

**FACTORS OF INNOVATION CHARACTERISTIC
AFFECTING INTERNET ADOPTION AMONG MICRO
RETAILERS IN KOTA KINABALU**

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DECLARATION

I hereby declare that the material in this thesis is my own except for quotations, excerpts, equations, summaries and references, which have been duly acknowledged

31 October 2014



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PENGAKUAN

Karya ini adalah hasil kerja saya sendiri kecuali nukilan, ringkasan dan rujukan yang tiap-tiap satunya telah saya jelaskan sumbernya.

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ABSTRACT

FACTORS OF INNOVATION CHARACTERISTICS AFFECTING INTERNET ADOPTION AMONG MICRO RETAILERS IN KOTA KINABALU

This thesis is about factors of innovation characteristic affecting Internet adoption among micro retailers in Kota Kinabalu because they were among the people who realize the use of internet in their business activity along with the technological advancement that emphasize on Internet-based ICT. As the backbone of the economy growth, micro retailer must increase the efficiency in conducting businesses in order to compete in this hyper-competition. Thus, adopting an internet into business activities was the best action as can attain a lot of benefits in terms of running business smoothly. The main purpose of this study was to identify the factors that are conducive for internet adoption among micro retailers which focus on four variables which are compatibility, complexity, relative advantage, and social status. A total of 180 questionnaires were sent out to selected shopping mall in Kota Kinabalu and 120 usable responses were received and analyzed. The result of this study can provide an insight and recommendation for micro retailer to adopt internet. This study found out that positive relationship between compatibility, relative advantage, and social status whereas negative relationship for complexity towards internet adoption among micro retailer. However, there is no significant relationship between relative advantage and social status but showed significant relationship for compatibility and complexity towards internet adoption. Other than that, this study found out that there were partially supported where relative advantage, compatibility, and social status are not supported the relationship while complexity supported moderating effect between innovation characteristic towards internet adoption. It was suggested that more incentives and better infrastructure been provided to support internet adoption among micro retailer.

ABSTRAK

Tesis ini adalah mengenai faktor-faktor yang memberi kesan kepada ciri –ciri inovasi penggunaan internet dalam kalangan perusahaan peruncit mikro di Kota Kinabalu kerana mereka adalah antara orang yang sedar tentang penggunaan internet dalam aktiviti perniagaan mereka bersama-sama dengan kemajuan teknologi yang memberi penekanan kepada ICT berasaskan internet. Sebagai tulang belakang kepada pertumbuhan ekonomi, peruncit mikro perlu meningkatkan kecekapan dalam menjalankan perniagaan untuk bersaing dengan persaingan sengit ini. Oleh itu, mengguna pakai internet dalam aktiviti perniagaan adalah tindakan yang terbaik seperti dapat mencapai banyak manfaat dari segi menjalankan perniagaan dengan lancar. Tujuan utama kajian ini adalah untuk mengenal pasti faktor-faktor yang kondusif untuk diterima pakai intener dalam kalangan peuncit mikro iaitu kesepadanan, kerumitan, faedah relatif dan status social. Sebanyak 180 soal selidik telah dihantar kepada pusat membeli belah terpilih di Kota Kianablu dan 120 tindak balas yang boleh digunakan telah diterima dan dianalisis. Ia telah mendapati bahawa hasil kajian ini dapat memberikan wawasan dan cadangan untuk peruncit mikro untuk menggunakan internet. Kajian ini mendapati hubungan yang positif antara kesepadanan, faedah relatif, dan status sosial manakala hubungan negatif untuk kerumitan kearah penggunaan internet dalam kalangan peruncit mikro. Walaubagaimanapun, terdapat hubungan yang tidak signifikan antara faedah relatif dan status sosial tetapi signifikan kepada kesepadanan dan kerumitan terhadap penggunaan internet. Selain daripada itu, kajian ini mendapati bahawa ada sebahagiannya di sokong di mana kelebihan relatif, kesepadanan, dan status sosial tidak disokong hubungan manakala kerumitan disokong kesan yang sederhana antara cirri inovasi kea rah penggunaan internet. Ia mencadangkan bahawa lebih banyak insentif dan infrastruktur yang lebih baik disediakan untuk menyokong penggunaan internet dalam kalangan peruncit mikro.

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CHAPTER 1

INTRODUCTION

1.0 Introduction

Chapter 1 included problem statement, research question, research objectives, and scope of the study. This chapter also provided with background of study that was essential to this research study. The chapter also concluded with restatement of the problem, how this study expands the existing knowledge base and finally the rationale for this research paper.

1.1 Background of study

Technological environment has faced strong waves of globalization across the world, thus has growth rapidly all over the world and change people's day-to-day lives as it has many advantages. The rapid growth of internet technology development enabled customer to purchase product or search product information on the internet. The information and communication technologies (ICT), particularly the use of internet in order to conduct online business rapidly change the conventional way of doing business among brick and mortar companies. Internet believes to be the most efficient tools in gaining bigger market and the ability to compete with other organization in attracting customer to their information, services as well as products. According to Tan et al (2010), adopting internet for business is no longer a choice but a must across the different types of Micro, Small, and Medium Enterprises (MSME) operating in different sectors.

Today, the use of internet not only widely adopted by large organization but followed by micro scale respectively (Al Qirim, 2006). In Malaysia, micro enterprises also play a vital role in the country's economic development (Abu Bakar Sedek et al, 2012). As Malaysia move towards advance information, communication and multimedia services, the technology awareness among Malaysian was increased tremendously time to time. A study by Abu Bakar Sedek et al (2012) on Micro Business Enterprise of Bumiputera Malays in Malaysia indicated that to survive in competitive industries, micro enterprise should stay alert against their rivals and be innovative in applied competitive strategy. Applications of uniquely differentiate products and strong marketing mix strategy will help them distinctively to stay longer in the market place and hence advanced towards next level of the enterprise (Abu Bakar Sedek et al, 2012). The use of internet as a part of innovation in business activity will appear to be essential ingredient to become better performing enterprise thus help the micro enterprise keep survival in long term.

Doing business online has been a new trend nowadays and many customers are switching to shopping online (Azahari et al, 2011). Retailing was witnessed seismic shifts. According to Denni (1996), every business must brought internet into their business operation and took advantage of the benefits they had offer while Nielson Global Online Survey (2007) indicated that fashion now was second only to books when it comes to shopping online. Micro retailer ought to take an advantage concomitant with technological advancement to use internet.

Internet would be keen enabler for business to be successful. Internet trends especially social networking and mobile application were the dominant trends nowadays (Victoria and Erne, 2013; Mazidah and Burairah, 2014). In addition, Malaysia had been ranked in the top 10 of the World Bank's Ease of Doing Business Index as 6TH position for 2014 where put ahead of developed economies such as United Kingdom which was ranked 10TH for 2014 showed that Malaysia

have improved the business landscape and the businesses would seek an opportunity to implementing online business strategy to boost up the revenue.

1.2 Problem Statement

Internet as a communication and information technology for electronic commerce has attracts businesses to exploit this technology. However, adoptions of internet are associates with large companies and highest likelihood of implementing internet in their business. Large companies are more capable and less to use word of mouth in their business activity and they are able in access to capital and skill in technology (N.Rao Kowtha and T. Whai Ip Choon, 2001; Battisti et al., 2009; Gretton et al., 2004; Kowtha and Choon, 2001; Lucchetti and Sterlacchini, 2004; Morikawa, 2004).

Whereas micro scales prefer to use word of mouth and serve the local customer in surrounding area rather than use internet (Mazidah and Burairah, 2014). Moreover, Lal (2002), larger firms are in a better position with innovation activities and have considerable resource base to invest in this new technology. Besides, the implementation of this technology through small scale sector is yet to be determined. The gap of adopting internet among large and small business become an issue from the past researchers (Premkumar and Roberts, 1999) because large scale seems to be more active in adopting internet if compare to small scale. The smaller firm particularly micro scales not feel the need for these technologies and still lack of awareness to adopt internet (Wolcott, Kamal, and Qureshi, 2008). Micro-enterprises face a host of challenges in their own attitudes towards technology, their capabilities, resources, access, operations, and business and social context according to Wolcott, Kamal, and Qureshi (2008). Much research is based on large company in Western country but still lack of research in micro scale.

Moreover, internet change the way business is conduct and many businesses are shift and improve their businesses through internet (Shah Alam et

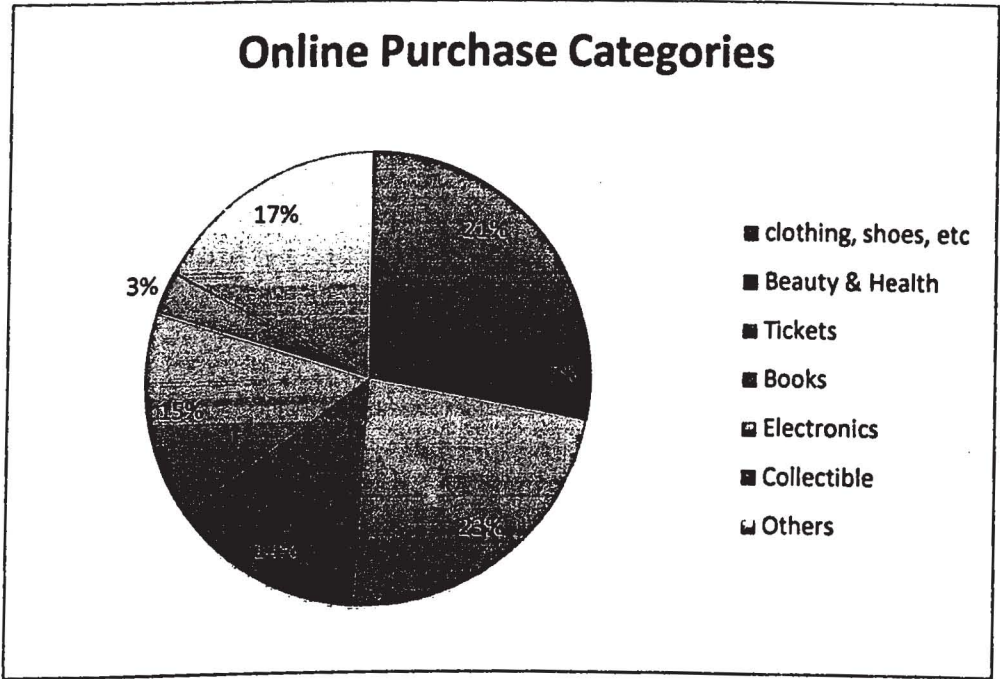
al., 2010). The use of internet is more commonly practiced in developed countries as compared to developing countries and Malaysia is one of them. This study also attempts to bridge the gap of internet adoption growth between two nations (developed and developing country) which are expected to lead to stronger impacts on developing countries (El Gawady, 2005). According to El Gawady (2005), there is a bigger scope for lowering inefficiencies and increasing productivity in businesses in developing nations. For instance, Malaysia is one of the developing countries, in which promotes the development of internet to boost economic advancement in the country. (Lau, Lim & Yap, 2011). Some studies show that although government spent a huge amount of money for facilities but micro enterprise still lagging in using internet (Hanitahaiza et al, 2012; Mazidah and Burairah, 2014; Victoria and Erne, 2013). They in turn facing problem of lack of customers, lack of management, sales and marketing skills which led them to business failure. These are common problems among micro businesses in Malaysia (Abu Bakar Sedek, 2003). A study by Husnayati and Rafidah (2005) also argue that despite various initiatives introduced by government, internet penetration among Malaysian small firms is still low.

In Malaysia context, studies on SME particularly in micro scale have not yet reached an in depth analysis concerning on the issue of internet adoption (Omar and Abd. Hamid, 2002). Despite a number of small scale studies on the issue, the current level of adoption of Internet-based business among micro enterprise is still not clear. According to SMI Association of Malaysia report that internet implementation among local micro enterprise is still at a very basic level which use PCs for simple operation such as basic accounting, financial data and word processing but few use technology in their daily operation. The use of internet in Malaysia is still in infancy. The study attempts to seek evidence in this issue in context of micro retailer in Kota Kinabalu.

Furthermore, Malaysian consumers are heavy users of the Internet which spending five or more hours per day on the Internet (Tan.C.F, 2012). As from

Figure 1.4 indicates that the tangible items or product hits the online purchase where apparel are the most tangible products to be purchase (Tan.C.F, 2012). For example, Noorshella (2012) in her study of Small Online Apparel Businesses in Malaysia found that customer like to shop at the websites or social media which offer many choices for merchandise of particular type. It means that fashion retailer are experiencing great attention in e-commerce thus help the micro retailers to adopt new innovation from conventional retailers to internet based which open up possibilities to share information and communication with customers and retailers (Burt & Sparks, 2003). Due to this technology era, micro enterprise business particularly in retailer must know how to upgrade the business by following the customer's buying trend (Victoria and Erne, 2013). Therefore, this gives insight that operating a business from conventional communication method (offline) to adoption of ICT (online) will improve business performance.

Figure 1.0: Online Purchase Categories



Sources: Malaysians' Perceptions of Online Shopping (Tan.C.F, 2012)

In the other hand, past study from variety country already identify many factors innovation characteristics that can influence internet adoption including

relative advantage, compatibility, complexity, and social status. But the result is not conclusive because has significant and no significant. So, this study will examine the factors affecting internet adoption in Malaysia context. A study by Limthongchai and Speece (2003) indicates that compatibility and relative advantage primarily influence adoption of internet while complexity was not useful predictors of adoption by micro enterprise in Thailand. Findings from Husnayati and Rafidah (2005) show compatibility were insignificant in influencing of internet.

Level of education also affecting internet adoption where there are study argue that education finds to have strongly influence innovation adoption. Whereas a study by Fletcher (2002), level of education found as the hindrance factors in adopting ICT among micro enterprise. A study by Zulkifli et al., (2012) found that majority of bachelor degree level are tend to use internet. In this study, level of education became moderator to test whether there are strong relationship in affecting internet adoption among micro retailer or vice versa.

1.3 Research Question

- a. Do compatibility have positive relationship on internet adoption among micro retailer in Kota Kinabalu?
- b. Do complexity have negative relationship on internet adoption among micro retailer in Kota Kinabalu?
- c. Do relative advantage have positive relationship on internet adoption among micro retailer in Kota Kinabalu?
- d. Do social status have positive impact on internet adoption among micro retailer in Kota Kinabalu.
- e. Whether level of education play significant role between the relationships between factors with internet adoption?

1.4 Objectives of the study

1.4.1 General objectives

In general, the purpose of this study is to investigate how factors of perceived characteristic of innovation affecting internet adoption among micro retailer in Kota Kinabalu.

1.4.2 Specific Objectives

- a. To determine the relationship between compatibility and internet adoption among micro retailer in Kota Kinabalu.
- b. To determine the relationship between complexity and internet adoption among micro retailer in Kota Kinabalu.
- c. To determine the relationship between relative advantage and internet adoption among micro retailer in Kota Kinabalu.
- d. To determine the relationship between social status and internet adoption among retailer in Kota Kinabalu.
- e. To examine statistically whether level of education moderate the relationship between factors (relative advantage, complexity, compatibility, and social status) towards internet adoption.

1.5 Scope of the Study

This study will only focusing on micro retailers of Brick and Mortar at selected Shopping Mall in Kota Kinabalu such as Center Point, One Borneo, Dongongon Mall, One Place Mall, and City Mall. Micro category are chosen as it represent large portion of respondent of services sector SMEs in Malaysia (Mazidah and Burairah, 2014) whereas retailer one of largest sector in Malaysia. The factors affecting internet adoption are limited to the selected factor only that is relative advantage, compatibility, complexity, and social status.

1.6 Significant of the Study

The value of the study in developing country such as Malaysia as well as Sabah as the state that contributing to the GDP of the country, it has been reported that retailer in Kota Kinabalu is face technologies constraint due to lack of high speed broadband coverage. So, it will be some insight for government to upgrade infrastructure especially in communication infrastructure to help retailer in developing businesses based internet adoption. Besides, the study also might give some insight for the retailer about the benefit of adopting internet for business activity in order to increase performance and extend their market.

1.7 Definition of Variable

The following terms will be further clarified to avoid confusion on the meaning of each variable in the context of this study.

1.7.1 Internet

Refers to the internet access services used such as narrowband, fixed broadband and mobile broadband. Narrowband includes analogue modem (dial-up via standard phone line), Integrated Services Digital Network (ISDN), Digital Subscriber Line (DSL) at speeds below 256 kbit/s, mobile phone and other forms of access with an advertise download speed of less than 256 kbit/s. Fixed broadband refers to technologies at speeds of at least 256 kbit/s in one or both directions such as DSL, cable modem, high speed leased lines, fiber-to-the-home, power line, satellite, fixed wireless and Wireless Local Area Network. Mobile broadband refers to technologies at speeds at least 256 kbit/s in one or both directions that access via any devices such as handheld computer, laptop or mobile phone (Mazidah and Burairah, 2014).

1.7.2 Internet Adoption

Refer to as to the use of internet which consists of computers, software and network in conducting business (Tan et al, 2009a, b). Adoption means the decision to use internet to communicate and/or conduct business with stakeholders and rejection implies decision not to adopt it in the business operations. (Roger, 1983)

1.7.3 Brick and Mortar

Is the jargon of e-commerce businesses which are companies that have a physical presence and offer face to face customer experiences.

1.7.4 Micro retailer

A business that consist of full time employees of five or fewer with annual sales turnover of less than RM300, 000. Full time employees include all paid workers for at least 6 hours a day and 20 days a month, or at least 120 hours a month. Full time workers also include foreign and contract workers. However, it excludes working proprietors, active business partners and unpaid family members or friends who are working in the business and do not receive regular wages. 'Or' basis means that a business will need to satisfy either one of the two criteria use in the definition while sales turnover refers to total revenue including other incomes (SME Corp, 2013).

Retail trade includes retail sales in non-specialized stores, retail sale of food, beverages, and tobacco in specialized stores, retail sale of automotive fuel in specialized stores, retail sale of information and communication equipment in specialized stores, retail sale of other household equipment in specialized stores, retail sale of cultural and recreation goods in specialized stores, retail sale of other goods in specialized stores, retail sale via stalls and markets, and retail trade not in stores, stalls, or market (SME Corp, 2013)

1.7.5 Relative Advantages

Relative advantage is defined as the degree to which an innovation is perceived as being better than the idea it supersedes" (Rogers, 2003). The term relative advantage refers to the perceived benefit dimensions which include effectiveness, efficiency, improves quality, greater control, increase distribution channel, reach new global market, new products and profitability.

1.7.6 Compatibility

Compatibility is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters" (Rogers, 2003).The term compatibility can be applicable in several dimensions. For instance, an innovation adoption in the organization can be matched with existing socio-cultural values and beliefs, previously introduced ideas, and client needs.

1.7.7 Complexity

Complexity is the degree to which an innovation is perceived as relatively difficult to understand and use" (Rogers, 2003). The term complexity refers to the extent to which the system is complicated and difficult to be learned and exploited in the organization. Complexity may refer to the extent to which the new information system is different from the existing information system. If users perceive the internet as too complex, there is a high possibility of rejecting the new internet while if users perceive internet as ease of use, there is a high possibility of accepting the new internet. In this study, complexity will measure according to ease of use by employees, stakeholders, and owners.

1.7.8 Social Status

Refers to the social status gained as the result of internet adoption in this study and is the non-financial predictor of internet adoption in this case. Social status can

be understand as the relative rank that an individual holds with attendant right, duties, and lifestyle, in a social hierarchy based on honor and prestige. In this study, social status is measure according to sophisticated, higher standards, and prestige of the adopter.

1.7.9 Level of Education

Level of education is refers to the level of education someone is pursuing. In this study, someone are refers to the owner of micro retailer or the employees. It consists of primary school, secondary school, certificate, diploma, bachelors' degree, master degree, Philosophy of Doctorate and so on.

1.8 Organization of Proposal

This proposal consists of three chapters which includes chapter one, chapter two and chapter three. Chapter one is about the overview of the study, problem statement, scope, research question and objective of the study and also consist value of study and definition of term for this study. Chapter two is about the literature review. This chapter explores the previous research that has been done by other researchers regarding the topic that related with this study. This chapter will provides a clear understanding about the topic. Apart from that this chapter also consist Diffusion of Innovation Theory because this theory is the most useful theory that related with the adoption of internet. Chapter three is the last chapter for this proposal. This chapter will present the proposed conceptual framework, hypothesis of the study, and also research design. The proposed research framework will shows the relationship among the variable and the proposed framework for this study was adopted and modified from the study that has been done by Tan et.al,. (2013), in their study about Internet-based ICT adoption: Evidence from Malaysia SMEs.

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