particular and the East African region in general. It provides an opportunity for marketers to reflect on the key determinants of market segmentation and drivers of price perception.

6. RECOMMENDATIONS

The recommendations emanating from the research findings are elucidated in the section that follows.

The marketing strategy of MNOs targeted at individuals might need to re-consider the use of demographic characteristics as attributes that are used for the market segmentation. Marketers should be careful while designing marketing strategies and making decisions about how to segment the market for MMS, taking into account price perceptions. The results suggest that demographic characteristics are not good predictors of consumers' perception and consequently do not indirectly influence purchasing behaviour. Thus caution ought to be exercised in using them.

Overall, price perception of mobile money is not explained by demographic attributes. Owing to the uni-dimensional nature of price perception used in this study, there is a case for undertaking a similar study with price perception as a multi-dimensional construct. In addition, future research ought to explore institutional and system factors which may influence price perceptions.

7. CONCLUSIONS

The aspiration of developing countries is to move towards a cashless society through automation of financial transactions in their economies. Automation competes with traditional paper instruments (cash and cheques) that people have trusted and used for decades. Thus, automated instruments must compete in terms of trust, convenience and price.

While price as an absolute amount is relevant, the perception of the price structure of the automated retail payment systems such as mobile money will determine their uptake by merchants and consumers. Thus, consumer perception of the constructs of trust, convenience, and cost are critical success factors.

The article has demonstrated that socio-economic characteristics of individuals do not have a statistically significant association with price perception. Nonetheless, the results appear to

be inconclusive. Therefore, further research is needed to better understand the determinants of price perceptions.

REFERENCES

- ADEBIYI SO, SHITTA HA & OLONADE OP.** 2016. Determinants of Customer Preference and Satisfaction with Nigerian Mobile Telecommunication Services. *BVIMSR's Journal of Management Research* 8(1):1-12.
- AGYEKUM CK, HAIFENG H & AGYEIWAA A.** 2015. Consumer Perception of Product Quality. *Microeconomics and Macroeconomics* 3(2):25-29.
- ARANGO C & TAYLOR V.** 2008. Merchant acceptance, costs, and perceptions of retail payment systems: a Canadian survey. Ottawa, CAN: Bank of Canada. (Discussion paper 2008-12.)
- ASMUNDSON I.** 2013. What is a price? *Finance & Development* 50(4):42-43.
- BISHOP WR.** 1984. Competitive Intelligence. *Progressive Grocer* 19-20.
- BOLTON LE, KEH HT & ALBA JW.** 2013. Culture and Marketplace effects on perceived price fairness: China and the USA. [Internet: <http://knowledge.wharton.upenn.edu/wp-content/uploads/2013/09/1350.pdf>; downloaded 2018-01-14.]
- BOYANOV K & VASILEVA V.** 2016. The "cashless society": consumer perceptions of payment methods. A comparative study. Aarhus, Denmark: Aarhus University, Denmark. (Bachelor's dissertation.)
- BUSINESSDICTIONARY.** 2017. Perception. [Internet:<http://www.businessdictionary.com/definition/perception.html>; downloaded 2017-12-12.]
- BUSINESS DICTIONARY.** 2018. Demographic factors. [Internet: <http://www.businessdictionary.com/definition/demographic-factors.html>; downloaded 2018-07-15.]
- CHEN H & SADEQUE S.** 2007. An empirical investigation of consumer price perception and reputation dimensions' effects on attitude toward private label brands. Umea School of Business and Economics. [Internet: <https://www.diva-portal.org/smash/get/diva2:140487/FULLTEXT01.pdf>; downloaded on 2018-07-15.] (MSc Dissertation.)
- CHIRIMUBWE RG, NYENGERAI S, MUKUCHA P, MUSIKWA A & MASAMHA B.** Impact of Demographic factors on Consumers' Perception towards Valuables Insurance. *International Journal of Innovative Research & Development* 2(11):482-489.
- CONFLUENCE MEDIA.** 2013. Factors that shape our perception. [Internet: <https://confluencemedia.wordpress.com/2013/03/18/factors-that-shape-our-perception/>; downloaded on 2018-07-15.]
- DICKSON P & SAWYER AG.** 1990. The Price Knowledge and Search of Supermarket Shoppers. *Journal of Marketing* 54(3):42-53.
- FOX N, HUNN A & MATHERS N.** 2009. Sampling and sample size calculation. [Internet: <https://pdfs.semanticscholar.org/ae57/ab527da5287ed215a9a3bf5f542ae19734ea.pdf>; downloaded on 2016-12-19.]
- GOVERNMENT OF CANADA, OFFICE OF CONSUMER AFFAIRS (OCA).** 2011. Chapter 4 - Consumer Literacy and Education: Summary. [Internet:<http://www.ic.gc.ca/eic/site/oca-bc.nsf/eng/ca02101.html>; downloaded on 2018-07-14.]

- HEDA S, MEWBORN S & CAINE S.** 2017. Pricing. Harvard Business Review. [Internet: <https://hbr.org/2017/01/how-customers-perceive-a-price-is-as-important-as-the-price-itself>; downloaded on 2018-02-05.]
- HOFSTEDE G.** 1980. Culture's Consequences, International Differences in Work-related Values. Sage Publications: Beverly Hills, CA.
- IFM (INSTITUTE OF MANUFACTURING).** 2016. Porter's Generic Competitive Strategies (Ways of Competing). [Internet: <https://www.ifm.eng.cam.ac.uk/research/dstools/porters-generic-competitive-strategies/>; downloaded on 2018-07-18.]
- INTERNATIONAL TELECOMMUNICATION UNION (ITU).** 2016. Time series by country (until 2014): percentage of individuals using the internet. [Internet: <http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>; downloaded on 2016-04-30.]
- JACOBY J & OLSON J.** 1977. Consumer Response to Price: An attitudinal information processing perspective. In: JACOBY J & OLSON J (eds). Moving ahead in attitude research. Pennsylvania: Pennsylvania State University (College of Business Administration). (pp 73-86.)
- JENKINS B.** 2008. Developing Mobile Money Ecosystems. [Internet: http://www.hks.harvard.edu/m-rcbg/papers/jenkins_mobile_money_summer_008.pdf; downloaded on 2015-02-02.]
- KASHYAP R & BOJANIC DC.** 2000. A structural analysis of value, quality and price perceptions of business and leisure travellers. *Journal of Travel Research* 39(1):45-51.
- KHAN LM & AHMED R.** 2012. A comparative study of consumer perception of product quality: Chinese versus Non-Chinese Products. *Pak. J. Eng. Technol. Sci* 2(2):118-143.
- KOPARAL C & CALIK N.** 2015. The role of the consumer demographics on their price perceptions when purchasing shopping goods – a study from Eskisehir, Turkey. Vienna. (17th International Academic Conference.) (pp 234-246.)
- KYRIAZOPOULOS P & ROUNTI IS.** 2007. Can Price Perceptions influence customer satisfaction? *FACESR. Admn* 6(1):11-22.
- LAL R & SACHDEV I.** 2015. Mobile Money Services - Design and Development for Financial Inclusion. Harvard Business School Working Paper 15-083. [Internet: http://www.hbs.edu/faculty/Publication%20Files/15-083_e7db671b-12b2-47e7-9692-31808ee92bf1.pdf; downloaded 2018-02-05.]
- LEONARD K.** 2018. The Importance of Demographics to Marketing. [Internet: <http://smallbusiness.chron.com/importance-demographics-marketing-25365.html>; downloaded 2018-07-15.]
- LICHTENSTEIN DR, RIDGWAY NM & NETEMEYER RG.** 1993. Price Perceptions and Consumer Shopping Behavior: A field study. *Journal of Marketing Research* 3(2):234-245.
- LINDSAY P & NORMAN DA.** 1977. Human Information Processing: An Introduction to Psychology. 2nded. New York, USA: Academic Press.
- LONGMAN DICTIONARY OF CONTEMPORARY ENGLISH.** 2018. Framework. [Internet: <https://www.ldoceonline.com/dictionary/framework>; downloaded on 2018-07-15.]
- MALLAT N.** 2007. Exploring consumer adoption of mobile payments - A qualitative study. *The Journal of Strategic Information Systems* 16(4):413-432.
- MAS I & MORAWCZYNSKI O.** 2009. Designing Mobile Money Services: Lessons from M-PESA. Innovations, Spring 2009. (77-91.)
-

- MELKIS M, HILMI MF & MUSTAPHA Y.** 2014. The Influence of Marital Status and Age on the Perception of Fast Food Consumer in an Emerging Market. *International Journal of Business and Innovation* 1(3):33-42.
- MENDOZA J.** 2016. Towards the formation and measurement of ethnic price perception. Cranfield, UK: Cranfield University. (Doctor of Business Administration Thesis.)
- MENDOZA J & BAINES P.** 2012. Towards a Consumer Price Perception Formation Framework: A Systematic Review. [Internet:<http://anzmac.org/conference/2012/papers/173ANZMACFINAL.pdf>; downloaded on 2018-01-10.]
- MENG J.** 2011. Understanding Cultural influence on price perception: empirical insights from a SEM application. *Journal of Product & Brand Management* 20(7)(2011):526-540.
- MONROE KB.** 1977. Objective and Subjective Contextual Influences on Price Perception. In: WOODSIDE AG, SHETH J. & BENNETT P. (eds.). *Consumer and Industrial Buying Behaviour*. New York, USA: Elsevier North-Holland, Inc.
- MUNNUKKA J.** 2008. Customers' purchase intentions as a reflection of price perception. *Journal of Product & Brand Management* 17(3):188-196.
- NAGLE TT & HOLDEN RK.** 2002. *The Strategy and Tactics of Pricing: A Guide to Profitable Decision Making*. Englewood Cliffs, NJ: Prentice-Hall.
- NDIWALANA A, MORAWCZYNSKI O & POPOV O.** 2012. Mobile money use in Uganda: a preliminary study. [Internet:<http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2012/06/m4dmobilemoney.pdf>; downloaded on 2016-10-18.]
- OLLILA S.** 2011. Consumers' attitudes towards food prices. Helsinki, Finland: University of Helsinki. (Academic Dissertation.)
- PENZ E & SINKOVICS RR.** 2013. Triangulating consumers' perceptions of payment systems using social representations theory: a multi-method approach. *Journal of Consumer Behaviour* 12(4):293-306.
- PORTER ME.** 1985. *Competitive Advantage*. The Free Press, New York.
- PUCCINELLI NM, CHANDRASHEKARAN R, GREWAL D & SURI R.** 2013. Are Men seduced by Red? The Effect of Red Versus Black Prices on Price Perceptions. *Journal of Retailing* 89(2):115-125. (2013.)
- QUAH C-H & TAN AKG.** 2009. Consumer Purchase Decisions of Organic Food Products: An Ethnic Analysis. *Journal of International Consumer Marketing* 22(1):47-58.
- QUIGLEY CJ (JR) & NOTARANTONIO EM.** 1992. An Exploratory Investigation of Perceptions of Odd and Even Pricing. Miami Beach, Florida: Proceedings of the Academy of Marketing Science (AMS) Annual Conference. (April 1992.) (pp 469-474 In: LEVY M & GREWAL D (eds.) *Developments in Marketing Science*.)
- RANYARD R, MISSIER DF, BONINI N, DUXBURY D & SUMMERS B.** 2008. Perceptions and Expectations of Price Changes and Inflation: A Review and Conceptual Framework. *Journal of Economic Psychology* 29(4):378-400.
- ROUHANI FR & HANZAE KH.** 2012. Investigation of the effects of demographic factors and brand perception on the purchase intention of luxury automobiles in Iranian consumers. *World Applied Sciences Journal* 17(8):1054-1065.
- SEKARAN U.** 2003. *Research methods for business. A skill-building approach*. 4thed. New York: John Wiley & Sons.
- SHIRAI M.** 2017. Effects of Price Reframing Tactics on Consumer Perceptions. *Journal of Retailing and Consumer Services* 34(2017):82-87.
-

SOGOSURVEY. 2015. Online survey maker. [Internet: <https://www.sogosurvey.com/>; downloaded on 2015-01-01.]

SSONKO GW. 2011. Status of mobile money services in Uganda: an exploratory study. [Internet: https://www.academia.edu/4602371/Status_of_Mobile_Money_Services_in_Uganda_-_An_Exploratory_Study_BOUWP0811?auto=download; downloaded on 2016-07-05.] (Bank of Uganda Working Paper BOUWP/08/11.)

STERNQUIST B, BYUN SE & JIN B. 2004. The Dimensionality of Price Perceptions: A Cross-Cultural Comparison of Asian Consumers. *Int. Rev. of Retail, Distribution and Consumer Research* 14(1):83-100

THE UPFRONT ANALYTICS TEAM. 2015. Understanding the Importance of Demographics in Marketing. [Internet: <http://upfrontanalytics.com/understanding-the-importance-of-demographics-in-marketing/>; downloaded 2018-07-15.]

TRACY B. 2004. The 7Ps of Marketing. [Internet: <https://www.entrepreneur.com/article/70824>; downloaded on 2017-12-20.]

UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY (UNCST). 2014. National guidelines for research involving human participants. Kampala, Uganda: UNCST. [Internet: <http://www.uncst.go.ug/dmdocuments/Human%20Subjects%20Protection%20Guidelines%20July%202014.pdf>; downloaded on 2014-12-29.]

UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY (UNCST). 2014. National guidelines for research involving human participants. Kampala, Uganda: UNCST. [Internet: <http://www.uncst.go.ug/dmdocuments/Human%20Subjects%20Protection%20Guidelines%20July%202014.pdf>; downloaded on 2014-12-29.]

UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY (UNCST). 2014. National guidelines for research involving human participants. Kampala, Uganda: UNCST. [Internet: <http://www.uncst.go.ug/dmdocuments/Human%20Subjects%20Protection%20Guidelines%20July%202014.pdf>; downloaded on 2014-12-29.]

UNIVERSITY OF VIRGINIA. 2018. Considering Consumer Price Perceptions: The Framing Effect. [Internet: <https://www.coursera.org/lecture/uva-darden-bcg-pricing-strategy-customer-value/considering-consumer-price-perceptions-the-framing-effect-Tdnq6>; downloaded on 2018-07-15.]

VARKI S & COLGATE M. 2001. The Role of Price Perceptions in an Integrated Model of Behavioural Intentions. *Journal of Service Research* 3(3):232-240.

WORLD BANK DATABASE. 2014. Population, total. [Internet: <http://data.worldbank.org/indicator/SP.POP.TOTL>; downloaded on 2014-12-03.]

ZEITHAML VA. 1987. Defining and Relating Price, Perceived Quality, and Perceived Value Marketing Science Institute Working Paper. [Internet: www.msi.org/reports/defining-and-relating-price-perceived-quality-and-perceived-value/; downloaded on 2018-01-03.]

ZEITHAML VA. 1988. Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing* 52:2-22. (July 1988.)