

## **Determinants for Purchase Intentions in automobile e-commerce in developing countries: A case on motor vehicle e-commerce in Uganda**

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### **Abstract**

*From a sample of 140 respondents' data on website quality, trust, personality attributes and purchase intentions under the motor vehicle ecommerce in Uganda was collected. Using the SMART PLS statistical application, we found that two paths were significant, i.e. trust to online purchase intentions which is defined by (Beta = .540, Sig. <.05) and the personality attributes to online Purchase which is defined by (Beta = .181, sig. <.05). In addition, the T statistics results of both paths were significant. Although website quality had weak prediction relationship with online purchase intentions, when trust was combined with website quality, personality attributes a predicting potential scoring of 0.456 was revealed. In line with prior revelations on consumer trust in ecommerce, the prominence of the trust variable on high value assets online purchases under the buyers based in sub-Saharan Africa augments the relevancy of honesty, reliability, openness, and kindness, trust facets in the theory of reasoned action, which fronts the fact that a person's behavior is influenced by their attitudes towards the intended outcome and public opinion.*

**Key words: Website Quality, Trust, Personality and Purchase intention.**

### **Introduction**

Consumer trust continues to remain a multifaceted aspect of the consumer buyer relationship in the market. From decades of barter trade to the changing trends through brick retail shops to the new era of internet marketing, consumer confidence remains a key aspect of modern purchasing. Dependent on many variables, trust is an amorphous variable which is subjective to individual's psychological condition (Todd, 2007). Moreover, trust is a critical element in influencing customers' behavior over internet transactions. Research has shown that the global population rate of access to internet has grown from 1% in 1995 to almost 50%, 36% of the world population was projected to use smart phones by 2018 from the 10% in 2011. Internet as an enabler of electronic business is a contributor to the 1.61 billion people in the world estimated to have purchased goods online in 2017, US\$1.9trillion global e-commerce sales in 2016 and likely to increase to US\$ 4.06 trillion by 2020. Business entities have tapped onto the resource of the internet to link to the customers directly under what is referred to as B2C. B2C e-commerce refers to the process by which firms sell products and services to customers through the internet (Laudon and Traver, 2006).

The advance in technology has paved way for internet's instrumental role in research and online business. The focal point of this research rotates around the Theory of Reasoned Acton (TRA) by Ajzen&Fishbein (1979) and Theory of Planned Behavior (TPB) by Ajzen(1991). TRA fronts

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the fact that a person's behavior is influenced by their attitudes towards the intended outcome and public opinion. In contrast, TPB argues that an individual does not have full control over his/her behavior and thus uses behavioral control concepts. Both schools of thoughts shade light on the factors that contribute towards customers' behavior in e-commerce. In this research, we attempt to understand the trust behavior of e-commerce car buyers. In Uganda, more than 3,000 vehicles enter the country every month compared to around 20 monthly in 1962. Number of all vehicles cleared by Uganda Revenue Authority in 2014/2015 was 51,629 and in 2015/16 was 34, 941. Several online car dealerships exist in Uganda. For example checki.co.ug, SBTJapan.com, Beforwad.jp and cars.co.ug. However, the ease of buying a car online is yet to be experienced. With the increasing numbers of cars being purchased, technology becomes a central part in the seller- buyer relationship. The rate of adapting to the evolving trend of e-commerce is dependent on communication channels used, perceived attributes of the idea, nature of social system, extent of change agents (influencers) and type of innovation being adopted (Rogers 2003).

### **Problem Statement**

Attempts made to unpack trust indicate that trust comprises of reliability, openness, kindness, competence and honesty. As much as trust is the willingness of a person to cooperate with another assuming the seller to work in their interest, Bradach et al (1989) argues that consumer trust has often time been hampered by obstacles of dependability, uncertainty and vulnerability. Many researchers have strived to ascertain the level of trust in business and technology adoption. However only a handful of research points to finding the empirical investigation in consumer trust in B2C e-commerce in Sub Saharan Africa. Africa remains the least ranking among the continents of the world in regards to internet penetration and online presence. Furthermore, concerns of data security, breach of privacy and fear for fraud among others continue to widen the gap for trusting an online vendor. With a slightly over 20% African population online (World Internet Report 2016), the willingness of customers to shift from face – face business to online vending is not only questionable but also leaves pending room for further research.

Therefore the purpose of this research is to study the empirical findings on consumer trust in e-commerce in relation to online individual car buyers in Uganda. This study is not only inclined towards online practical business implications, but also aims at augmenting the self-interest theory, especially taking the trust – business to consumer perspectives of adults within the sub-Saharan Africa, which is amid the formal institutional voids that may largely influence adult international business dealing from the sub Saharan Africa. The purpose of the study was therefore to find determinants for, and their influence on online Purchase intentions.

### **Specifically the study sought:**

1. To find out the influence of Personality Attributes on Purchase Intentions.
2. To find out the influence of Website Quality on Purchase Intentions.
3. To assess the influence of trust on online car purchase intentions

### **Literature Review**

This section is comprised of the theoretical and empirical literature review. It discusses different research findings on trust, trustworthiness and B2C e-commerce.

### **Theoretical Review**

Decades of research have been carried out in relation to technology adoption. Scholars have invested great amounts of resources to derive different theories on technology adoption usage of

ICT especially on online transactions which is often referred to as e-commerce. This study is mainly influenced by the Theory of Reasoned Action and the Theory of Planned Behavior.

The Theory of Reasoned Action (Fishbein & Ajzen, 1979) was developed to identify the determinants of consciously intentional behavior. It studies that consumers behave in a lucid way after evaluating their tentative gains and losses towards that specific behavior. Therefore it is fundamental to understand that consumer may manifest as a summation of individual goals, ideas, values and beliefs. Thus, in this study we build on the TRA to understand the vital variables influencing buyer's trust towards online retailers. The TRA assumptions have been linked to the Theory of Planned Behavior.

Theory of Planned Behavior, this theory explains human decisions as a result of predicting intentions and perceived behavioral control. (Ajzen, 1991) Developed for perfecting the TRA, the TPB thrives from TRA by its element of perceived behavioral control. It is believed that the stronger the intention to perform a given behavior, the higher the chances of that behavior being performed (Ajzen, 1991). Thus, in this study, we attempt to add thoughts on TPB to understand how the availability of the opportunities and resources availed to the consumer will quicken their rate of accepting to buy products and services through e-commerce. It is perhaps an enabling factor for online vendors to incorporate elements that develop customers' confidence towards tendencies of positive behavior for online transactions. Moreover, TRA and TPB further enhance the factor of subjective norm as well as influencing consumer acceptance towards technology adoption. Thus e-commerce recommendations in society in society sway behavior towards online transactions.

In the recent past, complex technology adoption theories and models on consumer behavior have emanated. For instance, Venkatesh et al (2003) fronted the Unified Theory of Acceptance and Use of Technology (UTAUT), putting forward four concepts that influence consumer's adoption of technology. UTAUT's four concepts include; - performance expectancy, social influence, effort expectancy and facilitating conditions of available resources to perform the expected behavior. In the current study, consumer's trust to buy cars from online vendors may be based on the benefit expected from using e-commerce. Moreover, Venkatesh (2003) stressed that distinct variables of gender, experience and age are also contributors to the UTAUT relations; perhaps the distinct variables of Ugandan online car buyers are vital for this investigation.

## **Empirical Review**

### **Trust and trustworthiness**

"Trust is a person's willingness to accept and /or increase their vulnerability to another person based on their perception of the other person's capability commitment and consistency" (Hacker et al 2002). Trust as a psychological state of an individual is difficult to measure in tangible aspects. It is a trustor's expectations about the motives and behaviors of a trustee (Quelch & Klein, 1996). Furthermore, Doney and Cannon (1997) describe trust as the customer's perception of the salesperson's credibility and benevolence. In this relationship, often clients expect that vendors behave in a predictable and mutually acceptable manner (Sako, 1992).

"online transactions and exchange relationships are not only characterized by uncertainty but also by anonymity, lack of control and potential opportunities, making risk and trust crucial elements of electronic e-commerce" (Petrovic et al 2003).

Therefore, the acceptance to purchase online equally requires customers to feel a level of trust in the online vendor. This calls upon retailers to exhibit trustworthiness. In formulating the trust equation, Green (2008) noted credibility (words), reliability (actions), intimacy/safety and self-

orientation (self-interest) as variables for creating a degree of trustworthiness in vendors. Perhaps, trust and trustworthiness facilitate the behavior of trust tendencies and behavior of online car buyers.

### **Personality Attributes**

Scholars have described the multi-dimensionality of online trust through fundamental traits of integrity, ability and benevolence (Gefen 2002), vulnerability in a trustor- trustee relationship (Emurian 2004) and a subjective matter (Grabner – Kraeeter 2002) dependent on different customer attitude. The appearance and details of a vendor's website can either speed up or lessen customer trust in a product/service being retailed. Warrant clauses, website privacy policy (Ang, Dubelaar& Lee 2001) concerning customer personal information and ability to deliver promise of quality products. Equally important, prominence of company logo and slogan (Egger 2001), ease of navigation (Nielsen, 1998) enable trust in e-commerce. In the mix of this entire dilemma, the actual time of when trust occurs is not known. According to researchers Kim et al (2001), trust occurs before, during or after online transaction. It can also be a bridge between past experiences and anticipated future(Palszkiewicz & Klepacki 2003)Important to understand also is that "Consumer trust for an internet vendor can reside in the individual characteristics of the consumer"(Chen and Dhillon, 2003.). These are embedded in a person's personality, values gender age education, attitudes towards e-commerce and past purchase behavior(Chen and Dhillon, 2003). Therefore, customer trust is a key variable in determining trust for purchase of cars.

Furthermore, Lee and Turban (2001) articulated trust in e-commerce on four principles; size of internet retailing company, trustworthiness of internet as a shopping medium, trustworthiness of internet vendors and infrastructure of the website such as third party approval. Additionally, the Model of Trust for Electronic Commerce (Egger, 2001) attributes trust to stem from; pre-interactive filters happening before any online interactions, information content and properties of the website as well as relationship management. It is vital to understand that often these determinants of trust vary with client preferences.

### **Website Quality and online purchasing intentions**

E-commerce refers to "business communication and transactions over networks and through computers specifically the buying and selling of goods and services and the transfer of funds through digital communication"(Hutt and Seph, 2004) without clients going outside the door(Slevn, 2000). E-commerce has taken forms of Business to Consumer, Business to Business(2BB), customer to business(C2B), Business to government (B2G), business to business(B2B) among others. According to Loshin and Murphy(1997) reliability, security and acceptability are most important aspects of e-commerce.

While researching about the applicability of Technology Acceptance Model to mobile learning technologies, GitumuMugo et al (2017) fronted that consumers face three influences towards their decision to technology acceptance. The perceived ease of use, perceived usefulness and attitude towards usage given technology system. TAM therefore plays a vital role in informing online car vendors about the likely behavior of consumers.

With the US\$1.9trillion global e-commerce sales in 2016 and likeliness to increase to US\$ 4.06 trillion by 2020, B2C E-commerce is taking an accelerating turn in era of today's online transacting. Electronic commerce in its different manifestations is spreading and rapidly affecting

all of us (Tsur et al 2001). With almost 50% of the world connected to the internet, the growth in internet use, quality and speed of internet (Drigas & Leliopoulos, 2013) are basic characteristics for e-commerce growth. Therefore, this study builds on the rate of e-commerce usage among online car buyers within sub-Saharan Africa and advocates for increase in the use of e-commerce for a shared benefit of the value of e-commerce in today's market.

### Methodology

This study was carried out under the quantitative research paradigm. The cross sectional research design was employed. Data was collected from Makerere University Business School (MUBS)an oldest business school in Uganda..

### Study Population and Sample

The study population was 17000 business students of MUBS as of 2017. With the sample of 150 students, the third year students of the bachelor degree programs and masters of business administration program were the informants of this study. We expected to collect data from any 75 business bachelor level students and any 75 masters of business administration level students.

### Data Collection and Analysis

Having used a self-administered questionnaire data was collected from business scholars. The data was analyzed using Smart PLS version 3 software. The total response rate was 93 percent. Additional characteristics of the respondents are indicated in Table 2 below.

### Findings of the Study

Table 2: Social- Demographic Characteristics

Socio-demographic Characteristics	Category	Frequency	Valid Percent
Respondents Gender	Male	86	61.0
	Female	55	39.0
	<b>Total</b>	<b>141</b>	<b>100.0</b>
Respondent Age	15-24	25	17.9
	25-34	87	62.1
	35-44	23	16.4
	45-54	5	3.6
	<b>Total</b>	<b>140</b>	<b>100.0</b>
Education Level	Bachelor level	63	47.7
	Masters level	69	52.2
	<b>Total</b>	<b>132</b>	<b>100.0</b>

The majority of respondents were male at 60 percent, at the age group of 25 to 34 while these respondents were relatively distributed in the business education level. Whereas the valid respondents who were at the bachelor education level totaled to 63 those at the masters level were 63 respondents. Hence the data on the study variables i.e. Personality Attributes, Trust, Website Qualityon online car Purchase Intentions was obtained from balanced adults with both undergraduate and graduate business knowledge.

**Table 3: Study Variables Composite Reliabilities and Average Variance Extracted**

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Personality Attributes	.776	.870	.691
Purchase Intentions	.815	.878	.645
Trust	.933	.946	.713
Website Quality	.918	.934	.671

In this study, most of the study variables indicated satisfactory results on the reliability scores, with trust and website quality scoring on the composite reliability of .946 and .934 respectively and the Cronbach's Alpha of .933 and .918 respectively. Additionally, the rest were beyond the threshold of 0.7. We note that that composite reliability scores are relatively higher than traditional Cronbach Alpha scores, thus conformation of robust predictor variable reliability scores. The AVE scores were also above 0.5 with trust AVE at .713.

**Table 4: Discriminant Validity**

	Personality Attributes	Purchase Intentions	Trust	Website Quality
Personality Attributes	.831			
Purchase Intentions	.419	.803		
Trust	.422	.646	.844	
Website Quality	.106	.284	.285	.819

Regarding the discriminant validity statistical test, results reveal that each latent variable stood out significantly. In each column, the respective scores on the top are higher than the scores that follow. Three predictor variables i.e. website quality, personality attributes and trust were tested on their relationship and predicting potential on the online purchasing intention. Whereas most of the respective factors for the respective predictors loaded beyond the 0.7 threshold, majority of the latent variables have weak relationships with the outcome variable, online purchasing intention. The Website quality revealed the weakest relationship scores with the outcome variable, of 0.092. Although the relationship between personality and online purchasing intention was weak (0.182), the relationship between trust and online purchasing intention was relatively strong (0.540).

Bootstrapped Model showing the Beta Values and the p values (in brackets) for each path indicate that the path from Trust to Purchase Intentions as defined by (Beta= .540, Sig.<.05) was significant. The predictors of each dimension (Outer model loadings- are displaying the t-values that is why they appear to be high). In all, significant Paths are those from trust and personality attributes. In terms of predicting potential of the three variables we found out that, all the four predictors had yielded an r square score of 0.456, meaning that website quality, personality attributes, and trust explain the online purchasing intention by approximately 46 percent.

**Table 5: Model Summary**

	Beta	Mean	SD	T Statistics	P Values
Personality Attributes → Purchase Intentions	.181	.190	.069	2.616	.009
Trust → Purchase Intentions	.540	.533	.070	7.747	.000
Website Quality → Purchase Intentions	.092	.101	.078	1.176	.240

Two of the predictor outcome relationships reveal significant effect sizes. i.e the T-static threshold of 1.96, these are Personality Attributes to Purchase Intentions and biggest effect size was revealed by Trust to Purchase Intentions.

### **Discussion of Findings**

This study revealed that Trust was high on the agenda of potential online motor vehicle customers, this is not contrasting existing online business and trust literature, with Trust as a psychological state of an individual, where a trustor's expectations about the motives and behaviors of a trustee (Quelch & Klein, 1996), are crucial in any form of business transition. Especially given that, often clients expect that vendors to behave in a predictable and mutually acceptable manner (Sako, 1992). Our findings in sub Saharan Africa, confirm earlier online trust indications by Petrovic et al (2003), that online transactions and exchange relationships are not only characterized by uncertainty but also by anonymity, lack of control and potential opportunities, making risk and trust crucial elements of electronic e-commerce. In the same line of argument, Green (2008) noted credibility (words), reliability (actions), intimacy/safety and self-orientation (self-interest) as variables for creating a degree of trustworthiness in vendors.

Regarding personality attributes which scored weak in terms of the relationship to online purchasing in the current study; prior researchers described the multi-dimensionality of online subjective matter (Grabner – Kraeeter 2002), largely dependent on different customer attitude. These attitudes are linked to the inclination to many other factors such as the website quality and the buying factors. For instance, warrant clauses, website privacy policy (Ang, Dubelaar & Lee 2001) concerning customer personal information and ability to deliver promise of quality product, prominence of company logo and slogan (Egger 2001), ease of navigation (Nielsen, 1998). All these factors according to some researchers like Kim et al (2001) link to trust. Kim suggested that trust occurs before, during or after online transaction. Similarly, bridge between past experiences and anticipated future (Palszkiewicz & Klepacki 2003). More so,

“Consumer trust for an internet vendor can reside in the individual characteristics of the consumer”(Chen and Dhillon, 2003.).

Thus our findings on trust's prominence in online vehicle purchases in Uganda enriches the prior studies that link buyer attitudes attributes moreover scholars like Chen and Dhillon, (2003) emphasized that embedded in a person's personality, values gender age education, attitudes towards e-commerce and past purchase behavior.

### **Conclusion**

Consumer trust is empirically revealed as a strongest predictor outscoring website quality and personality attributes in the ecommerce transactions landscape. Precisely consumer trust is strongly correlated with online intention to purchase. In line with prior revelations on consumer trust in ecommerce, the prominence of the trust variable on high values online purchases under the buyers based in sub-Saharan Africa further augments the relevancy of honesty, reliability, openness, and kindness, trust facets in Theory of Reasoned Action (TRA) by Ajzen & Fishbein (1979), which fronts the fact that a person's behavior is influenced by their attitudes towards the intended outcome and public opinion.

## Recommendations

Online business logistics stakeholders should place their concentration on reliability, honesty, kindness, openness, and competence so as to build up ecommerce traffic. Especially given that the high value goods, the motor vehicle purchases, are hinged on trust.

Related to trust is personality attributes, although this yielded a relative weak but positive relation with online commercial transactions on vehicle purchases, the personality attributes should be heeded to build the high monetary value online purchase like motor cars.

## Areas of further Research

Need for additional studies on the study variables using qualitative research approaches, so as to deeply understand the factors of personality attributes especially given that facets of trust such as kindness, competences, and reliability link to adults.

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