E-Commerce Usage in Hotel Industries Capabilities

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Abstract

E-commerce also known as the process of buying, selling, transferring or exchanging products, services and information via computer networks, including the internet. This study aims to determine the E-commerce usage in Malaysia hotel industries capabilities. Hotel industries are one of those which are fully beneficial from the E-commerce. E-commerce service may fulfill the customer needs more easily and quickly without any time constraints. This research founds that there is a correlation between organizational capabilities with E-commerce usage dimensions (E-commerce technology resources, E-commerce management skills, E-commerce business network, E-commerce competency and E-commerce information network). The stepwise regression exhibited that E-commerce management skills is the most dominant predictor of organization capabilities. Practically, this research provides leaders organization in hotel industries with useful advice on E-commerce investment decision making.

Keywords: E-commerce usage, hotel industries capabilities

Introduction

E-commerce is the best strategy and medium of instruction that are more efficient and flexible. Anyone who has the power to control the ability of information technology will achieve excellence, (Gilaninia et. al, 2011). E-commerce using the Internet and other information technologies to support trade and improve business capabilities. Internet and E-commerce have a role to change the balance of power between the organization and the industry (Rezvani, 2011; Kraemer and Zhu, 2004; Werthner and Ricci, 2004). E-commerce has been design the entire industries, major changes have been made in the conduct of business, for instance the hotel industry has undergone major changes (Laudon and Traver, 2012; Turban, 2003). E-commerce has the potential to design a different value according to the type of organization in a variety of industries, including the hotel industry.
Generally in tourism and particularly in hotels industry, growing rapidly in many countries and is the largest industry in the economy. The hotel industries have international dimensions and have the highest web usage. Businesses involved in the hotels industry can be divided into two categories which Click and Mortar company and Brick and Mortar company. Traditional hotel industry has changed. International customers will be the largest export revenue and is an important factor in the economy in many countries (Laudon and Traver, 2012; Turban, 2003).

It is undeniable that technological change has brought many good effects on a country's hotel industry. Changes in technology have proven that the hotel industry get the optimal benefit with increasing number of tourists coming to Malaysia. Based on data from the Malaysia Tourism Research, 12.8 million tourists visited Malaysia during 2001, an increase of 2.5 million compared to 2000 (MASSA, 2002).

Most of the organizations involved in tourism in Malaysia will be using E-commerce due to the pattern of the business and shareholders which cover different geographical boundaries. This requires organizations involved to operate through the use of computers and E-commerce systems. Although the relationship between E-commerce usage and industries capabilities has seen an impact but the extent of these effects cannot be identified and the dimensions of the E-commerce usage need to be identified which will give greater impact in improving organizational capabilities. This research examines the E-commerce usage in hotel industries capabilities focusing on the hotel which apply E-commerce system.

Literature Review

E-commerce

E-commerce is a business methodology that uses electronic medium to perform the entire business transaction. Suppliers and customers meet in a virtual to perform transactions using internet technology. E-commerce disposes borders and time. Customers can shop at anytime, anywhere through internet access. Buyers or customers simply need to visit any of the E-commerce website and then select the products or services required. The selected products will arrive within the prescribed period (Laudon and Traver, 2012; Yadim, 2007; Zhu, 2004; Turban, 2003; Chandran *et.* al., 2001). E-commerce concept is to support trade with computing systems with high dynamic and open information technology. In this system, electronic data exchange, process communication (computer to computer applications) in the information business is a branch of this system. Trading partners (sellers, buyers or middlemen) in global electronic market system met through the internet. The electronic market is a computer system that links each other. All trading activities of finding customers or suppliers, consulting, contracts, agreements and settlement of payments via electronic take place safely and efficiently (Intan Salwani et. al., 2009; Tan et. al., 2009; Norzaidi et. al., 2007; Turban, 2003).

E-commerce has been doing business online. Since the Internet became commercial, most companies have used the website to make a profit from big names like Amazon. com. Lately companies have been doing business and making money online. E-commerce covers a wide and numerous activities including the name and contact details as sales leads through the integration of online buying and selling experience. Opportunities for E-commerce are different and extensive and require greater care.

Referred to Laudon and Traver (2012); Gilaninia et. al., (2012); and Turban (2003), four E-commerce concept that are identified are, Business to Business – B2B, Business to Consumer – B2C, Consumer to Consumer – C2C, and Consumer to Business – C2B. New forms of E-commerce are often used for business-to-customer relations and transactions, not just (EDI) for business-to-business relations. This offers much bigger numbers, therefore great penetration; therefore more people want to use it (Rezvani et. al., 2011, Fisher, 2000). E-commerce is necessary in the interest of both parties together in such a trade, the buyer and seller, because it offers a combination of low cost, high reliability, accuracy, and speed. Thus, it can have an impact on both top and bottom line productivity ratio (Fisher, 2000).

In explaining the E-commerce, several approaches and important role has been highlighted by the researchers. In such case, most of the researchers have identified seven key role in E-commerce that are everywhere, global, consistent, accessibility, interactivity, information density, and personalization and customization, (Laudon and Traver, 2012; Zhu and Kraemer, 2005; Turban, 2003).

Methodology

This study uses cross-sectional study design. In the early stages of data collection, a pilot study was conducted involving 30 hotels that use e-commerce to get their opinion about the content and format of the questionnaire developed by Tow (2004). Based on this pilot study, the researchers used all the items in the questionnaire study because they are important, relevant and appropriate for this study. After that, the translation technique of back-to-back was used to translate the questionnaire survey in English and Malay to improve the validity and the reliability of the research findings (Hussey and Hussey, 1997).

This questionnaire consists of two variables: a) the use of E-commerce consists of 31 items and b) the ability of the Organization consists of 28 items taken from Tow (2004). The items selected in this study have croncbach alpha greater than 0.60, which indicates that they meet acceptable standards of reliability analysis (Sekaran, 2003). All items used in the questionnaire were measured using a 5-item Likert scale which ranges from "strongly disagree" (1) to "strongly agree" (5).

The population of this study is the hotel industry using E-commerce in Malaysia. Researchers have official approval to conduct a study of organizational management. The researchers distributed 146 questionnaires to study under the 3 star hotels and 111 survey questionnaires to 4 star hotels on using cluster sampling. From surveys distributed, 226 questionnaires were returned to the researchers and produce 87 per cent response rate. But, only 217 samples can be used which is 84 per cent. Number of samples exceeded the minimum sample of 30 participants as required by probability sampling technique shows that it can be analyzed using inferential statistics (Sekaran and Bougie, 2011).

Statistical Package for Social Sciences (SPSS) version 11.5 was used to analyze the data. First, the validity and reliability analyzes were conducted to assess the validity and reliability of the measurement scale (Nunally and Bernstein, 1994). Second, Pearson correlation analysis and descriptive statistics were conducted to determine the collinearity problem, and further confirm the validity and reliability of the construct (Hair et. al., 2006). Finally, multiple regression analysis has been recommended to assess the magnitude and direction of each independent variable and the dependent variable. Standardized coefficients (standardized beta) were used for all analyzes.

Research Findings

Reliability Analysis

Reliability analysis is the extent to which any reliable or consistent measure (Trochim, 2001). Alpha reliability is typically used to determine consistency. As illustrated in Table 1 below, E-commerce business network has the highest rate with cronbach alpha reliability of 0.99, while E-commerce technology resources, E-commerce management skills, E-commerce competency and E-commerce information network indicates between 0.93 and 0.98. Given these results, all variables have been studied have an adequate level of internal consistency as they meet the recommended standard 0.60 (Sekaran, 2003).

Table 1: Reliability Analysis (N=217)

Variables	Number of Item	Alpha Cronbach
E-commerce Technology Resources	8	0.93
E-commerce Management Skills	7	0.97
E-commerce Business Network	4	0.99
E-commerce Competency	3	0.97
E-commerce Information Network	2	0.98
Industries capabilities	17	0.73

Descriptive Statistics

Mean scores for variables

Mean score is calculated to determine the level of E-commerce technology resources, E-commerce management skills, E-commerce business network, E-commerce competency and E-commerce information network. As can be seen in Table 2 below, E-commerce technology resources appeared to have (mean=3.21, SD=0.51). Additionally, E-commerce management skills (mean=3.33, SD=0.93), E-commerce business network (mean=3.48, SD=0.66), E-commerce competency (mean=3.00, SD=0.24), and E-commerce information network (mean=3.15, SD=0.46).

Table 2: Summary of Mean Score Analysis

Variable	Mean	Standard Deviation
E-commerce Technology Resources	3.21	0.51
E-commerce Management Skills	3.33	0.93
E-commerce Business Network	3.48	0.66
E-commerce Competency	3.00	0.24
E-commerce Information Network	3.15	0.46
Industries capabilities	3.21	0.31

Bivariate correlation analysis

Pearson Correlation were conducted to measure the relationship between organization capabilities with E-commerce technology resources, E-commerce management skills, E-commerce business network, E-commerce competency and E-commerce information network to test all hypotheses related to that. As shown in Table 3, the findings of correlation analysis showed a significant positive relationship between the organizations capabilities with E-commerce management skills, E-commerce technology resources, E-commerce business network, E-commerce competency and E-commerce information network variables ($p < 0.01$). These results clearly support the hypothesis H1, H2, H3, and H4.

Table 3: Summary of the Relationship between Dependent and Independent Variables

Variable	Pearson Correlation Analysis					
	1	2	3	4	5	6
E-commerce Technology Resources	1					
E-commerce Management Skills	0.296**	1				
E-commerce Business Network	0.142**	0.226**	1			
E-commerce Competency	0.421**	0.255**	0.343**	1		
E-commerce Information Network	0.096	0.329**	0.009	0.135*	1	
Industries Capabilities	-0.485**	-0.701**	0.640**	0.506**	0.308**	1

Note : Significant at ** P<0.01

Multiple regression analysis with stepwise procedure

Multiple regression analysis with stepwise procedure was performed to determine the most dominant variable affecting the organization capabilities.

Organization Capabilities with E-commerce technology resources, E-commerce management skills, E-commerce business network, E-commerce competency and E-commerce information network.

As illustrated in Table 4 below, E-commerce technology resources, E-commerce management skills, E-commerce business network, E-commerce competency and E-commerce information network has expressed great influence on organization capabilities. E-commerce management skills have been found to be the most dominant predictor of organization capabilities ($\beta=0.464, p<0.01$), E-commerce business network ($\beta=0.461$, $p<0.01$), E-commerce technology resources ($\beta=0.220$, $p<0.01$), E-commerce competency ($\beta=-0.122$, $p<0.01$) and E-commerce information network ($\beta=0.114$, $p<0.01$). Together, these four variables stated R^2 value of 0.823, indicating that 82.3% of the variance in capabilities can be explained by them.

Table 4: Stepwise Regression of Organization Capabilities (N=217)

Model	R^2	Adjusted R^2	Unstand. Beta	Stand. Beta	T	Sig. Value
Model 1	0.492	0.489				
Constant			4.425		87.731	0.000**
EC Management skills			0.210	0.701	14.416	0.000**
Model 2	0.736	0.733				
Constant			3.789		65.268	0.000**
EC Management skills			0.176	0.587	16.259	0.000**
EC Business Network			0.215	0.507	14.058	0.000**
Model 3	0.799	0.796				
Constant			3.428		50.847	0.000**
EC Management skills			0.154	0.513	15.646	0.000**
EC Business Network			0.206	0.486	15.356	0.000**
EC Technology Resources			0.145	0.264	8.165	0.000**
Model 4	0.812	0.809				
Constant			3.220		38.325	0.000**
EC Management skills			0.141	0.471	14.035	0.000**
EC Business Network			0.210	0.495	16.103	0.000**
EC Technology Resources			0.145	0.263	8.416	0.000**
EC Information Network			0.076	0.124	3.916	0.000**
Model 5	0.823	0.819				
Constant			2.946		26.337	0.000**
EC Management skills			0.139	0.464	14.166	0.000**
EC Business Network			0.196	0.461	14.707	0.000**
EC Technology Resources			0.121	0.220	6.715	0.000**
EC Information Network			0.070	0.114	3.699	0.000**
EC Competency			0.142	0.122	3.586	0.000**

Note. ** $p < 0.01$ level (2-tailed).

Conclusion and Future Recommendation

The findings showed a significant relationship between E-commerce technology resources, E-commerce management skills, E-commerce business network, E-commerce competency and E-commerce information network with organization capabilities. Multiple regression analysis outcomes verify that E-commerce technology resources, E-commerce management skills, E-commerce business network, E-commerce competency and E-commerce information network has expressed great influence on organization capabilities. Of all the predictor's variables, E-commerce management skills appeared to be the most dominant variable in influencing organization capabilities. This result has also supported with previous studies by Tow (2004) and Bharadwaj (2000). These findings provide useful guidance to the hotel management, the Ministry of Tourism Malaysia and the Malaysian government in its efforts to enhance the usage of E-commerce to improve organization capabilities to achieve capability in line with the capability of the hotel industry in west countries. The management has been and will be using the application of E-commerce websites should give attention to the management of E-commerce skills. This is due to one of the factors of E-commerce management skills is having a group of people who are skilled in managing information technology systems and E-commerce.

This study has limitations in terms of the scope of the study or its methodology. Therefore further research should be conducted based on the following requirements: studies involving larger population size of homogeneous countries with Malaysia as the Southeast Asian country and carry out triangulation involve quantitative research, and qualitative to obtain a more comprehensive study involves two types of data.

References

Bharadwaj, A.S. (2000). 'A Resource-Based Perspective on Information Technology Capability and Firm Performance: An Empirical Investigation', MIS Quarterly, vol. 24, no.1, pp.169.

Chandran, D., Kang, K. S., & Leveaux, R. (2001). Internet culture in developing countries with special reference to e-commerce. Proceedings of the 5th Pacific Asia Conference on Information Systems (PACIS): Information Technology for Estrategy, Seoul, pp.656-64.

Fisher, M. (2000), 'Using E-Commerce To Deliver High Productivity.' MCB University Press vol. 49, no. 2, pp. 59-62.

Gilaninia, Sh., Omiidvani, N., Bakhshalipour, A., Eftekkhari, F., Seighalani, F. Z. (2012) The Role of ICT in Performance of Small & Medium Enterprise. Interdisciplanary Journal of Contemporary Research in Business. 3 (10).

Hair, J.F. , Anderson, R.E. , Tatham, R.L. and Black, W.C. (1998). Multivariate Data Analysis.Upper Saddle River, NJ, Prentice-Hall.

Hussey, J., and Hussey, R. (1997). Business Research: A Practical Guide for Undergraduate and Postgraduate Students. Basingstoke, UK: McMillan Press.

IntanSalwani, M., Marthandan, G., Norzaidi, M.D., Normah, O. (2009). E-commerce and value creation: empirical evidence in Malaysia. Proceedings of the European Applied Business Research Conference, Rothenburg,.

Kraemer, K.L., Dedrick, J., Melville, N., Zhu, K. (2006), Global E-commerce: Impacts of National Environments and Policy, Cambridge University Press, Cambridge.

Laudon, K., and Traver.(2009). E-Commerce. New Jersey. Pearson Prentice Hall.

Laudon & Traver (2012), E-commerce 2012 Coursemart. (New Jersey). Prentice Hall.

MASSA Magazine. 16-22 Mac, 2002.

McKay, J. & Marshall, P. 2004, Strategic Management of e-Business, John Wiley & Sons, Brisbane

Norzaidi, M.D., Chong, S.C., Murali, R., Intan Salwani, M. (2007), Internet usage and manager's performance in the port industry. Industrial Management & Data Systems, 107 (8). 1227-50.

Nunally, J. C. (1978). Psycometric Theory (2nd Ed). New York: McGraw Hill Co. Inc.

Rezvani, M., Gilaninia, Sh., and Mousavian, S.J. (2011). Strategic Planning: A Tool For Managing Organizations In Competitive Environments, Australian Journal of Basic and Applied Sciences, 5(9): pp1537-1546.

Sekaran, U. (2003), Research Methods for Business – A Skill Building Approach, 4th ed., Wiley, New York, NY,.

Sekaran, U., and Bougie, R. (2011). Research Methods for Business: A Skill Building Approach. UK: John Wiley & Sons.

Tan, K. S., Chong, S. C., Lin, B. (2009), Internet-based ICT adoption among small and medium enterprises: Malaysia's perspective, Industrial Management & Data Systems, 109 (2). 224-44.

Tow, C.J. (2004), Development of E-commerce Capability Instrument Using The Resource-Based View Perspective And Its Application To Firm-Level Performance. DisertasikedoktoranditerbitkanProquest Digital Disertation, University of South Australia.

Trochim, W.M.K. 2001, 'The Research Methods Knowledge Base', Cincinnati: Atomic Dog.

Turban, E., King, D. (2003), Introduction to E-commerce, Prentice Hall, Upper Saddle River, NJ.

Werthner, H. & Ricci, F. (2004). E-commerce and Tourism, Communication Of The ACM. 47(12). 101-105.

Xiao L. (2008). The Impact Of Dynamic IT Capability And Organizational Culture On Firm Performance. Doctorate Dissertation published by Proquest Digital Disertation, The George Washington University.

Zhu, K. (2004). The complementarity of information technology infrastructure and ecommerce capability: A resource-based assessment of their business value. Journal of Management Information Systems, 21(1), 167.

http://www.yadim.com.my/ekonomi/2007