



**CONSUMERS' ATTITUDE TOWARDS ONLINE SHOPPING:
THE AFFECTING OF RECOMMENDATION AGENTS**

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**MASTER OF COMPUTER SCIENCE
(MULTIMEDIA COMPUTING)**

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Faculty of Information and Communication Technology

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ABSTRACT

Online shopping is the use of technology for better marketing performance. The retailers are developing strategies to meet the demand of online shoppers they are busy in studying consumer behavior in the field of online shopping, to see the consumer attitudes towards online shopping. Therefore, the researcher has decided to study consumer's attitudes towards online shopping and specifically studying the factors influencing recommendation agent towards consumers' decision making to shop online. The respondents selected for the research is lecturers from KPTM Batu Pahat. The sample size selected for this research is 90 and the researcher used convenience sampling technique. The results of the study indicate that recommendation agents have a significant impact on consumer decision making. As expected, the use of the recommendation agents reduces consumers' effort to search for products information.

The findings indicated that among the four factors for this research have shown the most attractive and influencing factor for online shoppers is convenience, following security the second most influencing and thirdly time saving. Results have also showed that Website Design/ concerns are very important to how consumer get the information about product that they want to buy. Hence, the effectiveness of recommendation agents helps the consumers to get information and comparison.

ABSTRAK

Membeli secara dalam talian adalah satu teknologi yang bagus untuk pemasaran. Peniaga sentiasa mereka teknik pemasaran yang berkesan untuk menarik perhatian pembeli dan sentiasa membuat kajian mengenai tingkah laku pelanggan bagi menarik perhatian mereka supaya membeli secara dalam talian. Oleh sebab itu kami mengkaji sikap pengguna terhadap pembelian dalam talian dan fokus dalam kajian ini adalah mengenai faktor yang mempengaruhi pengguna terhadap agent cadangan dalam membuat keputusan untuk membeli secara dalam talian. Responden kajian seramai 90 orang di pilih di kalangan pensyarah Kolej Poly-Tech Mara Batu Pahat.

Keputusan dalam kajian ini menunjukkan agent cadangan memberi impak yang ketara dalam mempengaruhi keputusan pelanggan dalam membuat keputusan untuk membeli secara dalam talian. Seperti yang di jangka, menggunakan agent cadangan mengurangkan keupayaan carian maklumat sesuatu barang. Dalam kajian ini kami juga menemui empat faktor yang mempegaruhi pengguna membeli secara dalam talian. Faktor yang utama adalah kemudahan diikuti oleh keselamatan dan ketiga adalah faktor penjimatan masa. Keputusan juga menunjukkan rekaan laman sesawang dan ciri-cirinya juga memberi peranan penting dengan cara bagaimana pengguna mendapat maklumat sesuatu barang. Itulah cara bagaimana agent cadangan membatu para pelanggan mendapatkan maklumat barang yang mahu di beli secara dalam talian.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The web shopping business division of Malaysia was considered at around RM1.8 billion in 2013, and, by 2015, it is depended upon to addition to RM5 billion (Bernama, 2014). In perspective of the Malaysian Communication and Multimedia Commission (Association, 2012), web shopping is situated eleventh among the fundamental 15 reasons why Malaysians get to the Internet. Shopping online is the essential component that drives Malaysians to get to the Internet. While buying on the on the web, saw risk is a basic edge (Mwencha, Muathe, and Thuo, 2014) in light of the way that purchasers feel off kilter about their purchase decisions in this setting. Jin, Osman, Romle and Othman (2015) found that now is globalization time, e-trade has potential advancement in late year and thusly various powerful retailers are searching for overall invasion and expansion especially through e-business. They said the reason in light of e-trade is the less requesting and snappier ways to deal with augment business in the straightforwardness way. It was because of e-trade is the less demanding and quicker approaches to create business in the minimal effort way. It additionally gives chances to worldwide retailers to assemble their brands and find out about the customers in different nations before expanding their business or putting an organization or store specifically states.

According to Forsythe, Liu, Shannon, and Gardner (2006), shoppers can't straightforwardly touch the products to be acquired when purchasing on the web. One of the devices generally utilized on the sites of these online merchants is recommender frameworks which make proposals to the buyer to help their shopping and data about the item. Suggestions operators can

possibly bolster and enhance the nature of the choices shoppers make when looking for and selecting items on the web. They can decrease the data over-burden challenging shoppers, and additionally the multifaceted nature of online searches.

1.2 Background of the Study

Huge online retailers in Malaysia like Zalora.com and direction suppliers like Trivago.com have come to command their individual business sector portions on the web. One of the instruments generally utilized on the sites of these online brokers is recommender agents which make suggestions to the shopper to help their shopping. An exceptional typical for web shopping circumstances is that they approval merchants to make retail interface that consolidate to a great degree canny segments. One framework for insight that is required from a buyer point of view is the use of complex contraptions planned to help clients in tweaking to settle on their purchase decisions the electronic shopping environment to their individual slants. The accessibility of such apparatuses, which allude to as Recommendations Agent, may prompt a change of the path in which customers hunt down item data and settle on buy choices.

According to Wei and Jennings (2005) Recommendations Agent are web based programming that complete an arrangement of operations for the benefit of clients and give shopping advice in view of clients' needs, preferences, profile and past shopping exercises. They included distinctive sorts of proposal operators have been created inside Content-based sifting suggestion and Content-based communitarian separating proposal is the most generally utilized. As indicated by Montaner and Lluís (2003) Recommendations agents are usually removed from factual investigation of examples and analogies of information drawn from assessments of thing (rating) given by other client or verifiably by observing the conduct of other client in the framework.

Wang (2008) reported that client's conduct in internet shopping and in normal shopping is entirely unexpected. Both incorporate social, social, individual and psyche exploration thus on instruments however moderate shopping is significantly more affected by these parts when appeared differently in relation to internet shopping. The reason is that online buyers are constraining with social environment and mental parts. Web shopping generally in perspective of private considering reality view selectivity. Web shopping makes its own character for its modification.

In this paper, researcher identify the affectedness of proposals operator impact buy choice procedures among Malaysia. In view of hypothetical and observational work in advertising, judgment and basic leadership, brain research, and choice emotionally supportive networks, researcher build up an arrangement of theories relating to the impacts this instrument on buyers' quest for item data, the size and nature of their thought sets, and the nature of their buy choices in an online store. The aftereffects of a controlled examination demonstrate that proposal specialist influence on customer decision making.

The paper is organized as follows. First, researcher briefly discuss the relevant literature on development online shopping in Malaysia followed with costumer decision making towards recommendation agents. Next, researcher define an overview of recommendation agent for online shopping. Then develop an example interface of recommendation agent base on resonances. This is followed by a description of the method used to collect the data. The paper concludes with a general discussion of the findings.

1.3 Problem Statement

Electronic trade has turned into an extensive and essential segment of the new advanced economy in the course of the most recent ten years. In view of Berita Harian Online (2015), the quantity of web clients in Malaysia is required to increment to 25 million by 2015 from 18 million in 2012, as indicated by the 2013/2014 Economic Report discharged by the Finance Ministry here today. The report said the rate of family unit broadband infiltration expanded to 66.8 % toward the end of June 2013, while the cellular telephone entrance rate surpasses 100 %; there are presently 42.6 million endorsers. These days, online business is the one of stage to disperse item or administration direct to the client.

In online business, thing property is one of the frameworks for new thing organization to pull in buyer points. As said in the Introduction that because of expanding globalization; the significance of online business is expanding and making it all the more quick and helpful for customers. How customers get the data about the item that they need to purchase while shopping online? To beat this issue, online vender use Recommendation Agent to pull in client purchase the others item. This study will examine the impact of proposal specialist to impact basic leadership towards purchasing item.

1.4 Research Question

- What are factors that influence consumers to shop online
- How does recommendation agent influence customer decision making processes?
- Does recommendation agent affect customer decision making processes?

1.5 Research objective

- To study factor that costumer attitudes towards purchasing online shopping
- To analyses effectiveness of recommendation agent towards purchasing online shopping
- To propose example of recommendation agent.

1.6 Research scope and limitation

The scope of research is limited only to identify the affectedness of recommendations agent influence purchase decision processes. Based on theoretical and empirical work in marketing, judgment and decision making, psychology, and decision support systems, we discuss an affectedness of recommendation agents as a tool influence consumer decision making and help for search for product information, the size and quality of their consideration sets, and the quality of their purchase decisions in an online store.

The limitation of this study is to identify customer behavior during making decision in the proses of buying from online. Customer behavior would be changed according to their situation and emotional.

1.7 Research significant

To enhance the qualities of online business to get insight on the relationship between products attributes and consumer decision making. Importance factor that influence customer to shop online and customers' needs in order to enhance the qualities of online business by recommendation agent for qualities of online business.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This literature review phase refers to a scope of papers that are critical to the present circumstance of internet shopping. The past examination papers have been picked as they distinguish the components impact of suggestion specialists towards basic leadership in web shopping. The greater part of the chose writing is from the period 2010 to 2015. Nonetheless, there are still a few papers incorporated into the writing audit which were distributed before 2007 and because of the center of this exploration point on PCs particularly the scope of straightforwardly significant examination papers from late years is constrained. In this area some past writing in regards to the improvement of internet shopping in Malaysia is talked about. After that, concentrates additionally characterize about suggestion operator for their understandings into the impact of proposal specialists towards basic leadership in web shopping.

2.2 Development of online shopping in Malaysia

In the exploration by John and Jackie (2007), Malaysia online history beginning from 1995 were viewed as the start of the Internet age. They included that development in the quantity of Internet armed forces in Malaysia started around 1996. As indicated by study from the primary Malaysian Internet overview directed from October to November 1995 by MIMOS and Beta Interactive Services, one out of each thousand Malaysians had admittance to the Internet (20,000 Internet clients out of a populace of 20 million) (Beta Interactive Services, 1996). In 1998, this number developed to 2.6% of the populace. The study from Lee (2002) said that an aggregate number of PC units sold, which was 467,000 in 1998 and 701,000 in 2000 showed an expanding development. The Internet is getting the opportunity to be well known in

Malaysia, as it is a virtual spot where people share their contemplations, gather bunches, shape the future evenhandedly, and development another strategy for cooperating. The Internet is the world's most noteworthy mall that grants endeavors to do their business with insignificant exertion included, yet covering overall business part.

Jin, Osman, Romle and Othman (2015) found that now is globalization time, e-commerce has potential development in late year and along these lines numerous effective retailers are looking for worldwide infiltration and extension particularly through e-business. They said the reason because of e-commerce is the less demanding and quicker approaches to extend business in the ease way. It was due to e-commerce is the easier and faster ways to expand business in the low cost manner. It also provides opportunities for global retailers to build their brands and learn about the consumers in other states before growing their business or investing a company or store in certain states.

They also found from Malaysian Communications and Multimedia Commission,(2013) so as to advance Internet utilization, government has setup 1Malaysia Internet Center, scaled down group broadband Center, 1Malaysia Community Broadband Library and 1Malaysia Wireless Village both in the West and East Malaysia. From this confirmation, it exhibited that the administration's arrangements to construct the usage of web among the subjects to upgrade the instruction rates while in a backhanded way help the web shopping developments in Malaysia. Malaysia itself has finished snappy progression in the gathering of broadband organizations within a brief time period with the family broadband penetration rate of 11 percent in 2006 to 31.7 percent in 2009 surpassing the goal of 50 percent passage rate set in 2010. The expansion in the broadband utilization among the Malaysia subject to some degree could overstate internet shopping deals.

Hana, Mike and Parvaneh (2013) point out that Malaysia positioned top 30th of the 2013 Global Retail E Commerce Index among different nations with the online business sector engaging quality score of 36.8 purpose of the general online business sector size, shopper conduct, development potential and foundation. This acceptable record could be because of the administration endeavors to advance e-trade among Malaysia residents.

According to a report by Wong (2014) found that there are 87 percent of the online stores are worked by one to five full tickers while the rest of the 13 percent of the online store are worked by six to thirty full timekeepers. Other than he included, there are 68 percent of the online retailers earned not precisely RM10000 a month while only 18 percent of the online retailers made advantages more than RM50000 a month. It showed that most of the online stores in Malaysia are relative little setup and need in advantage getting. However, from this verification, Malaysia locals are moving towards getting web shopping as one of the shopping channel to extra the typical shopping some way or another while yearning for some happiness through web shopping.

A survey conducted by Soasta (2013) demonstrated that two-third of the folks are going to buy their kids' back to class supplier from online, Smartphone and tablet instead of to insist stress from shopping in retail store. These discoveries demonstrated that Malaysia has potential development in e-commerce and in this way it is vital to understand the web shopping patterns and new modernization challenges.

Akbar and James (2013) observe that components impacting customers to shop online these days is value, accommodation, productivity, item run, item classification, age, administrations, security trust and learning base. The components were characterized from examination influence purchaser propensity for shopping either online or retail shops.

2.3 Recommendation Agents

Wang and Benbasat (2007) define the recommendation agents are web based programming that do an arrangement of operations for the benefit of clients and give shopping suggestions taking into account clients' needs, preferences, profiles, and past shopping exercises. They added that recommendation agents have to propose as support tools for shoppers in the different progresses of their choice making forms in e-commerce situations. They offer purchasers some assistance with reducing data and decision over-load, enhances choice quality, and builds confidence decision making during shopping.

He, Jennings and Leung (2011) expressed that product promotion feasibility manages the capacity of the recommendation agents to suggest product, its measurements to draw in the member's consideration regarding the items and create interest for them. Online retailers may just advance items and offer uncommon arrangements to their clients without utilizing a RA. Be that as it may, general item an advancement without some proposal decision making in the matter of what things the customer may be exceptional on will be not accomplishment. They likewise recommended that, customers with comparative tastes and inclinations are liable to purchase comparable items. In view of this, utilizing joined filtering strategies to prescribe an item that one purchaser discovered alluring could be a viable method for expanding deals. Such strategies are liable to be viable and can affect shopper conduct.

According to Hostler, Victoria, Zhiling Guo, Guimaraes, and Forgionne (2011) recommendation agents have changed the method in which consumer look for product information and settle on buying choices. Since they show optional of suggestions placed by expected request to buyers, consumer who use recommendation agents are trusted upon to look

through and gain information on fewer options than the individuals who shop without utilizing recommendation agents, bringing about a littler search set. Therefore, the process of recommendation agents is depending on upon to expand product search effectiveness.

In the research of Hostler, Victoria, Guo, Tor and Forgionne (2011), after the consumer has been open to a product suggestion consumer will respond base on suggestion. Earlier studies have recommended that recommendation agents give more significant product information and along these appearances enhance consumer variety choice and quality. In the event that the clients are looking for data on particular items, the more important the data, the better the chance that the client will discover the item appealing. Since the utilization of proposal specialists flags the accessibility and status of related items, it can disentangle the purchaser's shopping by decreasing hunt and choice expenses. Through adjusted item proposal, suggestion operators can likewise satisfy purchasers' requirement for data and investigation, bringing about enhanced item look adequacy.

Recent research from them has shown that the presentation of product information altogether influences customers' fulfillment with online shopping. Both purchasing accommodation and site outline identified with item offerings are thought to be among the desirable elements that make a friendly consumer experience. Through suggestion operator's innovations, the presentation of item data on the sites is thought to be more compelling, making purchasers mindful of accessible items prone to be of enthusiasm to them. With less push to gain more important item data, worth and effectiveness of choice creating is likely to be upgraded site.

Felfernig and Gula found that members in their study who utilized a proposal operators were more fulfilled by the basic leadership process at the shopping site. The results from a fitting

and significant item proposal may change generally under various circumstances. Purchasers may discover the item proposals valuable and wish to purchase the item, however there might be different limitations that keep them from doing as such. It is likewise conceivable that a customer may basically choose to concede a buy to a later date. The individual does not really need to buy an item to show his or her fulfillment with the proposals and suggestions. In the nutshell, at whatever point clients discover the proposal specialists item recommendations accommodating, it is prone to build their level of fulfillment with the buying.

2.4 Consumer Decision Making

According to Reischach (2009) buying choices be determined by on product facts that can be lacking for a number of reasons, “such as the creation of challenging brands, the difficulties of thorough search or selection, preferences in product estimation, constant product innovation or consumer flexibility. This evidence irregularity between producers and consumers results in give importance to price and quality features during purchase decisions at the point of sale. If a customer distinguishes slight about the product’s information, they will improve the choice according to price thoughts. With improved product information about expected quality, consumers tend towards normal choices on the likely effectiveness over both attributes of the product that were search. Individually, by using recommendation agents product information irregularity between producers and consumers can be abridged in front of the product shelf. For example, may expose evidence on the quality of a product, thus may transformation the consumer decision making manners.

Xiao and Benbasat (2010) observe that characteristics of recommendation agents have been shown to influence the customers’ decision-making processes and outcomes, as well as their estimation of recommendation agents, which in turn influence their behavioral intention to

adopt recommendation agents. They also added that recommendation agents are designed to understand the different needs of particular customers that they serve. Customer's beliefs about the degree to which the recommendation agents understand them and are modified for them are key factors in recommendation agent's adoption. In multifaceted decision-making environments, individuals are often unable to estimate all information what is the best to making their choices due to their limited rational resources.

According to a report from Wang and Benbasat (2009) by screening out incompatible products, recommendation agents reduce consumers' choice loads and lead to higher decision quality and satisfaction. Furthermore, recommendation agents offer customers with shopping information that is mainly helpful for complex products, for example smart phone and laptops. Without appropriate support, consumers may be limited in their capability to estimate the information about the products, because they cannot refer with salespeople as in traditional shopping environments.

2.5 Factors influencing consumer to shop online

In spite of the fact that there are a few elements that impact purchasers to shop on the web, however as said above scientists have chosen four components subsequent to perusing writing in the field on buyer mentalities towards web shopping and these variables are talked about beneath in the light of past writing.

2.5.1 Convenience

Comfort element alludes that it is anything but difficult to scan or inquiry the data through online is simpler than the customary retail shopping. Through on the web, buyers can undoubtedly seek item index however in the event that the shopper appear to be

identical item or thing in a conventional store physically it is hard to visit physically and tedious moreover. Comfort has dependably been a prime variable for shoppers to shop on the web. Darian (2010) notice that online customers convey numerous advantages as far as comfort, for example, less tedious, adaptability, less physical exertion and so on. Bhatnagar and Ghose (2011) claims for comfort as a standout amongst the most vital favorable position for web shopping.

2.5.2 Time saving

Time reserve funds is one of most impacting elements of web shopping. Peruse or look an online list can spare time and tolerance. Individuals can spare time and can diminish exertion by shopping on the web. As indicated by Rohm and Swaminathan's (2012), one conceivable clarification that web shopping spares time amid the buying of products and it can dispense with the setting out time required to go to the conventional store. On the other side, some respondent imagine that it is additionally time taken for conveyance of products or administrations over internet shopping.

2.5.3 Website design/features

Site outline and web shopping action is one of the basic affecting elements of internet shopping. Site outline, site unwavering quality/satisfaction, site client administration and site security/protection are the most appealing elements which impact the view of the purchaser of web purchasing Shergill and Chen (2011). Kamariah and Salwani (2011) claims the higher site quality, the higher customer expects to shop from web. Web plan quality impactsly affects shopper decision of electronic stores, expressed by Liang and Lai (2010). Site plan one of the imperative variable spurring buyers for web