

## ANTECEDENTS OF SATISFACTION IN THE EMERGING DIGITAL ECONOMY: A CASE STUDY IN AN URBANISED SETTING.

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**ABSTRACT.** The digital economy is the new wave of economy sweeping the world. Countries that have positioned themselves to be active players in the emerging digital economy are said to reap the benefits accruing there from. For the digital economy to move forward, satisfaction is very important. This study aims at determining the antecedents of satisfaction in a digital economy. The study uses a survey where some 514 respondents living in the Klang Valley were randomly interviewed using a standard questionnaire. The data was analysed using SPSS 20.0 and both descriptive and inferential statistics were used. Using multiple regressions, trust, security and ease of use emerge as the only significant variables contributing to the variations in satisfaction. The Adjusted R Squared for satisfaction is .301 meaning the three variables contribute 30.1% of the variations in satisfaction. Trust has the highest beta and t value, hence having the highest effect and impact on satisfaction. Thus, for the smooth and continuous uptake of digital economy, handling these variables seen as antecedents of satisfaction is very crucial.

**Keywords:** Antecedents of satisfaction, digital economy, ICT, Internet

### INTRODUCTION

The digital economy is the new wave of economy sweeping the world. Countries that have positioned themselves to be active players in the emerging digital economy are said to reap the benefits accruing there from. That is also the reason why it could be noticed that seven out of ten top countries in the Digital economy rankings and scores (Digital economy rankings, 2010) are also listed in the top ten Ease of Doing Business Index (Doing Business Index, 2012).

Throughout history, world has seen how some revolutionary inventions in the area like transportation, utility, and communication and how they reshaped the economies. 21<sup>st</sup> century most innovative invention, the internet, has even greater and wider impact on world economies. The internet, currently with 2,405,518,376 worldwide users representing 34.3% of world population (Internet world Stats, 2012) is an invention that not only influences today's world economy but also the way people live thus making economic growth and technology now to be inextricably linked (Oxford Economics, 2013). Emerging markets utilize the technology to fuel growth and advanced markets seek new ways to cut cost and drive innovation (Oxford Economics, 2013)

However, for the digital economy to move forward, satisfaction is very important. In determining the ranking of Digital Economy, for instance, the highest proportion of marks is allocated to consumer and business adoption with 25% where the actual utilisation of digital channels by people and companies is a measure of successful implementation (Digital economy rankings, 2010). This can only be achieved when there is satisfaction among users. Malaysia, in this case, is ranked 36 out of 70 countries worldwide in digital economy rankings and scores in 2010 which improved from 36<sup>th</sup> place in 2009 with Sweden topping the list (Digital economy rankings, 2010). In terms of E-Government Development ranking, Malaysia is ranked 34<sup>th</sup> in 2008, 32<sup>nd</sup> in 2010 and 40<sup>th</sup> in 2012 (E-Government Survey, 2012).

This paper aims at determining the antecedents of satisfaction in a digital economy using an urban setting of Klang Valley, an area covering the capital city of Kuala Lumpur and parts of Selangor. This study is timely at a time Malaysia is moving towards a smart city concept. It will also help stabilise and move the digital economy forward.

## LITERATURE REVIEW

Borrowing the definition from the Australian government, Digital Economy (DE) is defined as “the global network of economic and social activities that are enabled by platforms such as the Internet, mobile and sensor networks” (Australian Government, 2013).

Antecedents of satisfaction in a digital economy vary in many aspects depending in which sector they belong to. However, there are some aspects that are overlapping. Those variations of antecedents of satisfaction can be seen in some of the selected study conducted by some researchers as described below.

Mohd Nor Hakim and Anwar (2012) have selected a number of antecedents that are based on a number of variables that are: (a) Technology Factors: Security, Usability and Site Design, (b) Privacy Shopping Factors: Convenience, Trust and Trustworthiness Delivery and (c) Product Factors: Merchandising, Product Value, Product Customization.

In another study conducted by Lin (2007) on the intention to use e-government services, System quality (Design, Interactivity), Information quality (Security, Informativeness) and Service quality (Empathy, Trust, Responsiveness) were selected as variables to see their effect e-government services. Trust scored the highest mean and design scored the least. Interactivity had a higher impact on the intention to use e-government services. As for services quality, the study showed that the variables (in the order of) trust, empathy and responsiveness positively influenced the intention to use e-government services. Among the variables, trust had the strongest effect on intention to use e-government services.

Ziqi Liao and Michael Tow Cheung (2008) chose Usefulness, Ease of Use, Reliability, Security, Responsiveness, and Continuous Improvement. In their study, they applied Herbert Simon’s seminal idea of bounded rationality to construct a framework for measuring consumer satisfaction with Internet banking in terms of a core subset of attributes.

Awareness, Accessibility, Availability, Accuracy, Reliability, Responsiveness, Trust, Privacy, Security were identified as attributes in measuring user satisfaction. (Keoduangsin and Goodwin 2009). These attributes were used to measure user satisfaction in Mobile e-Government Service.

In the study on customer satisfaction of online shopping in Malaysia by (Syed Shah Alam and Norjaya 2010), four key dimensions of customer satisfaction of online shopping are identified. It is found that website design, reliability, product variety and delivery

performances are the four key factors which influence consumers' satisfaction of online shopping in Malaysia.

Cheung & Lee, (2005) proposed a research framework that integrates both end-user computing satisfaction literature and service quality literature. This framework explicitly considers information quality, system quality, and service quality as the key dimensions of consumer satisfaction with Internet shopping.

From the above literature review of a number of studies, antecedents of satisfaction come in many forms. This study, however, will focus on four antecedents of satisfaction, which include usefulness, ease of use, trust and security to determine their influence on satisfaction in a digital economy. A study by Keoduangsine and Goodwin (2009) used similar attributes to measure user satisfaction in Mobile e-Government service. Similarly, Technology Acceptance Model study by Davis (1989) found that usefulness (perceived benefits) and ease of use influence acceptance of technology.

## METHODOLOGY

The study uses a survey where some 514 respondents living in the Klang Valley were randomly interviewed using a standard questionnaire. Male respondents make up 55.8% and 44.8% represent the female respondents. The data was analysed using SPSS 20.0. Inferential statistics were used to analyse the data. Multiple regressions were used as the inferential statistics. By using multiple regressions, the effects of the variables on satisfaction can be determined. Moreover, multiple regressions help explain the contribution of the independent variables in the variation of the dependent variable.

## ANTECEDENTS OF SATISFACTION IN A DIGITAL ECONOMY

From the findings, the model summary revealed a perfect model which is significant. The Adjusted R Squared as in Table 1 is .301 representing the overall contribution in the variations in satisfaction of digital economy by the four predictors viz. security, usefulness, ease of use and trust.

**Table 1. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.554 <sup>a</sup>	.307	.301	7.35155	.307	55.318	4	500	.000

a. Predictors: (Constant), Security, Usefulness, Ease of Use, Trust

Looking further (Table 2) at the four variables or antecedents of satisfaction for digital economy, only three of the variables - security, ease of use, trust - have significant contribution to the variation in the satisfaction of digital economy. Trust has the highest beta and t value, hence having the highest effect and impact on satisfaction in the digital economy. One of the antecedents, ease of use, is also responsible for technology acceptance as in TAM, meaning that it is an important aspect in the satisfaction of digital economy. Applications used in the digital economy should be user friendly thereby making it easier for the people to use as it contributes to satisfaction in the digital economy.

The contribution of the four variables in the variation of satisfaction in the digital economy can be considered good which is 30.1 percent. This represents one third of the variations in the satisfaction of digital economy.

**Table 2. Coefficients of the antecedents of satisfaction in a digital economy**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.269	2.244		2.348	.019
Ease of Use	.245	.076	.151	3.197	.001
Usefulness	.053	.072	.035	.735	.463
Trust	.540	.110	.274	4.897	.000
Security	.398	.098	.220	4.051	.000

Furthermore, among the four variables or antecedents of satisfaction for digital economy, only three of the variables - security, ease of use, trust - have significant contribution to the variation in the satisfaction of digital economy. In order words these antecedents are crucial in bringing about satisfaction in the digital economy which in turn will lead to acceptance of the digital economy. Trust has the highest beta (beta = .274) and t value (t = 4.897), hence having the highest effect and impact on satisfaction in a digital economy.

The findings of this study concur with studies by Mohd Nor Hakim and Anwar (2012) and Lin (2012) where security and trust are found to be important aspects in the digital economy. A similar study by Keoduangsiang and Goodwin (2009) where the attributes were used to measure user satisfaction in Mobile e-Government service is also in agreement with the findings of this study.

## CONCLUSION

This study has achieved the objectives set. From the findings, only three of the variables contributed significantly in the variations of satisfaction in a digital economy. For the success of a digital economy the antecedents, especially trust should be of concern for policy makers and practitioners in the digital economy due to its high influence on satisfaction in a digital economy. Satisfaction is important in stabilising the digital economy. Hence, for the smooth and continuous uptake of digital economy, handling these variables as antecedents of satisfaction in a digital economy is very crucial.

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