

FACTORS INFLUENCING THE AMOUNT OF SPENDING IN HOSPITALITY E-COMMERCE: A CASE STUDY OF BAKERY WEBSITE

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ABSTRACT

As a case study, the aims of this study were to explore the determinants of the amount of consumer spending in hospitality e-Commerce. Data was derived from the log file of the e-Commerce website that has been open since 2008 (<http://www.cakestory.kr>). Logistic regression analysis was primarily employed to examine the purpose of this study. As a result, it was observed that the flow of total sales might be inconsistent with the flow of sale ratio during the period from 2009 to 2010. Furthermore, the probability of the high spending varies depending on demographic characteristics (i.e., age and gender), individual characteristics (i.e., membership and payment types for the products), and behavior types (i.e., product types and searching time) for the product of event cakes in the hospitality e-marketplace. The results of this study can be utilized to understand the online consumer spending patterns in the hospitality e-Commerce.

Keywords: *Hospitality, e-Commerce, marketing, consumer spending, demographic characteristics, individual characteristics, behavior types*

INTRODUCTION

For decades, electronic commerce has been used to enhance communication and transactions between organizations and consumers as one of the most significant developments in the use of information technology in business (Tangpong, Islam, & Lertpittayapoom, 2009). Given the rapid growth and considerable optimism of Internet retailing of certain products, it has been posited that individual's attitudes and behavior toward online purchase are of critical importance in order to predict the managerial performance in e-marketplace (Sexton, Johnson, & Hignite, 2002). As a result, to date, substantial research that examines the effectiveness of e-Commerce models has been primarily focused on the information search behavior that consumers adopt in searching and gathering information to decide their purchase in e-Commerce environment (Ranaweera, McDougall, & Bansal, 2005). Despite the wide-spread discussion of e-Commerce advantages, the literature in relation to e-Commerce business models in the hospitality and tourism has attempted to find out (1) organizational, business and technical factors influencing consumer behavior intentions in Internet efficiency (e.g., Sigala, 2005), (2) the effectiveness of Internet sites in evaluating and developing websites (e.g., Kasavana, 2002; Kim,

Morrison, & Mills, 2004; Morrison, Taylor&Douglas,2005), and (3) determinants of online consumer satisfaction in a decision process perspective (e.g., Kohli, Devaraj, & Mahmood, 2004). These include limitations in terms of examining the managerial performance within the context of e-Commerce since company's profits or consumer's expenditures were excluded in the studies.

The managerial performance in an organization has been regarded as one of the standards in illustrating a successful e-Commerce model (Boyd & Bilegan, 2003). Previous research focusing on revenue management in e-Commerce proposed the importance of online product information in examining actual consumer behavior (i.e., buying vs. not buying) (Bellman, Lohse, & Johnson, 1999). In order to increase revenue in e-Commerce environment, in particular, online information would be more reliable when purchasing a certain product. As an example, it has been observed that people who spend more money online have a more wired lifestyle (Bellman, et. al, 1999). In this sense, it is essential to identify the major determinants of consumer online shopping behavior for the effective revenue management. An understanding of consumer profiles in e-Commerce is imperative (Sigala, 2005) because it is assumed that the amount of spending in product purchase varies depending on consumer demographic characteristics, personality, and behavior types.

Within the context of tourism, specifically, it has been noted that expenditure patterns vary relying on travelers' demographic characteristics, such as age, gender, and income (Agarwal & Yochum, 1999). This may imply that the expenditure patterns may differ by demographic characteristics in online shopping for hospitality products as well. In terms of payment types in e-Commerce, Georgia Tech Graphics, Visualization & Usability (GVU) Center surveys (1998) reported that the majority of online shoppers who responded to the ninth GVU survey were concerned about the security of credit card information in the e-Commerce environment (Kehoe, Pitkow, & Rogers, 1998). The study also suggested that the members of a group have different spending patterns in online purchase behavior. Considering these findings, it is assumed that the amount of online consumer spending depends on payment types, such as cash or credit card use, and the online membership (i.e., member vs. non-member).

In regard to product categories in consumer spending, the patterns of the spending vary in tourist buying behaviors (Kim & Littrell, 2001). Many studies on determining the probability of online purchase examined past online shopping experience, use of credit cards, security and transaction integrity issues, Internet knowledge, and psychological factors (Lee, 2002). In this sense, these factors can be determinants of the likelihood of the high spending in online purchase. Based upon the literature regarding spending patterns of individual online shoppers in hospitality e-Commerce, the primary aims of the study are (1) to explore the consumer spending patterns in e-marketplace and (2) to examine the influential predictors of the amount of spending when purchasing the hospitality products (i.e., event cakes).

METHODS

Subjects

This study focuses on predicting the individual's actual behavior toward the amount of online consumer spending on a product. In this regard, the actual online buyers through the e-Commerce website should be included in this study. Customers, who purchased a product (i.e.

event cakes) from the website during the period from June 2009 to May, 2010, were employed. A total of 288 consumers' online spending patterns were collected from the commercial event cake website.

e-Commerce website in hospitality

To explore the influential factors toward the amount of spending on a product in the hospitality e-marketplace, the study selected the e-Commerce website as an object in a small-sized e-Commerce firm. In regard to the selection of the object, the website has two advantages: (1) the e-Commerce website focuses on selling the hospitality product (i.e., event cakes) and (2) it is possible to accessibly extract the available data from the website. As a result, the e-Commerce website (<http://www.cakestory.kr>) was used for this study.

Data collection and analysis

Data was derived from the e-Commerce website that has been open for 3 years. The data includes buyer demographic characteristics (i.e., age and gender), individual characteristics (i.e., online membership status, buying frequency, and payment types), and behavior types (i.e., product types and searching time before purchasing a product) as well as a total number of visitors to the website for a year (Jun, 2009 to May, 2010), the amount of individual spending on a product, and the spending on product promotion. The data analysis of the study followed several statistical procedures; Excel and SPSS 15.0 were utilized to complete the analyses. The descriptive data including frequencies, means, and standard deviations are obtained to examine the demographic, information search behaviors, and purchasing behaviors. Logistic regression analysis was primarily conducted to determine the factors influencing the amount of spending on the event cake.

RESULTS

Buyer characteristics

It was observed that there are 66 male (22.9%) and 222 female (77.1%). In regards to the age bracket, it was shown that there are about 42% of "less than 20s", 49% of "30s", and 9% of "40s", respectively. A majority of buyers were member of the website (73%), while about 27 percent are non-members. In regard to the buying frequency, about 82 percent was first-time buyers in the e-market place, while about 18 percent was repeated online buyers. About 90 percent indicated that the product was ordered from promotion areas. In terms of product types, there are family events (40.6%), kids events (37.5%), and couple events (21.9%), respectively. Furthermore, searching time consists of 47.9% of "less than 15 minute", 79% of "16 to 30 minute", and 24.7% of "over 31 minute", respectively.

Factors influencing the amount of spending on the hospitality products

Table 1 shows the results of influential factors on the amount of spending in the hospitality e-Commerce. Based on the average consumer's spending, "the amount of the high spending" was coded "1" while "the amount of the low spending" was coded "0", and a binary logit analysis was employed. Overall, the results reveal that the prediction of the probability of the high spending can be significantly improved by understanding customer characteristics and types including demographic characteristics, individual characteristics, and behavior types. In

terms of the statistical validity, the percent correct reaches 76.2% and this improvement is statistically significant at .01 significant level (Chi-square= 81.318 and df= 10).

Results in Table 1 show that the probability of the amount of high spending varies depending on customer characteristics and types. The likelihood of the amount of high payment in E-Commerce increases by about 17% ($\exp(1.176)$) as age by one year. The probability of the amount of high payment increases by about 3 times ($\exp(3.234)$) when male purchases the product as compared to female. In terms of the individual characteristics, the likelihood of the amount of high payment decreases by about 98% when member purchases the products ($1-\exp(.021)$). Furthermore, the probability of the amount of high payment decreases by about 65% when the cash is used to buy the products.

In regard to the types of customer behavior, customers who purchases the product for a baby event are about 15times ($\exp(15.043)$) more likely to pay a large amount of money than those of customers who buy the products for a friend/relative do, while customers who purchase the products for a couple event are about 83% ($1-\exp(.172)$) more likely to pay a small amount of money than those of customers who buy the products for a friend/relative do. In addition, customers who spend 16 to 30 minute as searching time are about 80% ($1-\exp(.454)$) less likely to pay a large amount of money than those of customers who search the website during less than 30 minute do.

Table 1
Factors influencing the amount of spending on a product in Hospitality E-Commerce

Variables (n=288)		B	Exp(B)
Demographic characteristics			
Age		.162**	1.176
Gender ^D	1= Male, 0=female	1.174*	3.234
Individual characteristics^D			
Membership	1=Member, 0=Non-member	-3.870**	.021
Buying frequency	1=Repeated time, 0=First time	.899	2.458
Payment types	1=Cash, 0=Credit card	-1.041*	.353
Behavior Types^D			
Promotion area ^a	1=Promotion, 0=Non-promotion	-.920	.398
<i>Product types</i>			
Childhood events	1=Friends/relatives event	2.711**	15.043
Couple events	0=Others	-1.763**	.172
<i>Searching time</i>			
16 to 30 min.	1=Less than 15 min.	-.789	.454
Over 30 min.	0=Others	-1.637**	.195
Model Chi-square (sig.)		81.318(.000)	
-2 Log likelihood		174.493	
% correct		76.2	
Nagelkerke R2		.475	

D: Discrete response

* p< .05, ** p<. 01

^a \$1 = 1,200 Won (South Korean currency).

^b Brochure was distributed to the certain areas, and buyers are divided into two groups: promotion vs. non-promotion areas.

CONCLUSION

As a case study, this study explored determinants of the amount of consumer spending in hospitality e-Commerce. Data was derived from the log file of the e-Commerce website that has been open for 3 year (<http://www.cakestory.kr>). The results indicate that the flow of total sales might be inconsistent with the flow of sale ratio during the period from 2009 to 2010. It was also found that the probability of the high spending varies depending on demographic characteristics (i.e., age and gender), individual characteristics (i.e., membership and payment types for the products), and behavior types (i.e., product types and searching time) for the product of event cakes in the hospitality e-marketplace. The results of this study can be utilized to understand the online consumer spending patterns in the hospitality e-Commerce. With the understanding of the significant determinants of consumers' high expenditure in the e-Commerce transaction, e-Marketers in hospitality companies decide to make marketing strategies in increasing the revenue.

REFERENCE

- Agarwal, V. B., & Yochum, G. R. (1999). Tourist spending and race of visitors. *Journal of Travel Research*, 38(2), 173-176
- Bellman, S., Lohse, G.L., & Johnson, E. J. (1999). Predictors of online buying behavior. *Communication of The ACM*, 42(12), 32-38.
- Boyd, E.A., & Bilegan, I. C. (2003). Revenue management and E-Commerce. *Management Science*, Management Science, 49(10), 1363-1386.
- Curtis J. (2000). Cars set for online sales boom. *Marketing*, 10, 22-4.
- Kasavana, M. L. (2002). eMarketing: Restaurant websites that click. *Journal of Hospitality & Leisure Marketing*, 9 (3/4), 161-178.
- Kehoe, C., Pitkow, J., & Rogers J. (1998). *GVU's Ninth WWW User Survey Report*. Office of technology licensing, georgia tech research Corp., Atlanta.
- Kim, D. Y., Morrison, A. M., & Mills, J. E. (2004). Tiers ortears? An evaluation of the Web-based marketing effortsof major city convention centers in the U.S. *Journal of Convention & Exhibition Management*, 5(2), 25-49.
- Kim, S., & Littrell, M. A. (2001). Souvenir buying Intentions for self versus others. *Annals of Tourism Research*, 28(3), 638-657.
- Kohli, R., Devaraj, S., & Mahmood, M. A. (2004). Understanding determinants of online consumer satisfaction: A decision process perspective, *Journal of Management Information Systems*, 21(1), 115-135.
- Lee, P-M. (2002). Behavioral model of online purchasers in E-Commerce environment, *Electronic Commerce Research*, 2 (1-2), 75-85.
- Morrison., Taylor, & Douglas. (2005). Website evaluation in tourism and hospitality, *Journal of Travel & Tourism Marketing*, 17 (2), 233-251.
- Ranaweera, C., McDougall, G., & Bansal, H. (2005). A model of online customer behavior during the initial transaction: Moderating effects of customer characteristics. *Marketing Theory*, 5 (1), 51-74.
- Sexton, R. S., Johnson, R. A., & Hignite, M. A. (2002). Predicting internet/ e-Commerce use. *Internet Research*, 12 (5), 402-410.
- Sigala, M. (2005). Reviewing the profile and behaviour of internet users, *Journal of Travel & Tourism Marketing*, 17(2), 93-102.
- Tangpong, C., Islam, M., & Lertpittayapoom, N. (2009). The emergence of business-to-consumer e-Commerce new niche formation, creative destruction, and contingency perspectives. *Journal of Leadership & Organizational Studies*, 16 (2), 131-140.