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MALAYSIAN INTERNET USER'S MOTIVATION AND CONCERNS FOR SHOPPING ONLINE

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ABSTRACT

This study focuses on identifying the factors that motivate Malaysian Internet users' browsing or purchasing behaviour through the Internet and the concerns, which affect online buying. A total of 579 randomly selected respondents from the states of Penang, Wilayah Persekutuan and Selangor, Malaysia answered the questionnaire and the data was analysed using factor analysis to identify the possible predictors. The findings indicate that seven motivating factors: accessibility (the most important factor), reliability, convenience, distribution, socialisation, searchability, and availability (the least important factor) accounted for 61.402% of total variance. Of the 38 statements posed to respondents, 33 statements were selected based on criteria of eigenvalues greater than or equal to 1.00, factor loading of 0.50 or higher. The results indicate all of these factors were appropriate for further analysis and the model possessed convergent validity. There were eight "concern" factors extracted with cumulative percentage of 62.405% of variance. The pertaining factors were privacy (the most important factor), reluctance to change, quality of products and services, security of payment modes, speed of connection, the reluctance to change attitude, the difficulty in trusting vendors and non-disclosure of complete product information (the least important factor). It is concluded that electronic transactions should provide a secure, reliable and trusted environment in order to attract and maintain existing users of the Internet to shop online.

Keywords: E-commerce; Electronic commerce; Online shopping; Internet users; User attitudes and behaviour; Motivation factors; Reliable online transactions.

INTRODUCTION

According to the International Data Corporation (IDC), e-commerce consumer spending will grow from US$118 billion worldwide in 2001 to US$707 billion in 2005. E-business revenue will grow from 4% of companies' total revenue worldwide in 2000 to 7% in 2001 (Wolverton, 2001). Malaysia needs to take cognisance of these trends and react fast in order to be an active participant in the emerging electronic world. However, little information is known about Malaysian Internet users' motivation and concerns with respect to online

shopping. This paper describes the results of a survey of selected respondents from the states of Penang, Wilayah Persekutuan, and Selangor on their motivation and concerns about online shopping.

Inter Agency Task Force on Electronic Commerce (IATFEC) defines e-commerce as "all form of business transactions conducted over public and private computer networks. It is based on electronic processing and transmission of data, text, sound and video. E-commerce includes transactions within a global information economy, such as electronic trading of goods and services, online delivery of digital content, electronic funds transfer, electronic share trading, electronic bills of lading, commercial auctions, collaborative designs, engineering and manufacturing, online sourcing, public procurement, direct consumer marketing and after sales service. It includes both products (consumer goods, specialised medical equipment) and services (information, financial, legal and traditional services) and new activities (virtual malls). It involves the application of multimedia technologies in the automation and redesign of transactions and workflow, aimed at increasing businesses competitiveness" (National electronics, 1997).

The current study considers e-commerce as a non-linear interaction, without involvement of face to face communication between consumers (Internet users) and companies (Internet sellers) via computer networks to facilitate any kind of commercial transaction (browsing or purchasing products or services) easier, faster and cheaper electronically beyond traditional geographical boundary.

Buying trends and Internet adoption indicates that the overall electronic commerce value in Malaysia rose from US$18 million in 1998 to US$87.3 million in 1999. The IDC believes this will increase to US$5.37 billion by the end of 2004 (Lai, 2000). The growth of information technology (IT) and government initiatives are expected to accelerate further and motivate individuals to increase their knowledge of electronic commerce in the near future.

Recent findings indicate that the penetration of Malaysian shopping online (those who bought or ordered goods and services online) in 2000 was 1% of the total adult population in Malaysia (Taylor Nelson Sofres, 2001). This corresponded to 4% of Internet users in the country. Specifically, 24% of the total adult population in Malaysia are Internet users in 2001 and they are mainly males (28%). The study also found that 15% of Malaysian Internet users plan to buy or order goods or services online by the end of 2001. The Malaysian Internet users conducting online shopping found benefits in obtaining products, which are not available locally, thus reducing their product search time. Furthermore, the Internet users receive more attractive sales

promotional offers from Internet sellers and also through individual e-mail accounts. Electronic commerce also enhances consumer browsing flexibility and convenience. Consumers could enjoy window shopping on the Internet without the pressure to purchase, initiate as well as control non-linear searchers due to the interactive nature of the Internet and hypertext environment, access current and detailed information on products and services, and receive their orders either instantaneously via the electronic medium or through the wide distribution network of Internet vendors.

Despite these motivational factors, there are other transactional and non-transactional issues, which appear to affect the adoption of electronic commerce in Malaysia. To most consumers, the issue of security and privacy over the Internet is the most overwhelming barrier facing the adoption of electronic commerce. Widely publicised security lapses on the Internet, where hackers have access to personal financial information being sent electronically, have done little to boost consumer confidence in the Internet as a conduit for commerce (Goodwin, 1991).

There is also a great concern among the Internet users regarding the security of financial information transmitted over the Internet (Gupta, 1995) that includes vendor reliability of promise not to misuse users' personal and credit card information. If the buyers and sellers do not trust the technology of buying and selling online, the one who pays, cannot be sure that his credit number might be collected somewhere in the Web (occurring during data transfer of a credit card number) and used for other purposes (OECC, 1997a).

Generally, consumers tend to be more comfortable providing sensitive information only in situations where they can see the person with whom they are dealing with or revisit the physical location of the business if necessary or exert a certain amount of control over the situation (Janes et al., 1997).

Caelli (1997), states that the basis for secure electronic commerce on a global scale must eventually include these circumstances:

- willingness for consumers, merchants and banks or financial institutions to enter into integrated schemes;
- global, open standardisation of underlying formats, protocols and processes;
- national and international standards for security, technology and management; and
- national and international agreements on the social, economic and legal aspects of the system.

According to the Organisation for Economic Co-operation and Development (OECD, 1997b), consumer trust in electronic commerce will require consumer protection mechanisms that address four key issues: (a) fairness and truthfulness in advertising; (b) labelling and other disclosure requirements such as warranties, guarantees, product standards, specifications; (c) refund mechanism in case of cancelled orders, defective products, returned purchases as well as lost deliveries, and (d) a means of qualifying merchants in terms of the above.

Ratnasingham (1998) states that it is necessary to facilitate a "complete trustworthy relationship" among the trading partners and when this is achieved, it will increase the probability of a trading partner's willingness to expand the amount of information sharing through Electronic Data Interchange (EDI) and explore new mutually beneficial arrangements.

METHODOLOGY

There were 579 randomly selected respondents in this study which includes 334 male and 245 were female, who were selected from the states of Penang, Wilayah Persekutuan, and Selangor in Malaysia. The above states were chosen because they are generally known to have a high number of Internet users. The data collection used the questionnaire and was analysed using SPSS Version 10.0.

The majority of respondents (472) falls in the age group of "less than 30 years old", and were mostly Malays. About 40% of the respondents were "students" from the university community (comprising undergraduates and MBA students). The results showed that more than half of the total respondents (63%) earned a salary of "less than RM 3,000" per month. Table 1 (Appendix) provide the demographic details of the respondents.

Factor analysis was carried out to identify the underlying motivation and concern factors and a smaller set of important variables. The criteria used to determine the number of factors to extract was an eigenvalue greater than or equal to 1.00. Items with factor loading of greater than 0.50 on the factor were considered adequate indicators of that factor (Hair et al., 1992). The data analysis and interpretation of the motivation and concern factors are given below.

MOTIVATION FACTORS

Accessibility

The most important motivation factor when browsing or purchasing through the Internet, rated by the 579 respondents, was the "Accessibility factors".

"Instant access to detailed information" was dropped from the analysis because it's loading value was less than 0.50. The accessibility factors considered important comprise ten statements with 14.548% of variance and an eigenvalue of 13.268. The statements rated positively by the respondents about the Internet were "easy access to wider information" (0.805), "faster access to latest information" (0.780), "the best source to search for information" (0.668) and "reduce need for intermediaries" (0.537) (Table 2, Appendix).

Reliability

The second motivational factor was categorised under "Reliability factors", which accounted for 13.624% of variance and an eigenvalue of 3.186. The statements "web pages are visually attractive" and "convenient order cancellation process" were dropped from the analyses since their factor loading were lesser than 0.50. Seven reliability factors rated positively were "freight charges are clearly stated" (0.814), "prices of product are clearly stated" (0.807), and "web pages are loaded faster" (0.507).

Convenience

The "Convenience factors" comprise six statements with 10.546% of variance and an eigenvalue of 1.821. All statements had factor loading greater than 0.50, with the exception of "faster source of getting product information", which was dropped from the analysis. The most important statements claimed by the respondents was "no crowd of people shopping" (0.798), "no traffic jam" (0.743), and "more product variety for selection" (0.501).

Distribution

There were four statements loaded in this factor, which relate to distribution pattern of online shopping. The statement "no stress from customer service people" was dropped from analysis (<0.50). The most important statement in this factor was "orders are delivered in good condition" (with the highest loading of 0.752), followed by "better product return service" (0.747), "orders are delivered on time" (0.716), "more convenient shopping on the Internet" (0.598).

Socialisation

The fifth factor grouped dimensions related to "Socialisation factor" which accounted for an additional 3.175% of the variance with eigenvalues of 1.375. The most important variable was that they "could have foreign friends" (0.795), followed by "could practice foreign languages by communicating with

people from other countries" (0.795), and "allow unrestricted discussion of current issues" (0.580).

Searchability

Factor six describes the "Searchability Factor" which accounted for an additional 1.978% of variance. However, there were only two statements which resulted in this factor and the most important variable claimed by respondents was "owning a credit card" (0.672), and "need few movement to find product" (0.586).

Availability

The final motivation factor was "Availability Factor", which consisted of only one statement with 3.399% of variance. The statement "availability of products on the Internet that cannot be found locally" had a loading of 0.500. The eigenvalue for this factor was 1.065.

In conclusion, seven motivating factors: accessibility (i.e. the most important factor), reliability, convenience, distribution, socialisation, searchability, and availability (i.e. the least important factor) were extracted, which accounted for 61.402% of total variance. Of the 38 items, 33 items which pertain to these factors were selected based on criteria of eigenvalue greater than or equal to 1.00, factor loading of 0.50 or higher, and suppress the absolute value less than 0.50 factor loading. A review of the eigenvalues and factor loading indicated that all of these factors were appropriate for further analysis and the model possessed convergent validity, that is, the extent to which a measure correlates highly with other measures designed to measure the same construct (Churchill, 1979).

Despite these motivational factors, there were other concern factors which appear to affect emerging trends of shopping online among Malaysian Internet users.

CONCERN FACTORS

The details of the results are given in Table 3 (Appendix) and described below in accordance to their degree of importance.

Privacy

The most significant concern factor was "Privacy". This factor accounted for 13.195% of variance and consisted of eight statements with eigenvalues of 17.112. The majority of the respondents felt positively that "their database may be sold to others" when they key in personal identifications such as credit card numbers and personal information (0.806). Indeed, when purchasing online,

they had the perception that their "personal information may be shared with other businesses without their consent" (0.786), and that "Internet sellers may overcharge from ones' credit card" (0.692). Other concerns were, "misuse of my personal information by Internet sellers" (0.688), "product purchased through Internet may be delivered to another person" (0.552). Thus, the majority of the respondents were very concerned with the terms of privacy of personal information such as not willing to present credit card numbers to any disreputable Internet sellers for product purchased online.

Reluctance to Change

The second concern factor is the "Reluctance to Change factor", which contained seven statements. This factor accounts for 11.274% of variance with eigenvalues of 2.538. Out of the seven statements, the most important concern was "I don't trust digital signature" (0.763), followed by their worry of the "occurrence of virus transmission when purchasing online" (0.605). However, respondents indicate their reluctance to change their attitude and "prefer to support local businesses" than purchasing online (0.593), since they "cannot see the real product" (0.504).

Quality

The "Quality concern factor" accounted for 9.006% of variance with eigenvalues of 1.402. Five statements were loaded in this factor after the removal of the statement "can't bargain the price" (factor loading <0.50). Most of the respondents felt positively that it was "difficult to judge the quality of the product" when making purchases through the Internet and identified this as the most important variable (0.710). Respondents also believed that "perishable products cannot be purchased safely through the Internet" (0.679), they would be charged "a high tax for overseas orders" (0.637), there was "no after sales service for products purchased" over the Internet (0.573) and they were "worried of doing business with disreputable firms" (0.509).

Security

Factors which described "Security concern" indicated 9.006% of variance and contained six variables with eigenvalues of 1.402. The statement "product return information not clearly stated in the web pages" was treated as the most important item in this factor (0.692). Respondents were much concerned about the unclear statement of the information on products to be returned in the Internet sellers' web pages The majority of the respondents were concern about "line congestion" when browsing or purchasing through the Internet (0.676), and "unavailable shipment to buyers' country" (0.648). The results indicate that if Internet sellers do not adopt these practices, respondents would have

negative perception towards online shopping transaction or refrain from repeating purchases.

Trust

The next factor, the "Trust concern factor", comprises only two statements, which accounted for 5.944% of variance with eigenvalues of 1.313. Respondents were concerned that "free promotional gift may not be as valuable as promised" (0.552) and there were "limited methods of payment" for products purchased online (0.547). Respondents were not concerned about "no help by sales representatives", "product prices are in different currencies" and "inconsistent pricing among Internet sellers" (factor loading <0.50).

Connection Speed

The sixth factor that described "Connection speed concern factors" comprised two statements with 4.513% of variance and eigenvalues of 1.102. The majority of respondents were concerned about the "slow connection speed" involved when browsing online (0.665) and the "longer time taken to download information from the Internet" (0.607). The results indicate that the Internet users were very concerned with the connection speed because the depth of information search depended on the kilobytes per second (kbps) used. The faster the speed, the more information would be retrieved and would result in higher level of satisfaction gained.

Payment

Respondents were less concern about payment of online purchases and the "Payment concern factor" was considered as the seventh most important factor and accounted for 0.194% of the variance with eigenvalues of 1.089. "High expenses involving electricity bills, etc." were removed from this factor because the factor loading is less than 0.50. Two concern statements comprise "No credit card" (0.670), "longer delivery time involved" when purchasing through the Internet (0.526). The results indicate that Malaysian Internet users need some help from Internet sellers to cut down the time involved for online product purchased and banking institutions should provide more opportunities for customers of different age groups to own credit cards.

Non-Disclosure of Complete Product Information

The final important factor extracted was "Non-disclosure of complete product information concern" with 4.243% of variance and eigenvalues of 1.030. This factor also contained two statements, and respondents were most concerned with "non-disclosure of complete company information in every Internet

sellers' Web pages" (0.812) and "non-disclosure of complete product information in Internet sellers' Web pages" (0.802). Malaysian Internet users were willing to do online shopping when Internet sellers provide full disclosure for every item or product placed in their Web pages with precise facts and figures, because as consumers, they expected value for every cent spent for product purchased. This must be done in order to promote consumer awareness and willingness to do online shopping with reputable Internet sellers.

In summary, there were eight factors extracted in concern factor with cumulative percentage of 62.405% of variance. The pertaining factors were privacy (the most important factor), reluctance to change, quality, security, trust, connection speed, payment and non-disclosure of complete product information (the least important factor). These findings show that the model possessed convergent validity (Churchill, 1979).

CONCLUSION

The results of this study indicates that electronic transactions should be secure, reliable, and trusted in order to attract and maintain existing users of the Internet. Such measures would increase Internet users' confidence on the credibility of Internet sellers. This study primarily focuses on business to consumer markets (B2C) and examines the more tangible benefits to the online retailer. The online retailers should focus their marketing strategy on the motivation and concern factors as highlighted in the current study in order to win the confidence of the consumers.

The government should also play a role by giving priority to increasing the computer literacy rate among Malaysians for the creation of a knowledge-driven and IT-savvy society. This measure could be exercised through the provision of short courses, seminars, workshops, and conferences on issues of Internet and computer related technologies. Hence, these public education could help build up Malaysian consumers' confidence as well as increase the volume of sales in the e-commerce sector.

REFERENCES

Caelli, W.J. 1997. Information security in electronic commerce. PACIS'97 - *The Pacific Asia Conference on Information Systems*. Brisbane, Queensland, Australia. 1-5.

Churchill, G. A. 1979. A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, Vol.16, no.2, 64-73.

Goodwin, Cathy. 1991. Privacy: recognition of a consumer right. *Journal of Public Policy & Marketing*, 10 (Spring): 149-166.

Gupta, Sunil. 1995. HERMES : a research project on the commercial uses of the World Wide Web. Available at: http://www.umich.edu/~ sgupta/hermes/. [2000, February 27].

Hair, J.F., et al. 1992. *Multivariate data analysis*. 3rd ed.. New York: Macmillan.

Janes, Lambert, Pollett and Reid. 1997. The growth of electronic commerce: a critique. Available at: http://www.geocities/Colsseum/7542/[2000, May 5].

Lai, Linus. 2000. Online banking in Malaysia to hit one million home users by 2004. Available at: http://203.120.67.104/Press/releases/PR-MY-Online_ banking.htm. [2000, July 17].

Organisation for Economic Co-operation and Development [OECD]. 1997. *Communication Outlook*. Paris.

Organisation for Economic Co-operation and Development [OECD] 1997. Dismantling the barriers to global electronic commerce. Available at: http:// oecd.org/dsti/sti/it/ec/prod/DISMANTL.HTM [2000, June 5].

Ratnasingham, Paulin. 1998. Trust in web-based electronic commerce security. *Information Management and Computer Security*, Vol.16, no. 4: 162-166.

Taylor Nelson Sofres Sdn Bhd. 2001. E-commerce stumbles in Malaysia. Available at: http:// www.nua.ie/surveys/?f=VS&art_id=905356973 &rel=true.[2001, July 13].

The National Electronic Commerce Committee [NECC]. 1997. Malaysia's position on e-commerce. Available at://e.com.ec/report-19971007.html [2000, April 24].

Wolverton, Troy. 2001. Return Purchases Study: Online problems could deter customers. Available at: http://malaysia.cnet.com/news/2001/03/22/ 20010322j.html CNET News.com. [2000, June 25].

APPENDIX

Table 1: Internet Users' General Demographics

Characteristics of Respondents	Frequency	%
Gender		
Male	334	57.7
Female	245	42.3
Age		
< 20	79	13.6
20 - 30	393	67.9
30 - 40	81	14.0
40 - 50	21	3.6
50 - 60	5	0.9
> 60		
Ethnicity		
Malay	356	61.5
Chinese	150	25.9
Indian	55	9.5
Others	18	3.1
Present Occupation		
Student	242	41.8
Professional	204	35.2
Businessman	42	7.6
Government Servant	41	7.1
Others	50	8.6
Highest Education Level		
SPM Holder (or O-Level)	89	15.4
STPM / Diploma (or A-Level)	134	23.1
Certificate	32	5.5
Degree	251	43.4
Postgraduate	63	10.9
Others	10	1.7
Monthly Income (RM)		
< 1,000	215	37.1
1,000 - 3,000	147	25.4
3,000 - 5,000	115	19.9
> 5,000	102	17.6
Working/Studying Place		
Penang	161	27.8
Selangor	241	41.6
K. Lumpur	177	30.6

Table 2: Internet Users' Motivation Factors

Variables	Component						
	1	2	3	4	5	6	7
Easy access to wider information	.805						
Faster access to latest news	.780						
The best source to search for information	.668						
Cheaper source of information	.667						
Can customise level of detailed information required	.596						
Can download free software on the Internet	.595						
No restriction in browsing Internet	.587						
Can browse Internet for 24 hours a day, every day	.550						
Broad range of products available on the Internet	.550						
Reduce need for intermediaries	.537						
Shipping cost clearly stated		.814					
Product prices clearly stated		.807					
Special offers clearly stated		.751					
Customer service contact number clearly stated		.732					
Web pages are updated frequently		.626					
More interesting sales promotional activities		.574					
Web pages are loaded faster		.507					
No crowd of people shopping			.798				
No traffic jam			.743				
No hassle of queuing to counter for payment			.733				
Reduced waiting time for searching products			.578				
Convenient ordering process			.503				
More product variety for selection			.501				
Orders are delivered in good quality				.752			
Better product return service				.747			
Orders are delivered on time				.716			
More convenience shopping on the Internet				.598			
Can have friends from foreign countries					.795		
Can practice use of foreign language by communicating with people from other countries					.795		
Allows unrestricted discussion of current issues					.580		
Owning a credit card						.672	
Need lesser movements to find products						.586	
Availability of products on the Internet that cannot be found locally							.500
Total Initial Eigenvalues	**13.268**	**3.186**	**1.821**	**1.531**	**1.375**	**1.088**	**1.065**
% Rotation Sums of Squared	**14.548**	**13.624**	**10.546**	**9.204**	**6.029**	**4.051**	**3.399**

Table 3: Internet Users' Concern Factors

	Component							
	1	2	3	4	5	6	7	8
My database may be sold to other people	.806							
My personal information may be shared with other businesses without my consent	.786							
Others may intercept my message	.695							
Internet sellers may overcharge my credit card	.692							
Misuse of my personal information by Internet merchants	.688							
Uncomfortable giving my credit card number on the Internet	.635							
Overloaded unwanted messages sent by people	.566							
Product may be delivered to another person	.552							
I don't trust digital signature		.763						
Wrong keyword types bring to negative sites		.689						
Limited credit card company offers online payment		.613						
Virus transmission occur when purchasing online		.605						
I prefer to support local businesses		.593						
No knowledge on digital signature		.558						
Cannot see the real product		.504						
Difficult to judge product quality			.710					
Perishable products cannot be purchased safely			.679					
High tax for overseas order			.637					
No after sales service for product purchased			.573					
Worried of doing business with unreputable firms			.509					
Product return information not clearly stated				.692				
Line congestion				.676				
Web pages are updated rarely				.648				
Unavailability of shipment to buyers from other countries				.603				
Security guarantee not clearly stated				.584				
Cannot find the product desired				.576				
Free promotional gift may not be as valuable as they promise					.552			
Limited method of payment					.547			
Slow connection speed						.665		
Longer time taken to download information						.607		
No credit card							.670	
Longer delivery time involved							.526	
Non-disclosure of complete company information								.812
Non-disclosure of complete product information								.802
Total Initial Eigenvalues	**17.112**	**2.538**	**1.872**	**1.402**	**1.313**	**1.102**	**1.089**	**1.030**
% Rotation Sums of Squared	**13.195**	**11.274**	**9.912**	**9.006**	**5.944**	**4.513**	**4.319**	**4.243**