WIN, LOSE OR DRAW: BRICK-AND-MORTAR VERSUS E-COMMERCE RETAIL STORES

Masrurakhon Kudratkhujaeva
Masters (WIUT)
Deputy director "MUSAFIR'S" LLC

ABSTRACT

The research gap was identified to understand and predict online consumer behavior and mainly identify main factors that hinder making an online purchase in the e-commerce sector. The purpose of the study is to contribute towards getting insights into barriers and limitations for consumers to use e-commerce for practical applications by business people. It is crucial to carry out research in this context to create valuable knowledge that is highly demanded from business people because the majority of them still face problems to have a complete image for understanding online consumer behavior. The carried out qualitative research by Masrurakhon Kudratkhujaeva laid a comprehensive understanding of research to proceed further for descriptive research via 207 questionnaires. Technology Acceptance Model was adopted by extending the framework with trust and instrumental factor (need for touch) referring to the qualitative research findings. The following findings were obtained; in particular, trust, perceived usefulness and age have an impact on intention to use e-commerce; whereas instrumental factor, perceived ease of use, gender and the average Internet usage hours does not have impact on intention to use e-commerce.

Key words: consumers behavior, e-commerce, trust, need for touch .

АННОТАЦИЯ

Пробел в исследованиях был выявлен для понимания и прогнозирования поведения потребителей в Интернете и, главным образом, для выявления основных факторов, которые препятствуют совершению онлайн-покупок в секторе электронной коммерции. Цель исследования — внести вклад в понимание барьеров и ограничений, с которыми сталкиваются потребители в использовании электронной коммерции для практических целей деловых людей. Крайне важно провести исследование в этом контексте, чтобы получить ценные знания, которые очень востребованы у деловых людей, поскольку большинство из них все еще сталкиваются с проблемами, связанными с получением полного изображения для понимания поведения потребителей в Интернете. Проведенное Масрурахон Кудратхуджаевой качественное исследование заложило всестороннее понимание исследования для дальнейшего проведения описательного исследования с помощью 207 анкет. Модель

принятия технологии была принята путем расширения структуры за счет доверия и инструментального фактора (потребности в контакте) со ссылкой на результаты качественных исследований. Были получены следующие результаты; в частности, на намерение использовать электронную коммерцию влияют доверие, предполагаемая полезность и возраст; тогда как инструментальный фактор, воспринимаемая простота использования, пол и средняя продолжительность использования Интернета не влияют на намерение использовать электронную коммерцию.

Ключевые слова: *поведение потребителей, электронная коммерция, доверие, потребность в прикосновениях.*

INTRODUCTION

In recent years, the proliferation of interests towards online consumer behavior is practiced all over the world both from academics and business practitioners. According to the OECD, e-commerce refers to the activity of selling or buying a product or service via transactions between different parties such as governments, organizations, businesses, individuals through the World Wide Web (OECD, 2002). E-commerce still refers to a new practice for consumers and increased trust practiced once people become familiar with it; however, it is important to reveal new ways for continuous attraction and retention of consumers to use the e-commerce system. (Jones and Leonard, 2008; Wang, et., al, 2016). Global e-commerce sales are forecasted to grow 3.5 trillion USD that constitutes 12% of global sales according to emarketer. Meanwhile, the e-commerce market constituted 1% in Uzbekistan by 2019 taking into account that the only e-commerce market is developed in Tashkent with more than 90% of Internet users. Why does the e-commerce market demonstrate such pitiable results? It is time to revolutionize the e-commerce market and determine for online commerce companies to win, lose or draw brick-and-mortar companies. Technology Acceptance Model was widely utilized as the research framework for critical analyses of online buying behavior of consumers (Davis, 1986).

THE LITERATURE REVIEW
Barriers and limitations of e-commerce

Kotab and Helsen (2001) revealed the following obstacles such as culture, language, PC availability, access costs, computer literacy & knowledge, state regulations in terms of global e-commerce. Moreover, limitations are unorganized electronic marketing (Rovenpor, 2003), low credit card penetration (Hawk, 2004). Furthermore, E. Turban et al, (2010) identified technical and non-technical barriers and limitations. The former includes inadequate security of system, reliability, communication protocol, and standards, software and infrastructure development

eventually. Meanwhile, the latter comprises the following factors in the context of trust & confidence, privacy & security, internet experience, e-commerce costs, government regulations & standards, lack of expertise, inconvenient/expensive electronic access, legal issues and an insufficient number of sellers and buyers. As can be witnessed some barriers and limitations are discovered several times by the researchers; as a result, this tendency increases its probability of occurrence in different countries.

Factors affecting the intention to make an online purchase

The models of technology acceptance and adoption present diffusion of innovation (DIO) and technology acceptance model (TAM). The former is expounded by Rogers (1983), who presented product and service categories such as risk, relative advantage, complexity, compatibility and trialability that influence consumers' acceptance of new products/services. Prior to this professor, Bauer and Ostlund (1974) represented risk and additional compounds for technology acceptance and adoption. Tornatzky and Klein (1982) identified that relative advantage has an influence on new innovation adoption, whereas Cooper and Zmud (1990) argues that innovation with complexity requires greater technical skills, operational effort and implementation to raise its adoption likelihood. Additionally, Tan and Teo (2000) claimed that enabling individuals to experiment leads to their comfortability with innovation and raises its adoption probability as well. TAM was introduced by Davis (1986) who argued that there are three factors such as perceived usefulness, perceived ease of use and attitude towards usage; in particular, the first two factors have an influence on the third. These theories illustrate that users' technology perception has an impact on its adoption; in particular, these frameworks can be implemented for analyzing consumers' behavior on the Internet and e-commerce adoption eventually, revealing barriers and limitations. Chen and Barnes (2007) advocates that trust has a relationship with the intention to use e-commerce.

E-commerce in Uzbekistan

Referring to the UNCTAD B2c E-Commerce Index 2017, Uzbekistan took 78th (out of 130) of places with a 43.8 index. Tashkent, the capital of Uzbekistan, is the only sustainable region for e-commerce due to the fact that 90% of users belong to this territory (Export.gov, 2017; Unctad.org, 2018). Internet penetration is expected to hit 58% by 2021 that refers to the fundamental significant driver for e-commerce development (Euromonitor, 2018). Moreover, the barriers and limitations of e-commerce development are undeveloped logistics infrastructure and payment systems (Adb.org, 2018).

Research model and hypotheses development

In this paper; e-commerce is defined and studied as the use of online stores by consumers to order a product, make an online payment as a transaction and its delivery.

Referring to theoretical background and research paper analyses, it developed the following model the extends Technology Acceptance Model (TAM) by including two additional factors such as trust and instrumental factor (Need for Touch) taking into account in-depth interviews' findings.

Technology Acceptance Model extension

TAM was introduced by Davis (1986) who argued that there are three factors such as perceived usefulness, perceived ease of use and attitude towards usage; in particular, the first two factors have an influence on the third.

The graphical representation of the research model that illustrates the relationship among variables. **Dependent variables** comprise consumers' intention to use e-commerce and **independent variables** are perceived ease of use (PEU), perceived usefulness (PU), trust (TR), instrumental factor (IF) (Need for Touch (NFT) and consumer demographics.
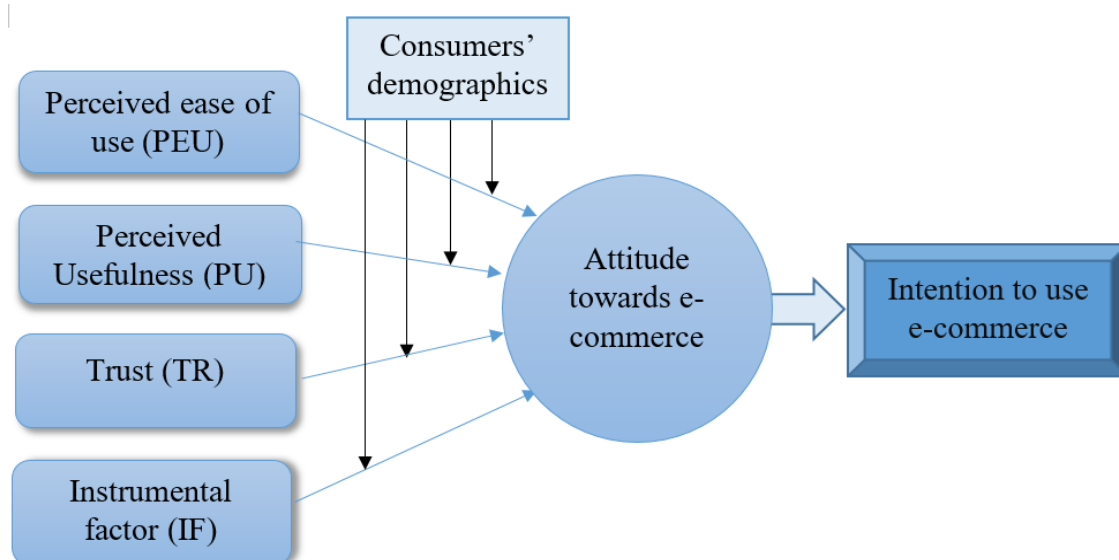
Research Model: Technology Acceptance Model extension

Perceived ease of use (PEU)

PEU is defined in this research paper as an individual's perception that the usage of a particular system will improve his/her work performance.

All the above and below definitions were applied to the problem at hand and the following hypotheses were generated:

H1 (alternative hypothesis): Perceived ease of use has an impact on consumers' intention to use e-commerce

Perceived Usefulness (PU)

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PU refers to an individual's perception that the usage of a particular system will be free of effort.

H2: Perceived usefulness has an impact on consumers' intention to use e-commerce

Referring to the in-depth interviews' findings, 100% of interviewees stated distrust and instrumental factor (Need for Touch) as the main barriers of consumers' intention to use e-commerce; thus, TAM was extended by adding these constructs.

Trust

H3: Trust has an impact on consumers' intention to use e-commerce

Instrumental factor (IF)

Need for Touch (NFT) is defined as a preference for information extraction and usage thanks to the haptic system. It's a motivational-based construct that has two factors like *instrumental* and *autotelic* ones. In this research paper, the instrumental factor will be measured taking into account the problem at hand.

Instrumental factor (IF) is determined as pre-purchase touch with main purchase purpose.

H4: Instrumental factor has an impact on consumers' intention to use e-commerce

(Peck, Joann and Terry L. Childers, 2003)

Consumer demographics are gender (5), age (6), internet usage (7), The following hypotheses will be tested to

H5: Gender has an impact on consumers intention to use e-commerce

H6: Age has an impact on consumers' intention to use e-commerce

H7: Internet usage has an impact on consumers' intention to use e-commerce

METHODOLOGY

Quantitative research is carried out by collecting data with the help of *questionnaires* to address research question and objectives. Referring to the literature review, the research model and hypotheses were determined that laid foundations for ***descriptive study***, which is applied to describe features of a phenomenon or population investigated. It comprises ***quantitative research*** that is conducted by collection and analysis of questionnaires to achieve **objective #1.** This *strategy* illustrates data collection from a sample by asking a set of questions to explore its characteristics.

Data collection method comprises both ***secondary and primary data,*** the former presents information collected by the third party that does not correlate with a problem at hand, whereas the latter implies data collected based on a research purpose specifically by a researcher.

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Secondary data was gathered via investigation of corresponding theories and statistics and conducted studies, which was performed via credible journals and websites such as EMERALD, JSTORE, Science Direct etc. As it was over mentioned, *primary data* was collected with the help of 207 **online questionnaires out of 300 that indicates 69% of the response rate**.

Sampling method

Convenience sampling is performed as a sampling technique and refers to a non-probability technique. This technique represents that respondents were selected taking into account of the researcher's convenience, physical and cognitive access to the sample size. This is performed with the help of creating a post of the questionnaire link in the social sites "Telegram" and "Facebook". The first question will be "If you have not never or do not do online shopping, please fill this questionnaire". This means that sample size represents non-users of e-commerce who have Internet experience. This sample was selected because it's very interesting why people having Internet access and experience still do not use e-commerce.

Measurement and scaling

Seven-point Likert Scale *(1= Strongly disagree, 2=Disagree, 3=Somewhat disagree, 4=Neither agree or disagree, 5=Somewhat agree, 6=Agree, 7=Strongly agree)* was generally accepted by researchers to rate attitude of respondents such as level of agreement and disagreement that range from strongly disagree to strongly agree. Researchers advocate that seven-point Likert Scale demonstrates ease of use, accuracy, optimize reliability of scores, presents true subjective usability evaluation and stronger correlation with t-test results whereas that is below or above seven-point generates less accurate data. The reliability was checked by Cronbach's alpha and Pearson correlation. Fisher exact test showed that 5-point Likert Scale presents higher number of interpolations that refers to attempt to use in comparison with 7-point items, where $p < 0.01$ (Russell, C., & Bobko, P., 1992; Diefenbach, M.A., Weinstein, N.D., & O'Reilly, J., 1993; Preston, C.C., & Colman, A.M., 2000; Sauro, J., & Dumas, J. S., 2009; Finstad, K., 2010; Leung, S., 2011). Number of points of Likert Scale influences the size of correlation coefficient; in particular, it is increased by the number of scale categories. In this research paper, 7-point Likert Scale for items was used taking into account the above factors and it refers to a continuous type of data that indicates that sophisticated statistical techniques can and will be applied.

The main type of data is categorical that refers to consumer demographics; in particular, nominal data are gender and education, occupation. The interval data is 7-point Likert Scale that is used to rate the agreement or disagreement of participants for constructs such as perceived ease of use, perceived usefulness, trust, instrumental

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factor (need for touch). Numerical data comprises age and average Internet usage hours per day.

Table of the questionnaire

Constructs	Items	Factor Loading	Cronbach's Alpha	Source
Perceived ease of use (PEU)	I believe that it's easy to use e-commerce	0.899		Hyun-Hwa Lee, Ann Marie Fiore, Jihyun Kim, 2006
	I believe that it's easy to learn how to use e-commerce	0.899		
	I believe that it's easy to become competent in usage e-commerce	0.891		
	I believe that e-commerce is clear and understandable	0.891		
Perceived Usefulness (PU)	I believe that e-commerce increases my performance in making online shopping	0.862		Hyun-Hwa Lee, Ann Marie Fiore, Jihyun Kim, 2006
	I believe that e-commerce is time-saving	0.862		
	I believe that e-commerce is convenient	0.862		
	I believe that e-commerce enables me to purchase any item more quickly	0.862		
Trust	I believe that e-commerce is secure			
	I believe that trusting a person/thing in e-commerce is not difficult for me	0.694	0. 790	W. H. Makame, J. Kang, S. Park, 2014
	I believe that I can trust transactions (selling, payment etc.) in e-commerce	0.835		
	I feel confident giving my personal information (address, phone numbers, email and payment accounts etc.) in e-commerce	0.783		
Instrumental factor (IF)	I feel more confident to make a purchase after touching a product		0. 870	(Bearden, Netemeyer and Haws, 2011)
	I place more trust in products that can be touched before purchase			
	If I can't touch a product before purchase, I am reluctant to purchase the product			
	The only way to be certain that a product is worth buying is to actually touch it.			
Intention to use	I will try to use online store for shopping in my daily life	0.667	0.88	Gurjeet Kaur and Tahira Khanam Quareshi
	I will make purchases through online store			
	I will transact with online			

	store in the near future			(2015)
	I will recommend others to use online store			

Reliability, Validity, Generalizability

Validity refers to the degree to which a researcher; choice of measurements is appropriate to what is intended to measure.

Validity for Quantitative research:

Face validity is checked in terms of how specific questions are related to the research question and objectives. In the literature review, research models and hypotheses were determined and in the methodology, research questions and objectives related to data collection instruments such as questionnaire and its design, measurement and scaling were presented in detail. Thus, the logical connection between questions in the questionnaire and research objectives has been established. Moreover, referring to the pilot test of the questionnaire, a focus group of 10 people was formed where a researcher asked feedback and critical evaluation for the questionnaire, along with a question for face validity were given; in particular, critical evaluation of the logical link was practiced. Mainly, in the supervisor meeting logs, face validity was numerous times analyzed and approved by the specialist as the supervisor. **Content Validity** refers to assessments construct's items that are used to measure. The main measurement used was the Likert Scale that is generally accepted as a valid scale to measure agreement and disagreement that was developed by Rensis Likert in 1932. It was already mentioned above why 7-point of Likert Scale was used as scaling. Constructs measurement were adopted referring to the research papers which have been already checked and suggested as a valid measurement being published in the credible journals such as International Journal of Managing Information Technology, South African Journal of Business Management and Journal of Consumer Research. Referring to the pilot questionnaire feedback and critical evaluation, negative responses from participants were not incurred. **Construct Validity** is checked in terms of how instruments and assessment measurement can study the problem at hand**.** Technology acceptance model is widely implemented as the research model by researchers to investigate the adoption of computer based technologies and mainly e-commerce. Discriminant and convergent validity were strongly supported and tested using the multitrait-multimethod analysis (MTMM). Thus, construct validity has been already checked and verified. In accordance with the qualitative research conducted by Masrurakhon Kudratkhujaeva, trust have construct validity in accordance with in-depth interviews' findings because 100% of

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interviewees stated that trust and instrumental factor (need for touch) are main factors that influence purchase intention and barriers for intention to use e-commerce. Meanwhile, the literature review presents several research papers that constitute that trust as one of the main factors.

Reliability

Reliability refers to the degree to which measure will have the same outcomes if it is performed in the same conditions. As it was over mentioned, the measurement model is internally consistent with a reliability coefficient that is higher than 0.70 in accordance with Cronbach alpha and factor loading. Constructs were adopted referring to the research papers where constructs were checked and published in credible journals such as International Journal of Managing Information Technology, South African Journal of Business Management and Journal of Consumer Research.

Generalizability implies an extension of the research carried out on the sample population to the population at large. These paper findings are accomplished at the sample size, decided by the researcher; 207 respondents for the questionnaire. This study needs to exercise caution when generalizing the findings because convenience sampling technique was carried out.

Quantitative research results

The descriptive analysis represents the demographics of the sample that involves gender, age, education level, occupation and average Internet usage per a day. As can be seen, the respondents with the following ages filled the questionnaire, where 16 is the minimum age and 56 is the maximum one. There can be observed frequency of respondents with the same age and its percentage; for instance, there are 15 respondents of 18 years old. Moreover, there can be observed the minimum and maximum age as well along with standard deviation that is about 9.493 and the observation numbers that is 207. Variance, skewness and kurtosis were analyzed as well and depicted above. As can be seen, from the total 207 respondents there are 112 females and 95 males; in particular, the average age of both females and males is 27 years old. The minimum age of males and females are 16 and 17 years old respectively and the maximum ages are 52 and 56.

The average Internet usage hours per a day were performed initially in the Excel file, when people were given approximately an hours range such as from 1 to 2 hours that accounts for 1.5 hours. The tab command enables overviewing the full range of the average Internet usage hours, where 15 minutes is equal to 0.25 (one fourth of an hour). The most frequent average Internet usage hours are 2 and 3 hours that were mentioned 33 as opposed to 34 times by the respondents. The maximum average Internet usage hours is 16 hours per a day. The standard deviation is about 3.08.

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Referring to the statistics, about 45.9 % of respondents are males (0) and 54.11 % of them are females (1). As concerns the education level, 1=Incomplete secondary education, 2=Secondary education, 3=Incomplete higher education, 4=Higher education, 5=Other. The sample comprises about 37% and 46% of the respondents are with incomplete and higher education levels respectively. Turning to occupation, 1=Study, 2=Work, 3=Housewife, 4=Retired, 5=Unemployed; approximately 52% and 37% of respondents study and work respectively; whereas no respondents are retired.

In order to check the research hypotheses that were designed in the literature review, the following steps are performed to conduct a multiple linear regression analysis.

Hypothesis testing:

```
. spearman inst_fact per_usef ease_of_use
(obs=207)

            | inst_f~t per_usef ease_o~e
  inst_fact |  1.0000
   per_usef |  0.0008   1.0000
ease_of_use |  0.0369   0.5599   1.0000
```

Both independent and dependent variables that refer to constructs are measured by four items to increase its factor loadings and Cronbach alpha that demonstrated internal consistency (reliability). Factor analysis was conducted by creating summated scale and new variables such as Instrumental Factor (inst_fact), perceived usefulness (per_usef), perceived ease of use (ease_of_use), trust (trust) and intention to use e-commerce (use_int) are created and further used in the multiple linear regression.

With reference to Skewness Kurtosis test to check normal distribution of variables such as Instrumental Factor of Need for Touch (inst_fact), perceived usefulness (per_usef), perceived ease of use (ease_of_use), trust (trust) and intention to use e-commerce (use_int); the following hypothesis are checked.

Instrumental factor is not normally distributed because p-value (0.0042) $\leq$ 0.05, H0 is rejected and **H1 is accepted.** Perceived usefulness is not normally distributed because p-value (0.0000) $\leq$ 0.05, H0 is rejected and **H1 is accepted.** Perceived ease of usefulness is not normally distributed because p-value (0.0004) $\leq$ 0.05, H0 is rejected and **H1 is accepted.** Trust is normally distributed because p-value (0.2089) > 0.05, **H0 is accepted** and H1 is rejected. Intention to use is normally distributed because p-value (0.0611) > 0.05, **H0 is accepted** and H1 is rejected.

According to Shapiro–Wilk test, the same results are obtained for a double check.

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```
. swilk inst_fact per_usef ease_of_use trust use_int

              Shapiro-Wilk W test for normal data

     Variable |    Obs       W        V        z     Prob>z

    inst_fact |    207    0.96079   6.027    4.140   0.00002
     per_usef |    207    0.97090   4.473    3.453   0.00028
  ease_of_use |    207    0.94723   8.111    4.825   0.00000
        trust |    207    0.99651   0.536   -1.437   0.92468
      use_int |    207    0.99444   0.855   -0.362   0.64129
```

Spearman rank correlation test is performed to check variables for a linear relationship such as instrumental factor, perceived usefulness and perceived ease of usefulness that is not normally distributed. As a result, perceived usefulness and instrumental factor has a very weak linear relationship (0.0008, "very weak" is 0.00-0.19) instrumental factor and perceived ease of use has a weak linear relationship (0.0369, "weak" is 0.20-0.39) and perceived ease of use and perceived usefulness has a moderate linear relationship (0.5599, "moderate" is 0.40-0.59).

```
. corr use_int trust
(obs=207)

             |  use_int    trust

     use_int |   1.0000
       trust |   0.6157   1.0000
```

The linear correlation between trust and intention to use that are normally distributed is 0.6157, this indicates that approximately intention to use shares approximately 37.9% of its variability with trust (0.6157*0.6157*100%=37.908649%)

Factor Analysis and regression

Referring to the Cronbach alpha's results, all variables alpha is higher than 0.58 that is accepted as minimum requirements of alpha coefficient; mainly the test scale is 0.7178 that represents a good alpha score as its coefficient is between 0.65 and 0.8. Referring to the researches "Factors influencing electronic commerce adoption in developing countries: The case of Tanzania"; "The role of technology acceptance model in explaining effect on e-commerce application system", "Factors obstructing intentions to trust and purchase products online" and the book as "Handbook of Marketing Scales: Multi-Item Measures for Marketing and Consumer Behavior Research", the measurement model was adopted taking into account that Factor Loading and Cronbach alpha of constructs of ***perceived ease of use*, perceived usefulness,** *trust, instrumental factors and purchase intention* were **internally consistent** because presented more than minimum **reliability** coefficient of 0.7 as is set by Nunnally (1978); while, convergent validity was presented referring to factor loading as well.

Enter method regression analyses are performed to determine the best set of consumer acceptance on e-commerce or intention to use e-commerce. Multiple linear regression model is conducted to test hypotheses #1,2,3,4,5,6,7 by identifying 6 predictors

```
. *** Regression
. reg use_int trust ease_of_use per_usef inst_fact female Age AverageInternetusagehours, robust

Linear regression                                 Number of obs   =       207
                                                  F(7, 199)       =     36.67
                                                  Prob > F        =    0.0000
                                                  R-squared       =    0.5008
                                                  Root MSE        =    1.1088
```

use_int	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
trust	.3937809	.0874823	4.50	0.000	.2212696	.5662923
ease_of_use	.178831	.0845738	2.11	0.036	.0120551	.3456068
per_usef	.2263053	.0686311	3.30	0.001	.0909676	.3616429
inst_fact	-.0646362	.0624689	-1.03	0.302	-.1878222	.0585497
female	.097943	.1543781	0.63	0.527	-.2064839	.4023698
Age	-.0274152	.009615	-2.85	0.005	-.0463755	-.0084549
AverageInternetusagehours	.0281357	.026857	1.05	0.296	-.0248251	.0810965
_cons	1.831886	.4865602	3.76	0.000	.87241	2.791361

variables.

The initial regression model: Intention to use= intercept+ 0.394 trust+0.179 perceived ease of use+ 0.226 perceived usefulness – 0.646 instrumental factor+ 0.979 female -0.274 age + error term

In accordance with the multiple linear regression, the overall model is statistically significant with $F_{(7, 199)}$ that is equal to 36.67 with p-value of 0.0000 that is lower than 0.005. Robust command is added to control issues with heteroskedasticity. Meanwhile, R-squared that is the coefficient of determination is equal to 0.5008 that indicates that strength of prediction with the set of predictors that represents that 50.08% of the variance in the intention to use e-commerce is explained by the variables such as trust, perceived ease of use, perceived usefulness, instrumental factor, female, age and the average Internet usage hours.

H0: There is no impact of trust on intention to use e-commerce

H1: There is an impact of trust on intention to use e-commerce (✓)

The p-value of trust is $0.000 \leq 0.005$ thus we reject H0 and accept H1

With regard to regression coefficient of trust, it is explained as for one-unit increase in trust, intention to use increase by value of about 0.394; whereas keeping other predictors constant.

H0: There is no impact of perceived ease of use on intention to use e-commerce

H1: There is an impact of perceived ease of use on intention to use e-commerce (×)

The p-value of perceived ease of use is $0.036 > 0.005$ thus we accept H0 and reject H1

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H0: There is no impact of perceived usefulness on intention to use e-commerce

H1: There is an impact of perceived usefulness on intention to use e-commerce (✓)

The p-value of perceived usefulness is $0.001 \leq 0.005$ thus we reject H0 and accept H1

With respect to regression coefficient of perceived usefulness, it is explained as for one-unit increase in perceived usefulness, intention to use increase by value of about 0.2263; whereas keeping other predictors constant.

H0: There is no impact of instrumental factor on intention to use e-commerce

H1: There is an impact of instrumental factor intention on to use e-commerce (×)

The p-value of perceived ease of use is $0.302 > 0.005$ thus we accept H0 and reject H1

H0: There is no impact of gender on intention to use e-commerce

H1: There is an impact of gender on intention to use e-commerce (×)

The p-value of female is $0.527 > 0.005$ thus we accept H0 and reject H1

H0: There is no impact of age on intention to use e-commerce

H1: There is impact of age on intention to use e-commerce (✓)

The p-value of age is $0.005 \leq 0.005$ thus we reject H0 and accept H1

Turning to regression coefficient of age, it is explained as for one-unit increase in perceived usefulness, intention to use decrease by value of about 0.2263; whereas keeping other predictors constant.

H0: There is no impact of the average Internet usage hour on intention to use e-commerce

H1: There is impact of the average Internet usage hour on intention to use e-commerce (×)

The p-value of female is $0.296 > 0.005$ thus we accept H0 and reject H1

The final regression model:

Intention to use= intercept+ 0.394 trust + 0.226 perceived usefulness – 0.646 –0.274 age + error term

CONCLUSION

Turning to the findings of the quantitative research, the descriptive analysis illustrates the sample size of people with a medium age of 27 with 4.5 average Internet usage hours. It was identified that trust and intention to use e-commerce has a strong correlation. This result has solid reasons because consumers use online services without physically being at the store and visually evaluating products or selecting services that represent good reputation and gain trust from consumers. As a

result, trust is considered as the main factor in a purchasing decision. This result is consistent with the findings of the researchers of Turban et al, (2010), John (2012) Gefen et al. (2003), Pavlou (2003) and Makame et al (2014), Chen and Barners (2007).

The Technology Acceptance Model was extended in accordance with the results of qualitative research by including trust and instrumental factors (need for touch). The multivariate analyses using multiple linear regression demonstrated that the model is correctly designed and proven to be a useful theoretical framework in the research area. Perceived usefulness, age and trust demonstrates impact on intention to use e-commerce, whereas perceived ease of use, instrumental factor, gender and the average Internet usage hours do not have impact on intention to use e-commerce. These results demonstrate that consumers do not have concerns with e-commerce ease of use in a purchase decision (intention to use e-commerce); in particular, e-commerce system features related with overall current usage, learning how to use, becoming competent users, and a clear and understandable system. This can be assumed that consumers have a higher focus on e-commerce benefits such as convenience, time and cost-savings.

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