

Online Search and Buying Behaviour: Malaysian Experience

RECHERCHE EN LIGNE ET HABITUDES D'ACHAT: EXPERIENCE MALAISIEENNE

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Abstract: This study examines online search pattern and buying behaviour in Malaysia. Malaysian consumers search moderately for product/service information with company websites being the most popular mode of searching. Books, airline tickets, and hotel room booking are the products and services commonly purchased to satisfy self-fulfillment and affiliation needs. Respondents who have online purchase experiences have a higher intention to make online purchase in the future. There is no gender difference in terms of the frequency of online search and purchase as well as the type of consumer needs being satisfied over the Internet. Implications of the research findings and suggestions for future research are discussed.

Keywords: online search behaviour; online purchase; online ads; Malaysia

Résumé: Cette étude examine le modèle de recherche en ligne et les habitudes d'achat en Malaisie. Les consommateurs malaisiens recherchent raisonnablement les informations des produits / services sur les sites web des sociétés, ce qui est le mode le plus populaire de la recherche. Livres, billets d'avion, et réservation de chambre d'hôtel sont les produits et services généralement achetés pour satisfaire l'accomplissement de soi et les besoins d'affiliation. Les répondants qui ont des expériences d'achat en ligne ont davantage l'intention d'acheter en ligne à l'avenir. Il n'y a pas de différence entre les sexes en terme de fréquence de recherche et d'achat en ligne ainsi que le type de besoins de consommateur qui sont satisfaits par l'Internet. Des implications des résultats de recherche et des suggestions pour de futures recherches sont discutées.

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1. INTRODUCTION

There has been a rapid growth in the use of Internet since its introduction in the early 1980s. The Internet has grown tremendously in both its applications and number of users mainly due to its unique characteristics of flexibility, interactivity, and personalisation. It has been a very useful tool for communication, entertainment, education, and electronic trade (Ko, Jung, Kim, and Shim, 2004; Koyuncu and Lien, 2003). With the increased Internet access both at home and in schools, the number of Internet users will continue to grow.

The revolutionary change brought forth by the computer and information technology has an important impact on consumers' daily lives. On the business side, the Internet has transformed the way businesses are run. It allows retailers to offer an unlimited range of products and services to all consumers from around the world at any point in time. It is deemed to be the most significant direct marketing channel for the global marketplace (Ko et al., 2004).

On the consumer side, the Internet has given consumers more control in accessing information on products and services. Consumers pull for online content—they decide when, where, what, and how much commercial content they wish to view. The Internet enables consumers to access a wide range of products and services from companies around the world, and it has reduced the time and effort that they spend on shopping (Ko et al., 2004). Consumers play a much more active role in searching for information online to accomplish a certain purpose or goal. They access the Internet with that goal in mind, and that goal can influence individual behaviours and responses to online information. Consequently, researchers should explore why people go online and what activities they do online (Rodgers and Thorson, 2000; Smith, 2002).

Given the significant growth and optimistic outlook for the future of online shopping, it is important to examine consumers' behaviours in relation to online purchase. The present study attempts to investigate consumer online behaviours using a Malaysian sample. The number of Internet users in Malaysia has grown rapidly. According to the statistics compiled by the Malaysian Communications and Multimedia Commission (MCMC), Malaysians are the second most frequent users of the Internet among the Southeast Asian nations based on the survey conducted in year 2003. MCMC is a government agency which promotes and implements the national policy on communication and information technology development within the country. Malaysia has 3,413 registered Internet users per 10,000 people, only behind Singapore with 5,088 registered users per 10,000 inhabitants. The number of Internet dial-up users in Malaysia was estimated at 10.32 million in mid 2005 ("Malaysians second," 2005).

Furthermore, the Malaysian government has been promoting the development of information and technology (IT) within the country for economic advancement. Malaysians have been urged to be more IT-savvy so that they can start their own business using IT. For example, housewives are encouraged to use IT to do business by marketing their home-made products online and making home deliveries ("Use IT to get ahead," 2005). In addition, Malaysian state governments are building infrastructure to achieve full Internet access in rural areas ("Full Internet Access," 2006). The IT movement includes the setting up of cyber centers and e-mail communication system. The "E-mail 4 All" project will push parents into the IT age and it aims to achieve a 40% e-mail usage in the state rural areas by 2010 ("E-mail Soon," 2005). Given the increasing usage of the Internet in the country, it is timely to examine the online behaviours among Malaysian population.

The present study aims to examine the following three main areas: (1) consumers' online search activities prior to their decision to buy online, (2) the typical products and services purchased online, and (3) the type of search mode that builds to online purchase. Section 2 of this paper reviews the current literature on online consumer behaviours and presents the research questions and hypotheses. Section 3 outlines the research method and describes the measurements scales. Section 4 presents the results in relation to each of the research questions and hypotheses. Finally, section 5 discusses the research findings and their implications for researchers and practitioners. It also describes the importance of the current study and provides several suggestions for future research.

2. REVIEW OF LITERATURE

2.1 Online Consumer Behaviours

Several types or classes of online consumer behaviours have been examined by various researchers—they are (1) the amount of time spent online, (2) the products and services purchased online, (3) intention to purchase online and online purchase, (4) the utility of the Internet, and (5) online search activity. The first type is about the amount of time that consumers spend online. Based on the study by Korgaonkar and Wolin (2002), consumers can be classified as heavy, medium, and light users of the Internet. The heavy users spend up to five hours per day on the Internet mainly in the evenings and nights, and they access the Internet everyday of the week. The medium users spend up to three hours per day on the Internet, primarily during evening and night hours but often on weekends. The light users spend about an hour per day on the Internet without a clear pattern in terms of the time of the day. Typically, consumers spend between one to three hours per day online and favour surfing the Internet regularly in the evening and at night during weekdays. The study by Bellman, Lohse, and Johnson (1999) indicated that although people access the Internet frequently at office and at school, more of their online hours are at home—with 21% of the respondents spending more than 20 hours per week on the Internet at home.

The second type of online consumer behaviour is about buying behaviour, i.e., what types of goods and services consumers acquire via the Internet. What do people buy online? According to the list compiled by Battey (2000), the top ten e-commerce categories are airline tickets, hotel reservations, computer hardware, consumer electronics, car rentals, books, apparel, office supplies, software, and food/beverages. Other products and services that consumers buy online include clothing, healthcare products, computer and computer accessories, groceries, music and CDs, sunglasses, videos and movies, flowers, sporting goods, toys, personal care products, jewelry, college textbooks, concerts and plays, investment choices, legal services, news subscription, and insurance (Bhatnagar et al., 2000; Foucault and Scheufele, 2002; Leonard, 2003; MacSweeney, 2000; Vijayasarathy and Jones, 2000).

For those who have experience in online purchase, do they have a higher intention to buy online again than those who have not purchase online before? In studying students' online purchasing behaviour of textbooks, Foucault and Scheufele (2002) found a significant positive link between previous online purchase of any goods and services with the likelihood of buying textbooks online. Similarly, Brown, Pope and Voges (2003) found a positive relationship between prior online purchase and future online purchase intention. Those who have previous online purchase experience are more likely to have intention to purchase online in the future than those who have no online purchase experience before.

The third type of online behaviour is about the relationship between intention to buy online and online purchase. Most of the studies examining this relationship are based on the theory of planned behaviour by Ajzen (1991). The theory of planned behaviour states that behaviour can be predicted by intention and that intention, in turn, is determined by three factors—attitude toward the behaviour (favourable or unfavourable appraisal of the behaviour), subjective norm (social pressure to perform or not to perform the behaviour), and perceived behavioural control (perceived ease or difficulty of performing the behaviour). Ajzen and his colleagues found plenty of evidence concerning the link between intention and behaviour. For example, people's voting intentions tend to correlate quite strongly with actual voting choice (as cited in Ajzen, 1991). Furthermore, Sheppard, Hartwick and Warshaw (1988) did a meta-analysis of 87 studies and found an average correlation of 0.53 between intention and behaviour. In the context of online shopping, Limayem, Khalifa and Frini (2000) found a significant positive relationship between intention to shop online and online shopping. Similarly, Pavlou and Fygenson (2006) found that getting information and purchasing, the two focal behaviours in their research are significantly influenced by their respective intentions.

The fourth type of online behaviour is about the function or utility of the Internet, i.e., for what purpose the Internet is used. There are two perspectives to the utility of the Internet: (1) whether it is mainly for personal or business use, and (2) what needs are being satisfied in the online transactions. With regard to the first perspective, Bellman et al. (1999) found that although the Internet is put to varied uses such as reading news and e-mails, entertaining, researching for product/service information, shopping, and banking transactions; the most regular use of it is for work-related activities. However, using a sample of 420

consumers in a large metropolitan area, Korgaonkar and Wolin (2002) found that about half of the consumers engage the Internet for personal use, rather than business-related use. Other uses of the Internet have been found to be seeking for travel and financial information, downloading software, casual surfing, communicating and socialising, and doing research (Lohse et al., 2000; Rodgers, 2002).

The second perspective of the usage of the Internet is about the types of consumer needs being satisfied. As cited by Leonard (2003), consumer needs can be classified based on Maslow's hierarchy of human needs. They are:

1. Physical needs—consumers' most basic needs. Examples are groceries, foods, beverages, and home.
2. Safety needs—consumers' need to be safe and secure. Examples are insurance, smoke detectors, and security systems.
3. Love and affiliation needs—consumers' sense of belonging or the need to be with others. Examples are perfume, cosmetics, and travel.
4. Prestige and esteem needs—consumers' need for status. Examples are jewelry, cars, and education.
5. Self-fulfillment needs—consumers' need for self-actualisation, the complete fulfillment of human capacities, individual enhancement and advancement, and the creation of unique personal identity.
6. Examples are self-fulfillment products and services such as further education, self-development materials, tanning salons, cosmetic surgery, and fitness equipment.

In the study done by Leonard (2003), the author found that the items frequently sought online are used to satisfy love and affiliation needs. These items include books and magazines, airline tickets, CDs and software, computer equipment, flowers, toys, and cosmetic/personal care products. Clothing is also a frequently sought item and it satisfies a physical need; but it also can be used to fulfill love and affiliation needs. The author concluded that "the respondents fulfilled (purchased) love/affiliation needs the most, followed by physical needs. The Internet was not used frequently to satisfy prestige/esteem, self-fulfillment and/or safety needs" (p. 7).

The fifth and final type of online behaviour discussed here is the search activity in relation to buying online. Search activities include the number of websites visited by consumers before they make a purchase, the types of websites searched, the frequency of browsing online, the number of searches, and the use of search terms or keywords (Ahuja, Gupta and Raman, 2003; "Search before the Purchase," 2005). How many websites do consumers visit before making a purchase decision? Ahuja et al. (2003) examined the number of websites people visit before they make a purchase decision. The authors found that both students and non-students usually visit between one to three websites before they make a purchase. They have visited websites on apparel, audio-video, computer, grocery, healthcare, home entertainment, sports, and travel; with travel being the most common category of website searched. By examining panel data from over 10,000 Internet households and three types of commodities—books, CDs, and air travel services, Johnson, Moe, Fader, Bellman, and Lohse (2004) found that the amount of online search was quite limited. On the average, the Internet households only visited 1.2 book sites, 1.3 CD sites, and 1.8 travel sites during a typical active month.

In addition, DoubleClick, which sells online and e-mail marketing tools, has released a comprehensive report on buyer search activity ("Search before the Purchase," 2005). The report states that about 50% of the online purchases are preceded by search on a search engine, and the number of searches leading up to the purchase varies by product/service category. For example, apparel buyers conducted 4.7 relevant searches; computer hardware buyers, 4.9; and travel buyers averaged six relevant searches in the 12 weeks prior to their purchase. Majority of these search activities across the 12 weeks are primarily using generic terms; that is, without mentioning any specific brand names. However, searching for branded merchandise becomes prominent close to their purchase, peaking immediately prior to the purchase. A major observation is that most buyers do considerable information search well in advance of making their purchase.

Consumers plan and do research well before completing their purchase transactions suggests a positive relationship between search activity and online purchasing behaviour. This finding is in line with the argument by many other researchers on online shopping. They have proposed that searching for product/service information is the most important predictor of online buying behaviour. When consumers

spend more time on the Internet and have more online experience, they tend to research and buy more (Bellman et al., 1999; Bhatnagar et al., 2000; Koyuncu and Lien, 2003; Leonard, 2003; Lohse et al., 2000). Looking for product information on the Internet is the most important information for predicting consumers' online buying behaviour (Bellman et al., 1999). This is further supported by Lohse et al. (2000), "Not surprisingly, the degree of Internet usage to search for product information explained the most variation in whether someone would make an online purchase" (p. 23).

2.2 Gender Differences

In terms of gender differences in the types of products and services purchased online, Bhatnagar et al. (2000) found that men are more likely to buy online for products categories such as hardware, software, and electronic; whereas women are more likely to buy online for product groups like food, beverages, and clothing. Leonard (2003) attempted to classify that men buy hardware, software, and electronic goods to satisfy love and affiliation needs; whereas women buy items like food, beverages, and clothing to satisfy physical needs. In addition, Tweney (1999) reported that women are also more likely to shop for legal service via the Internet (i.e., safety needs). These arguments suggest a gender difference in the types of consumer needs to be fulfilled through online shopping.

In addition, many studies have also examined gender differences in online behaviour with respect to Internet usage and online expenditure (Chang and Samuel, 2004; Leonard, 2003; Lohse et al., 2000; Tweney, 1999). Based on the research study done by Chang and Samuel (2004), frequent online shoppers in Australia tend to be male and the infrequent shoppers tend to be female. Those who shop online more than five times per year and who spend high amounts per online transaction tend to be males. Leonard (2003) examined gender differences in the number of items researched and purchased online and found that men research and purchase more products and services over the Internet than women. Leonard (2003) and Tweney (1999) also indicated that men are more likely to shop online than women. In sum, men have been found to be more inclined to and active in online shopping than women.

2.3 Research Questions and Hypotheses

The Internet has played a larger role in consumer buying decision especially when purchase decisions become more routine and there is a lesser need for personal assistance (Ratchford, Talukdar and Lee, 2001). More consumers will engage the Internet in their search for information. In their study of the role of the Internet in the search process for automobiles, Ratchford et al. (2001) found that about 38% of the car buyers surveyed in a metropolitan area in 1999 used the Internet as their source of information. Peterson and Merino (2003) reported that about 36% of the American public searched online for products and service information in 2001, as compared to 26% in year 2000. In the Malaysian context, 40.5% of the household users of the Internet surveyed used the Internet to search for information on goods and services in year 2005 ("Household Use," 2005).

The above findings imply that more research studies on online consumer search behaviour are needed. In addition, Kulviwat, Guo, and Engchanil (2004) stated that "while information search has been a major research stream in the consumer behaviour literature, online search for product/service information is a relatively new area" (p. 245). Studies on online consumer search behaviour in the Malaysian market are inadequate. Consequently, the present authors decided to explore the search behaviour of Malaysian online consumers. The current study will examine Malaysian online consumer search behaviour involving two general modes of online search—company websites and online ads; and how these search modes link to intention to purchase online and actual online purchase. Specifically, the present study attempts to address the following five research questions and three hypotheses:

Research questions:

1. Are Malaysian consumers' heavy, medium, or light users of the Internet?
2. What is the popular searching mode for product/service information?
3. What are the common products and services consumers purchase via the Internet?
4. What consumer needs are being satisfied over the Internet?

5. What is the likelihood to make future purchases on the Internet with or without prior experience in online buying?

Hypotheses:

H₁: Men search and purchase online more than women.

H₂: There is a gender difference in terms of the types of needs being satisfied over the Internet.

H₃: Those who have online purchase experience exhibit a higher future online purchase intention.

3. METHODOLOGY

3.1 Sample

The data for this study were collected from 200 employees (office employees and lecturers) at a private university in Malaysia. Survey questionnaires were personally distributed and collected from the respective respondents. One hundred and fifty employees completed the questionnaires, yielding a response rate of 75%. A sample size of 150 is considered sufficient for data analysis (Anderson and Gerbing, 1988). Most of the respondents belong to the Chinese ethnic group with an average age of 32 years old. They were considered highly educated respondents with majority of them holding Masters qualification. Table 1 describes the characteristics of the sample in details.

Table 1: Characteristics of Respondents

Gender	Race	Marital Status	Occupation	Monthly Income
Females: 69%	Chinese: 75%	Not married: 57%	Lecturers: 82%	Ranged from RM1,000 to RM7,000: 24%
Males: 31%	Indians: 13%	Married: 42%	Office employees: 17%	Between RM2,000 to RM4,000: 76%
	Malays: 9%	Unspecified: 1%	Unspecified: 1%	
	Others: 3%			

3.2 Measurements

To measure the amount of time spent online, one item “On the average, how many hours do you spend on the Internet per day?” was used. This method of measuring Internet usage in terms of the number of hours spent online is adapted from Park and Jun (2003)

Consumers’ search activity was measured in terms of (1) the type of search engines (such as Yahoo!, Google, MSN), (2) the number of company websites visited, and (3) the frequency of clicking online ads. The respondents were asked to indicate their favourite search engines and the company websites that they have searched for in relation to product or service information. They were instructed to give more than one answer, whenever applicable, in responding to these questions. The use of the number of websites visited as a measure of search activity was adopted from Ahuja et al.’s (2003) empirical study on online consumer purchasing behaviour. The frequency of clicking online ads was measured in terms of the percentage of time they clicked on the online ads based on their exposure to the ads on the Internet. The percentage of time was in 10% interval ranging from 0% to 100% of the time. This approach of measuring frequency was adapted from Korgaonkar and Wolin’s (2002) study in their assessment of beliefs about web advertising.

Online purchase was measured in terms of the type and the number of products and services purchased online. To find out the products and services commonly acquired online, the respondents were asked to list down, one by one, the tangible products (e.g., books and electronic goods) and the services (e.g., hotel room booking and airline tickets) that they have purchased online. They were also asked to list the types of web services that they have used or subscribed to via the Internet before and now, and whether they paid for the services or not. Examples of web services are online news and inter-bank transfer service. The total number of items purchased in both products and services were used to measure consumers’ total online purchase. The unpaid or free web services were not included in the calculation of the number of products and services

purchased online. This approach of measuring online purchase was adapted from Joines, Scherer and Scheufele (2003).

One item “Whether you have or have not purchased goods and services online before, how likely are you to make an online purchase in the future?” was used to measure consumers’ intention to buy online in the future. The respondents answered the question based on the scale 1 = “definitely will not” to 5 = “definitely will.” This method of measuring intention to buy online in the future was adapted from the study by Foucault and Scheufele (2002).

4. RESULTS

Research Question 1: Are Malaysian consumers heavy, medium, or light users of the Internet?

The amount of time spent online ranged from 0.5 to 10 hours with an average of 3 hours per day. Eighty seven percent of the respondents indicated that they were online for less than 5 hours per day on the average. According to the categorization by Korgaonkar and Wolin (2002), spending about 3 hours per day online is considered a medium usage of the Internet. Hence, Malaysian consumers can be classified as medium users of the Internet.

Research Question 2: What is the popular searching mode for product/service information among the Malaysian consumers?

Table 2: Types of Search Engines and Frequency of Access

Search Engine	Frequency	Search Engine	Frequency
Google	112	Catcha	3
Yahoo!	102	Dogpile	2
MSN	38	Ask Jeevas	2
Cari	8	Alltheweb	2
Altavista	7	Hotbot	1
Lycos	3		

Table 2 shows the type of search engines that have been accessed by the respondents and its frequency of searching. The results show that the favourite search engines among the respondents were Google and Yahoo!

With regard to the search at company websites, the respondents have visited a wide variety of websites ranging from baby products to airlines. The frequently visited websites were airlines, banks, bookstores, newspapers, hotels, education institutes, and book publishers. The number of websites visited ranged from zero to ten, with an average of four websites per person. Nine percent of the respondents indicated that they have never visited any company websites. For researching information on online ads, the respondents clicked on the Internet ads between 0% and 80% of the time (with an average of 20%) when they came across online advertising. Nineteen percent of the respondents indicated that they have never clicked an online ad before. The findings suggest that the company website seems to be a more popular searching mode for product/service information than online ads.

Research Question 3: What are the common products and services purchased by consumers via the Internet?

About three-quarters of the respondents said that they have never bought any tangible products via the Internet. Of those who have bought products online before, the number of products purchased ranged from one to nine with an average of two items per person. The products purchased online included books, CDs, computers, electronic appliances, toys, sport equipment, collectible items, stamps, fast food, health supplements, car care products, apparel, cosmetics, handbags, and personal care products. However, the type of product most commonly purchased online was books; which is not unexpected given the fact that majority of the respondents were in the teaching profession.

About a third of the respondents indicated that they have never purchased any services online. For those who have purchased services online before, the number of services purchased ranged from one to four with an average of two services per person. The types of services purchased via the Internet included airline

ticketing, hotel room reservations, movie and events tickets, tour packages, workshops and seminars, online TV program, restaurant reservation, tuition, and car rental. The most popular service acquired online was reservation of airline tickets (43% of the total services bought online), followed by reservation of hotel rooms (29% of the total services bought online.)

The findings that books and airline tickets being the most popular items sought online are similar to those of the Internet survey done by MCMC. MCMC conducted the survey on household use of the Internet from May 1 to July 24 of year 2005 using a sample size of about 3,765 Internet users. The results of the national survey indicated that airline ticket was the most popular item sought online, followed by books and music (“Household Use,” 2005).

The results also show that the frequency of services acquired was far more than that of the tangible products. The total number of products purchased online was found to be 40 whereas the total number of services purchased online was 97. It indicates that Malaysian consumers prefer buying intangible products over the Internet. Furthermore, Malaysian consumers seem to prefer buying *search goods* such as books and airline tickets, which attribute information, can be easily obtained prior to the purchase or use. As defined by Girard, Korgaonkar, and Silverblatt (2003), “a good is a search good when full information for dominant product attributes can be known prior to purchase” (p. 109). Consumers are generally confident to buy a search product or service without using or sampling the item prior to its purchase. The finding that search goods are preferable online is similar to that of the study by Brown et al. (2003). The authors found that the item most likely to be purchased online was entertainment ticket, which is a search good.

To further investigate the functions of the Internet to the consumers, the respondents were asked to provide the types of web services used or subscribed to. Thirty nine percent of the respondents did not use or subscribe to any web services. For those who have used web services before, the number of web services used ranged from one to seven with an average of two per person. The types of web services mentioned in the survey were e-banking, employees provident fund i-account, e-publication, phone bill payment, gift redemption, software updates, job search and/or posting, e-mailing, library links, and parental services. There was no cost involved in most of these web services. The only two paid web services mentioned were anti-virus and e-banking that cost RM30 and RM2 per transaction respectively. This finding implies that Malaysian consumers are still reluctant to *pay* for web services.

Research Question 4: What consumer needs are being satisfied over the Internet in the Malaysian market?

The types of products and services purchased would reflect the types of consumer needs being satisfied over the Internet. Table 3 lists out the top three most popular products and services acquired via the Internet and the classification of the consumer needs. The analysis shows that the respondents mainly satisfied their self-enhancement and love needs. Note that certain products and services can be used to fulfill more than one type of needs depending on the purpose of buying them (Leonard, 2003). For example, airline and hotel room bookings satisfy love and affiliation needs if they are used to fulfill a consumer’s need to belong. However, they satisfy self-advancement needs if they are used to fulfill the need to develop oneself by attending academic and professional conferences (in relation to the nature of the sample in this study).

Table 3: Consumers Needs in Relation to Products and Services Purchased Online

Product	Type of Need	Service	Type of Need
Books	Self-Fulfillment	Airline Ticketing	Love & Affiliation Self-Fulfillment
CDs	Love & Affiliation	Hotel Room Reservation	Love & Affiliation Self-Fulfillment
Computer	Prestige and Esteem Self-Fulfillment	Movie Tickets	Love & Affiliation

Research Question 5: What is the likelihood to make future online purchases for those consumers with or without prior experience in online buying?

Table 4 shows the frequency of their intention to purchase online. Slightly more than half (52.7%) of the respondents indicated that they would probably or definitely will buy online in the future. About a third of them would buy online if the things they are looking for are not available in brick-and-mortar outlets.

Table 4: Intention to purchase online

Intention	Frequency	Percentage (in whole #)
Definitely will not	5	3.3%
Probably will not	20	13.3%
Only if I can't find the things in retail stores	46	30.7%
Probably will	54	36.0%
Definitely will	25	16.7%
Total	150	100.0%

Testing Hypotheses H₁ to H₃

Tests of differences were done to examine differences between groups as stated in hypotheses H₁ to H₃. The t-tests of difference did not show any significant gender differences in the frequency of online search and purchase as well as the type of needs being satisfied over the Internet. Therefore, H₁ and H₂ were not supported by the data. However, the chi-square test of difference did show that consumers with online purchase experience have a higher intention to buy online in the future than those without online purchase experience. This result is consistent with the finding by Brown et al. (2003) as mentioned previously. Thus, H₃ was supported by the data. Table 5 shows the cross-tabulation between those who have and those who have no previous online purchase experience.

Table 5: Intention to buy online between those with and without online purchase experience

Intention	With online purchase experience		Without online purchase experience	
	No.	Percentage	No.	Percentage
Definitely will not	1	1.0%	4	8.5%
Probably will not	8	7.8%	12	25.5%
Only if I can't find the things in retail stores	31	30.1%	15	31.9%
Probably will	40	38.8%	14	29.8%
Definitely will	23	22.3%	2	4.3%
Total	103	100.0	47	100.0

Pearson Chi-Square statistics = 20.238, 4 degrees of freedom, significant at p<0.001.

5. DISCUSSIONS AND CONCLUSION

The focus of this study is to examine online buyer search activity in relation to the acquisition of products and services via the Internet in the Malaysian market. The results of the present study indicate that:

1. Malaysian consumers are medium users of the Internet and they research moderately for product/service information.
2. Their favourite search engines are Google and Yahoo!, and the popular searching mode for product/service information is company website.
3. Malaysian consumers acquire intangible products (services) more than the tangible products via the Internet. In addition, they tend to buy search goods (books, airline tickets, and hotel rooms) online.
4. Malaysian consumers are reluctant to pay for web services.
5. They buy products and services to satisfy their needs for love, affiliation, and self-development.
6. Majority of the consumers in the study have the intention to buy online in the future. Those who have experience with online purchase show a higher tendency to buy online again than those who have no prior experience in online buying.
7. Finally, Malaysian consumers do directed searching; they search with a specific goal in mind and with the intention to purchase online.

Although online shopping is not in the main stream yet, Malaysian consumers generally have a positive attitude towards online shopping and the tendency to buy online. The findings of the present study imply that company websites should be used as a major marketing and communication tool in the Internet operations. Through the Internet, consumers can research information about the products or services—product attributes, pricing information, promotion, payment method, delivery arrangement, returns and exchange, and after-sales support. Detailed information about what is being offered and how to order must be clearly provided in the websites. As suggested by Rowley (2000), for those online consumers who are seeking for a specific item, sufficient information about the products and services must be provided in detail to cover frequently asked questions. E-mail system or other interactive features should also be provided to handle further enquiries.

E-marketers should design the webs in such a way that consumers find it easy, pleasant, attractive, and efficient to browse. A fruitful and satisfying online shopping experience would bring repeat customers. As supported by Tan and Wei (2006), to encourage online browsers to return, a website must be well-designed to facilitate browsers to find what they need and to achieve satisfaction while browsing.

Well-established companies will have a competitive advantage in exploiting Malaysian e-market as they have already created some kind of branding among the consumers. Consumers would tend to access the websites of well-recognized companies especially when they have the intention to buy. E-commerce would also be more effective for search goods, a product category where personal examination or trial is not needed.

With regard to online advertising, e-marketers should place ads that appear to be interesting and attractive to create consumers' curiosity and to draw their attention. Consumers are exposed to various forms of online ads (such as banners, pop-up windows, and text-based hyperlinks) when they spend considerable amount of time online. They may click on the ads if they are stimulating visually. Generally, consumers would do aimless browsing for something interesting (Rowley, 2000), and aimless or general browsing is a variation of ongoing search which may lead to impulse buying (Bloch, Sherrell and Ridgway, 1986).

The present study did not find any statistical significant gender differences in online behaviours and attitudes, which is in line with the findings by Schimmel and Nicholls (2003) that "gender differences no longer exist regarding e-commerce behaviour and the perceptions of the benefits and concerns of Internet shopping" (p. 5). However, the insignificant gender differences found in the present study may be due to the homogeneous characteristics of the sample.

The results of the study must be used with caution as the sample size is relatively small in understanding consumer behaviours. Furthermore, the sample consisted of mainly Malaysian ethnic Chinese with one profession, which is not representative of the general Malaysian population. Future research study in the Malaysian market should include other races of Malays and Indians as well as students in the sample for comparison purpose. E-commerce behaviours in relation to demographics and shopping orientations may also be needed to produce profiles of typical Malaysian online shoppers or browsers. In addition, it is important to examine their preferences in online shopping as well as their attitudes toward websites and online advertising in various forms.

Further investigations on search behaviours of online consumers are also needed. What are the general search patterns of Malaysian consumers in gathering information for products and services to make their decisions to buy online? Are there distinct search patterns for different types of online shoppers? The study by Johnson et al. (2004) suggests that more active online shoppers tend to search across more sites for information. What are the initial point of online search and the order of access? What are their search strategies in terms of keywords used, duration of search, and timing? Do they use different search strategies for different types of purchase decisions or different categories of products and services? What factors would influence online search activities? Would the consumer's experience and competency in using Internet technology influence their search behaviours? What are the outcomes of search—better choice decisions, increased product/service knowledge, or hedonic responses?

Nevertheless, the present study has contributed to our understanding of online buyer behaviours, which has profound implications for organizations conducting business via the Internet. It helps online retailers better address the needs and wants of their consumers and devise their online retail strategies for website

design and online advertising. Data on online consumer buying behaviours are much needed in lieu of the gaining importance of online retailing in the global market. More studies on cross-cultural comparisons of Internet buying behaviour are also much needed. E-commerce is going international and the understanding of online consumer behaviours in various countries has profound implications for international vendors.

REFERENCES

- Ahuja, M., Gupta, B. and Raman, P. (2003). An empirical investigation of online consumer purchasing behavior. *Communications of the ACM*, Vol. 46, No. 12, pp. 145-151.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, Vol. 50, No. 2, pp. 179-211.
- Batthey, J. (2000, August 28). By the numbers. *InfoWorld*, Vol. 22, No. 35, p.16.
- Bellman, S., Lohse, G.L. and Johnson, E.J. (1999). Predictors of online buying behavior. *Communications of the ACM*, Vol. 42, No. 12, pp. 32-38.
- Bhatnagar, A., Misra, S. and Rao, H. R. (2000). On risk, convenience, and Internet shopping behavior. *Communications of the ACM*, Vol. 43, No. 11, pp. 98-105.
- Bloch, P.H., Sherrell, D.L. and Ridgway, N.M. (1986). Consumer search: An extended framework. *Journal of Consumer Research*, Vol. 13, No. 1, pp. 119-126.
- Brown, M., Pope, N. and Voges, K. (2003). Buying or browsing? An exploration of shopping orientations and online purchase intention. *European Journal of Marketing*, Vol. 37, No. 11/12, pp. 1666-1684.
- Chang, J. and Samuel, N. (2004). Internet shopper demographics and buying behavior in Australia. *The Journal of American Academy of Business, Cambridge*, Vol. 5, No. 1/2, pp. 171-176.
- E-mail soon for Perak newborns.* (2005, June 1) The Star, p. 3 Nation.
- Foucault, B.E. and Scheufele, D.A. (2002). Web vs. campus store? Why students buy textbooks online. *The Journal of Consumer Marketing*, Vol. 19, No. 4/5, pp. 409-423.
- Full Internet access to rural Pahang.* (2006, July 19) The Star, p. N26 Nation.
- Girard, T., Korgaonkar, P. and Silverblatt, R. (2003). Relationship of type of product, shopping orientations, and demographics with preference for shopping on the Internet. *Journal of Business and Psychology*, Vol. 18, No. 1, pp. 101-120.
- Ha, H.Y. (2004). Factors influencing consumer perceptions of brand trust online. *Journal of Product & Brand Management*, Vol. 13, No. 5, pp. 329-342.
- Household use of the Internet survey 2005.* Retrieved December 16, 2007, from http://www.cmc.gov.my/facts_figures/stats/pdf/Household_use_internet_survey2005.pdf
- Johnson, E.J., Moe, W.W., Fader, P.S., Bellman, S. and Lohse, G.L. (2004). On the depth and dynamics of online search behavior. *Management Science*, Vol. 50, No. 3, pp. 299-308.
- Joines, J.L., Scherer, C.W. and Scheufele, D.A. (2003). Exploring motivations for consumer Web use and their implications for e-commerce. *Journal of Consumer Marketing*, Vol. 20, No. 2, pp. 90-108.
- Ko, H., Jung, J., Kim, J.Y. and Shim, S.W. (2004). Cross-cultural differences in perceived risk of online shopping. *Journal of Interactive Advertising*, Vol. 4, No. 2. Retrieved December 16, 2007, from <http://www.jiad.org/vol4/no2/ko>.
- Korgaonkar, P. and Wolin, L.D. (2002). Web usage, advertising, and shopping: relationship patterns. *Internet Research: Electronic Networking Applications and Policy*, Vol. 12, No. 2, pp. 191-204.
- Koyuncu, C. and Lien, D. (2003). E-commerce and consumer's purchasing behaviour. *Applied Economics*, Vol. 35, No. 6, pp. 721-726.

- Kulviwat, S., Guo, C. and Engchanil, N. (2004). Determinants of online information search: A critical review and assessment. *Internet Search, Vol. 14, No. 3*, pp. 245-253.
- Leonard, L.N.K. (2003). Acquiring goods and services via the Internet: Consumer shopping perceptions. Retrieved November 30, 2007, from http://www.firstmonday.org/issues/issue8_11/Leonard
- Limayem, M., Khalifa, M. and Frini, A. (2000). What makes consumers buy from Internet? A longitudinal study of online shopping. *IEEE Transactions on Systems, Man, and Cybernetics—Part A: Systems and Humans, Vol. 30, No. 4*, pp. 421-432.
- Lohse, G.L., Bellman, S. and Johnson, E.J. (2000). Consumer buying behavior on the Internet: Findings from panel data. *Journal of Interactive Marketing, Vol. 14, No. 1*, pp. 15-29.
- MacSweeney, G. (2000, July). More consumers turning to Net for Insurance. *Insurance & Technology, Vol. 25, No. 7*, p.10.
- Malaysians second most frequent Net users in SEA. (2005, July 14) The Star, p. 8 Nation.
- Park, C. and Jun, J.K. (2003). A cross-cultural comparison of Internet buying behavior: Effects of Internet usage, perceived risks, and innovativeness. *International Marketing Review, Vol. 20, No. 5*, pp. 534-553.
- Pavlou, P.A. and Fygenson, M. (2006). Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior. *MIS Quarterly, Vol. 30, No. 1*, pp. 115-143.
- Peterson, R.A. and Merino, M.C (2003, February). Consumer information search behavior and the Internet. *Psychology & Marketing, Vol. 20, No. 2*, pp. 99-121.
- Rodgers, S. (2002, Spring). The interactive advertising model tested: The role of Internet motives in ad processing. *Journal of Interactive Advertising, Vol. 2, No. 2*. Retrieved December 28, 2007, from <http://www.jiad.org/vol2/no2/roddgers/index.htm>.
- Rodgers, S. and Thorson, E. (2000, Fall). The interactive advertising model: How users perceive and process online ads. *Journal of Interactive Advertising, Vol. 1, No. 1*. Retrieved December 16, 2007, from <http://www.jiad.org/vol1/no1/roddgers/index.htm>.
- Rowley, J. (2000). Product search in e-shopping: A review and research propositions. *Journal of Consumer Marketing, Vol. 17, No. 1*, pp. 20-35.
- Schimmel, K. and Nicholls, J. (2003, June). Gender differences and e-commerce behavior and perceptions. *Journal of Internet Banking and Commerce, Vol. 8, No. 1*. Retrieved December 26, 2007, from <http://www.arraydev.com/commerce/jibc/0306-01.htm>
- Search before the purchase: Understanding buyer search activity as it builds to online purchase* (2005, February). Retrieved December 16, 2006, from http://www.doubleclick.com/us/knowledge_central/documents/RESEARCH/searchpurchase_0502.pdf
- Sheppard, B.H., Hartwick, J. and Warshaw, P. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research, Vol. 15, No. 3*, pp. 325-343.
- Smith, S.M. (2002). *Electronic commerce issues for consumers and marketers: A literature review*. Retrieved December 20, 2007, from <http://www.arches.uga.edu/~saysmith/ecommerce.html>
- Tan, G.W. and Wei, K.K. (2006). An empirical study of web browsing behaviour: Towards an effective website design. *Electronic Commerce Research and Applications, Vol. 5*, pp. 261-271.

Tweney, D. (1999, September 27). Men and women: Online, we should be more than markets. *InfoWorld*, Vol. 21, No. 39, p.76.

Use IT to get ahead, housewives urged. (2005, June 3) The Star, p. 22 Nation.

Vijayasathy, L.R. and Jones, J.M. (2000). Print and Internet catalog shopping: Assessing attitudes and intentions. *Internet Research: Electronic Networking Applications and Policy*, Vol. 10, No. 3, pp. 191-202.