

# Examining Online Shopping Services in Relation to Experience and Frequency of Using Internet Retailing

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*E-shopping has the potential to replace traditional in-store shopping. It is well perceived that information and communication technologies have great impacts on modern society - they are changing how and where we work, shop, and in general terms how we live our lives. In this study, we use a survey instrument to examine the association between experience level with Internet and e-shopping and consumers' frequency of online purchasing, while considering sex as a passive influencer. We study these relationships in a multinomial logistic regression model that is aimed at online retailers to help them improve their understanding of their consumers' characteristics and propensity to buy through Internet retailing. Tracking the online journey of consumers will help enhance the attractiveness of this new retailing medium to current and potential customers.*

**Keywords:** *frequency of online shopping, Internet retailing, online services, online shopping services,*

**JEL Classification:** *M31*

## 1. Introduction

In recent years, due to technological developments so-called e-services have gained increased importance. The rise of e-services is closely connected to the development of the internet as a marketplace and the concept of e-commerce. Today, purchasing books via the internet, booking flights and online banking are far beyond being a speciality for web enthusiasts. The 'e-service' is a service which is entirely delivered by technologies (Bruhn and Georgi, 2006, p.325).

The Internet and other related technologies have helped companies to work more quickly, more accurately and on a larger stage. There are few companies today that do not have web sites established to inform potential and existing customers and promote their products and services.

A 2012 report from BCG assesses that more than a billion Internet users are already using mobile devices to purchase products and services, exhibiting a profound change in decision making process. As per-store decline, all retailers will need to reconsider the role of their brick-and-mortar assets, rethink their physical locations, and re-seize them to meet changing consumer needs. This re-evaluation may transform how many companies operate and can lead to massive changes in market shares, the retailer landscape, and commercial real estate (Vinerean, 2013, p.10). Under these premises, the growth and transformational

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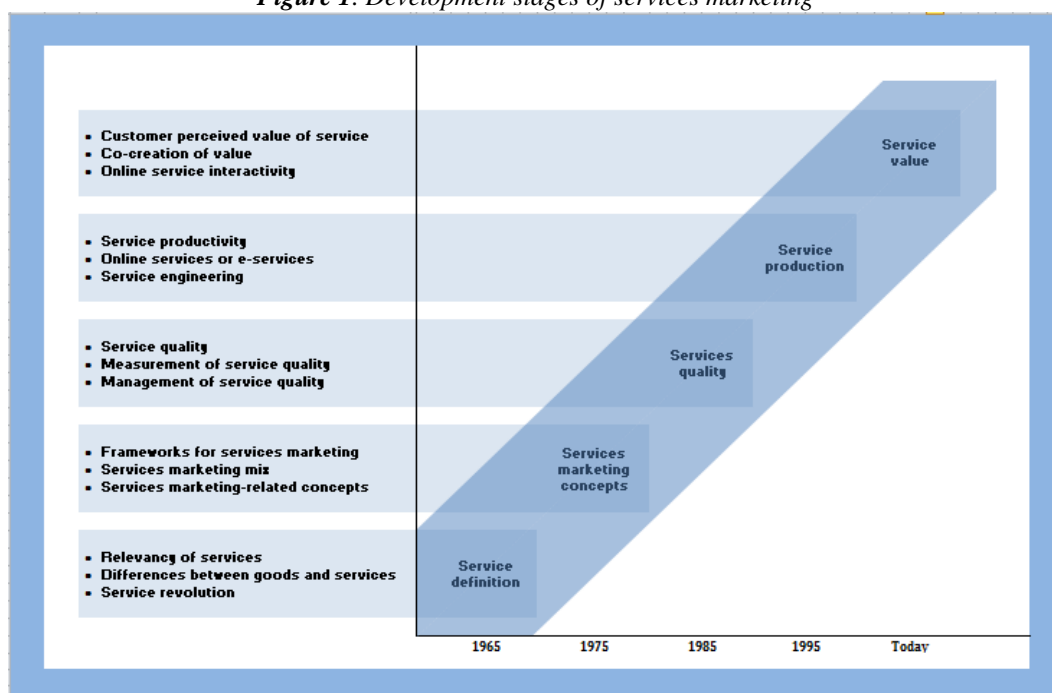
potential of online shopping services is undeniable.

This paper is organized as follows. The next section summarizes the development of online services and their importance in changing marketing. Section 3 and 4 develop the premises of the primary data marketing research, in terms of the data, variables, survey instrument. Section 5 contains the results of the empirical analysis that studies the relationships between consumer experience and frequency to buy using online shopping. The last section recapitulates the findings, provides managerial suggestions for implementation, discusses limitations of the present research and makes recommendations for future research.

## 2. Literature Review and Conceptual Framework

In this section, we will create an overview of the emergence and development of services marketing in academic literature, in order to highlight the main issues that led to this concept. Thus, Bruhn and Georgi (2006, p.10) differentiated five stages corresponding to the development of services in marketing, in chronological order (Figure 1).

Figure 1. Development stages of services marketing



Source: Adapted Bruhn and Georgi, p.10

### 2.1. 1960s: Service Definition (Definitional Focus)

At this stage of academic research, various works have treated the concept of "service" in terms of its definition, structure and differences between goods and services. Services took a growing share in the economic statistics and this development was entitled "services revolution". An important feature of the service is the process dimension of a service as the main benefit of a service is created by the service provider and the client when they meet (Regan, 1963, pp. 57--62). Thus, based on the differences between goods and services the first definitions of services were proposed. Services are activities, benefits and rewards that are offered for sale or provided in connection with the sale of goods. The term may involve consulting, support and delivery through which the vendor serves convenience and comfort to customers (Judd, 1964, pp. 58--59). Also, in the same paper from 1964, Judd classified services into three categories: rental property service (right of possession and use of a product), services related to property owned (customize, repair or improve a product) and services that not involve other assets (experiential possession, with no product).

### 2.2. 1970s: Services Marketing Concepts (Conceptual Focus)

In this phase, the papers exploring marketing services began to develop and define specialized concepts for this new area. It was claimed that in the service industries, the concept of marketing has not been

fully established because the field of marketing did not seize any guidance, terminology or concrete practices to pursue, that were relevant for the service context. This was the reason why Shostack (1977, pp. 73--80) proposed differences between services and products by studying the tangible and intangible dominants, mentioning that service marketers should focus on improving and differentiating the reality by manipulating tangible indices.

The conceptual focus led to the framework definition of services marketing. In this period of time, researches were developed regarding the implementation of a specific mix of marketing that was aimed towards services companies (Bateson et al., 1978).

Eventually, in this stage, several "new" concepts of marketing appeared, based on different themes of the service areas, such as relational marketing, defined through all marketing activities that attract, develop, maintain, and improve the customer relationships (Berry, 1983).

### **2.3. 1980s: Service Quality (Measurement Focus)**

In the next stage of development services marketing, service quality concept proved to be a major challenge for service companies. Due to the characteristics of services, quality represents a more complex construct than product quality that requires new theoretical frameworks. For example, from a general perspective, service quality characteristics cannot be classified as objective, as they are subjective to each client.

The best known model that conceptualized quality is GAP model which explains the determinants of service quality in terms of the gap between service expectations and perceptions of service performance (Parasuraman et al., 1985, pp. 41--50). Based on conceptual considerations on the quality of services, the following research have focused on developing tools on how to measure service quality, and the most popular measuring instrument based on the GAP model is the SERVQUAL approach, which measures service quality using 22 elements that are associated with five dimensions of service quality: tangible elements, reliability, responsiveness, empathy, and trust (Parasuraman et al., 1988, pp.57--66).

Furthermore, from a quality control perspective in order to capture the financial implications related to quality improvement, Rust et al. (1994) determined the concept of "Return On Quality", based on four assumptions: (1) quality is an investment, (2) efforts should be measured as financial, (3) it is possible to invest too much in quality, (4) not all quality expenditures are equally valid.

Other researchers have noted the meeting between the supplier and the customer as a central dimension that leads to the quality of services, developed through new concepts such as "servuction" (developed to capture the interaction system for a service company; Langeard and Eiglier, 1987) or "service encounter" (namely, the dyadic interaction between the customer and service provider; Solomon et al., 1985, pp. 99--111.; Bitner et al., 1990, pp. 71--84). "Moments of Truth" represented a new term that became part of the marketing services jargon to emphasize that each customer contact creates a moment that affects the company's relationship with him and determines the company's ability to maintain a client (Norman, 1984). This development led to other approaches for measuring service quality, such as "service blueprinting" to capture the activity to identify all possible processes and points of failure that could have a negative domino effect on the whole process of providing quality (Shostack, 1984, pp. 133--139).

Among the many research on service quality, due to the development of the Internet concept, in this timeframe the first studies that explore the potential changes the Internet might denote on marketing. Thus, Rosenberg and Hirschman (1980, pp. 103--112) believed that consumer electronic purchases will transform conventional retailing, an idea shared by Schneiderman (1980, pp. 60-61), who considered that this form of Internet purchases will be the dominant form of shopping.

### **2.4. 1990s: Service Production (Operational Focus)**

Increasing profitability and cost orientation in the 1990s led to a more systematic perspective of service production. To study the productivity of services, different studies started by examining the relationship between input and output from the production services' process (Gummesson, 1995, pp. 77-79). Thus, different service factors were analyzed, such as opportunities to improve productivity, efficiency and effectiveness of service production through the management of these issues.

With the creation and continuous development of the World Wide Web and Web browsers in the 1990s, the Internet had turned from a simple communication tool in a revolutionary technology that was impacting marketing. Initially, in consumer marketing, the Internet was perceived as another channel that requires a redistribution of company funds and investments to seize new potential income sources (Hagel and Eisenmann, 1994, pp. 39-55).

One major issue in this area and this timeframe was how to approach this service technology as a support and assistance feature for customers (Vinerean, 2013, p.20). In this regard, Domegan (1996, pp.52--69) determined specific advantages for why companies should start using the Internet in an effective and efficient manner: automation, operational efficiency, generating customer information, strategic effectiveness, and possibility of product differentiation. Moreover, Quelch and Klein (1996, pp. 60--75) identified the companies that had an online presence and practiced Internet marketing, by definition, as global companies that can cater to their customers anytime and anywhere in the world. Peterson et al. (1997, pp. 329--346) noted that the Internet has the potential to create new business models, change the traditional approaches of service delivery based on the collected information, target customer niches, and develop new ways of interacting with customers, especially through the expansion of existing customers and attraction of new customers (Vinerean, 2013, p.21).

In the mid-90s, Hoffman and Novak (1996, pp.50-68) developed the premises of a new model used to explain consumer behavior in an online setting, more specifically in e-commerce. The authors explain how the interactivity of this setting leads consumers to engage in an active manner in the process of navigating on different networks (in contrast to the passive experience of watching television programs, for example). Generally speaking, online consumers can demonstrate experiential active behaviors (e.g. browsing the Internet) and goal-oriented behaviors (e.g. online shopping). These two types of online consumer behaviors led to important implications for the commercial development of the Internet and different types of online interactive marketing techniques, strategies and tactics.

### **2.5. Today: Service Value (Process Focus)**

Marketing academia in the field of services tends to focus on perceived service value, namely the analysis of the value that is created by a service company for the customer through the eyes of the customer (Bruhn and Georgi, 2010, p.12). In relation to this concept, we discuss customer value and customer equity to understand how a customer relationship (or all of them, in case of customer equity) contributes to the overall value of a company.

Presently, the main focus of marketing services is changing to a 'service logic' introduced for the first time by Vargo and Lusch, in 2004. This new logic implies that service research should focus on issues such as skills, information, knowledge, interactivity, connectivity, and continuing relationships. Thus, the orientation has shifted from the producer to the consumer, who is a now co-creator of value (Lusch and Vargo, 2006, pp.281--288). The actual service can be provided either directly by aligning the activities of a company, or indirectly through the online service platform. Nowadays, service organizations create value for clients through performance, and more and more consumers turn to the virtual environment to gain that value.

Thus, online services should provide customers with a different experience through an interactive flow of online information, compared with the traditional offline channels. Rowley (2006, pp. 339--359) extended the concept of online services to include all media and interaction types that are mediated by information technology such as the Internet, mobile devices, interactivity of electronic retailing (e-tailing Eng.), customer support and service delivery.

This paper takes this stream of literature of e-services to examine the relationship between experience with internet in general, and online shopping, in particular, and frequency of e-purchases, while considering the sex of the respondents as a passive influencer. To study these aspects, we explore the context of e-commerce, in general.

As Internet use continues to increase, it will become increasingly important to understand the implications of its use not only on search behavior, but also on purchase behavior. Ultimately, firms are interested in what consumers purchase and the factors that play a role in that purchase choice, and whether previous experience does play a role in future online buying behavior.

## **3. Research Hypotheses**

The investigated and proposed model is based on a quantitative marketing research from primary sources. One of the most important contributions of a marketing research is to define the marketing research problem that requires the provision of marketing solutions (Malhotra and Birks, 2007, p.15). The problem definition for this conducted research is in regard to the better understanding of consumer behaviour in relation to Internet retailing, considering the experience consumers have with this technology and online shopping services.

In this research, we will explore how consumers interact with e-purchasing services in the context of

online shopping, as an information-intensive activity. Through this research we will examine the relationships between consumers' experience and their frequency to approach e-commerce. Thus we propose the following hypotheses:

H1. Consumers experience with online shopping has a notable impact on their frequency to buy in an e-tailing setting.

H2. Consumers experience with Internet, in general, does not reflect a notable impact on their frequency to buy in an e-tailing setting.

#### 4. Research Methodology

##### 4.1. Research Instrument and Data Collection

The primary scope of this study is to understand online shopping behavior of consumers use or intend to use e-commerce. In this paper, we measured four categorical constructs to examine the proposed relationships. Constructs were measured using multiple-choice scales. An online consumer survey was developed and used data collection, from January to June 2013. Primarily, 107 responses were gathered from different forums devoted to online shopping.

Table 1 presents the profile of the respondents, as well as the psychometric properties of the measures.

*Table 1. Measurement and respondents profile*

<i>Variable</i>	<i>Measurement items</i>	<i>Frequency</i>	<i>Marginal Percentage</i>
Frequency of online shopping (in the last year)	2 or 3 times	33	30.8%
	4 or 5 times	31	29.0%
	6 or 7 times	16	15.0%
	7 or 8 times	27	25.2%
Experience with online shopping	I only purchased one time from an e-store	13	12.1%
	I purchased more than once from the internet	94	87.9%
Experience with internet	Over 6 years	86	80.4%
	Less than 4 years	6	5.6%
	4-6 years	15	14.0%
Sex	Male	38	35.5%
	Female	69	64.5%
Country	Australia	7	6.5%
	Brazil	2	1.9%
	Denmark	3	2.8%
	France	3	2.8%
	Germany	7	6.5%
	Greece	1	0.9%
	India	5	4.7%
	Poland	1	.9%
	Romania	21	19.6%
	Spain	7	6.5%
	UK	14	13.1%
Age group	USA	36	33.6%
	18-25	5	4.7%
	26-30	1	0.9%
	30-40	4	3.7%
Valid	Over 40s	11	10.3%
		107	100.0%

#### 5. Empirical Analysis and Results

##### 5.1. Multinomial Logistic Regression

Logistic regression is multiple regression but with an outcome variable that is a categorical dichotomy and predictor variables that are continuous and categorical (Field, 2005, p.218). Logistic regression determines the impact of multiple independent variables presented simultaneously to predict membership of one or other of the two dependent variable categories.

However, in this analysis, we used multinomial logistic regression which is different than binary logistic regression because the dependent variable is not restricted and has more than two categories. More specifically, this method is used to predict respondents who are more likely to purchase only, by increasing their frequency of online purchases, based on their sex and experience with Internet usage, in general, and online shopping, in particular.

For a dependent variable with K categories, consider the existence of K unobserved continuous variables,  $Z_1, \dots, Z_K$ , each of which can be thought of as the "propensity toward" a category. In the case this paper,  $Z_k$  represents a customer's propensity toward online shopping for the  $k^{\text{th}}$  category of frequency times, with larger values of  $Z_k$  corresponding to greater probabilities of choosing e-commerce (assuming all other Z's remain the same). Mathematically, the relationship between the Z's and the probability of a particular outcome is described in this formula.

$$\pi_{ik} = \frac{e^{z_{ik}}}{e^{z_{i1}} + e^{z_{i2}} + \dots + e^{z_{iK}}}$$

where  $\pi_{ik}$  is the probability the  $i^{\text{th}}$  case falls in category k  
 $z_{ik}$  is the value of the  $k^{\text{th}}$  unobserved continuous variable for the  $i^{\text{th}}$  case

$Z_k$  is also assumed to be linearly related to the predictors.

$$z_{ik} = b_{k0} + b_{k1}x_{i1} + b_{k2}x_{i2} + \dots + b_{kj}x_{ij}$$

where

$x_{ij}$  is the  $j^{\text{th}}$  predictor for the  $i^{\text{th}}$  case

$b_{kj}$  is the  $j^{\text{th}}$  coefficient for the  $k^{\text{th}}$  unobserved variable

J is the number of predictors

If  $Z_k$  were observable, you would simply fit a linear regression to each  $Z_k$  and be done. However, since  $Z_k$  is unobserved, we must relate the predictors to the probability of interest by substituting for  $Z_k$ .

$$\pi_{ik} = \frac{e^{b_{k0} + b_{k1}x_{i1} + \dots + b_{kj}x_{ij}}}{e^{b_{10} + b_{11}x_{i1} + \dots + b_{1j}x_{ij}} + e^{b_{k0} + b_{k1}x_{i1} + \dots + b_{kj}x_{ij}}}$$

In SPSS (IBM, 2012), there is a non-identification aspect that is included in the algorithm. This means that if a constant is added to each Z, then the outcome probability is unchanged. To solve this problem,  $Z_K$  is (arbitrarily) set to 0. The  $K^{\text{th}}$  category is called the reference category and all parameters in the model are interpreted in reference to that particular category. Also, the coefficients are estimated through an iterative maximum likelihood method (IBM, 2012).

$$\pi_{ik} = \frac{e^{z_{ik} + c}}{e^{z_{i1} + c} + e^{z_{i2} + c} + \dots + e^{z_{iK} + c}} = \frac{e^{z_{ik}}}{e^{z_{i1}} + e^{z_{i2}} + \dots + e^{z_{iK}}}$$

In order to achieve the multinomial logistic regression, we used the dependent variable of 'Frequency of online shopping' and three categorical predictors: 'Experience with Internet (in general)', 'Experience with online shopping' and 'Sex'. In terms of describing the model, we computed a custom model that excluded the 'Sex' variable.

After computing the model, we determined whether it reasonably approximates the behavior of the data. Firstly, we observe the goodness-of-fit tests (Table2), in the form of Pearson and Deviance statistics to show if the model fits the data in an adequate manner. Therefore, in this model, the data is consistent with the model assumptions because it displays significance values greater than 0.10 (Table2).

**Table 2. Goodness-of-Fit**

	<b>Chi-Square</b>	<b>df</b>	<b>Sig.</b>
Pearson	14.331	12	0.280
Deviance	17.118	12	0.145

The 'Model Fitting Information' Table (Table3) presents a likelihood ratio test that shows whether the model fits the data better than a null model (in which all the parameter coefficients are 0), by comparison to the proposed (Final) model. The Chi-Square statistic (37.525) is the difference between the -2 log-likelihoods of the Null (78.233) and Final (40.708) models. Since the significance level of the test is less than 0.05, you can conclude the Final model is outperforming the Null.

**Table 3. Model Fitting Information**

<i>Model</i>	<i>Model Fitting Criteria</i>	<i>Likelihood Ratio Tests</i>		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	78.233			
Final	40.708	37.525	6	.000

Table 4 presents the likelihood ratio tests that check how each effect contributes to the proposed model. In general, if the significance of the test is small (less than 0.05) then the effect contributes to the model. In this particular model, Experience with Internet, in general does not add a major contribution to the model of predicting purchases through the use of online services.

**Table 4. Likelihood Ratio Tests**

<i>Effect</i>	<i>Model Fitting Criteria</i>	<i>Likelihood Ratio Tests</i>		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	40.708 <sup>a</sup>	0.000	0	
Experience with internet	43.327	2.619	4	0.263
Experience with online shopping	75.605	34.897	2	.000

Notes: The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

a. This reduced model is equivalent to the final model because omitting the effect does not increase the degrees of freedom.

Given the fact that the present model follows a regression with categorical dependent variable, it is not possible to compute the coefficient of determination,  $R^2$ , in order to summarize and explain the proportion of variance in the dependent variable associated with the predictor (independent) variables. To overcome this shortcoming, indicators presented in Table 5 are used to estimate the coefficient of determination for the model. Cox and Snell's  $R^2$  and McFadden's  $R^2$  are based on the log likelihood for the model compared to the log likelihood for a baseline model (IBM, 2012). However, with categorical outcomes, even for a "perfect" model they display theoretical maximum values of less than 1. Nagelkerke's  $R^2$  is an adjusted version of the Cox and Snell R-square that adjusts the scale of the statistic to cover the full range from 0 to 1 (IBM, 2012). In categorical regressions, even though each computed statistic can be suggestive on its own, it is more useful to regard the values in comparison with each other to explain the model. Therefore, the model with the largest  $R^2$  statistic is 'best' according to this measure, and in this case, Nagelkerke's  $R^2$  best describes the proposed regression model with a satisfactory  $R^2$  of 46.2%.

**Table 5. Pseudo R-Square**

Cox and Snell	0.438
Nagelkerke	0.462
McFadden	0.252

The parameter estimates table (Table 6) summarizes the effect of each predictor. The ratio of the coefficient to its standard error, squared, equals the Wald statistic. In general interpretation terms, parameters with significant negative coefficients decrease the likelihood of that response category with respect to the reference category whereas parameters with positive coefficients have the opposite effect. SPSS considers parameters associated with the last category of each factor as redundant given the intercept term.

**Table 6. Parameter Estimates**

Frequency of online shopping (in the last year) <sup>a</sup>		B	Std. Error	Wald	Df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
More than 6 times	Intercept	-0.293	0.913	0.103	1.000	0.004			
	Experience with internet=More than 6 years	0.693	0.957	0.524	1.000	0.003	2.000	0.306	13.062
	Experience with internet=Less than 4 years	1.025	1.026	0.997	1.000	0.318	2.786	0.373	20.819
	Experience with internet=4 to 6 years	0 <sup>b</sup>			0				
	Experience with online shopping=I purchased more than once from the internet	-0.112	0.203	0.305	1.000		0.894	0.894	0.894
	Experience with online shopping=I only purchased one time from an e-store	0 <sup>b</sup>			0				
	2 or 3 times	Intercept	1.969	1.221	2.599	1.000	0.001		
Experience with internet=More than 6 years		0.827	1.201	0.473	1.000	0.003	2.286	0.217	24.082
Experience with internet=Less than 4 years		0.251	1.345	0.035	1.000	0.001	1.286	0.092	17.954
Experience with internet=4 to 6 years		0 <sup>b</sup>			0				
Experience with online shopping=I purchased more than once from the internet		-1.068	1.822	0.343	1.000	0.146	5.230	0.754	48.567
Experience with online shopping=I only purchased one time from an e-store		0 <sup>b</sup>			0				
a. The reference category is: 4 or 5 times.									
b. This parameter is set to zero because it is redundant.									

This is the multinomial logit estimate for frequency of online shopping of more than 6 times relative to



4-6 times, when the predictor variables in the model are evaluated at zero. For the respondents with an experience of more than 6 years with Internet in general, the logit for using online shopping more than 6 times per year relative to 4-6 years is 0.693.

Regarding the multinomial logit, estimate for a one unit increase in 'Experience with internet=More than 6 years' score for frequency of online shopping of more than 6 times relative to 4-6 times given the other variables in the model are held constant. If a respondent would experience an increase by one point for his increase his 'Experience with internet=More than 6 years' score, the multinomial log-odds would be expected to increase by 0.693 unit while holding all other variables in the model constant.

For frequency of online purchases of more than 6 times relative to 4 - 6 times, the Wald test statistic for predictors measuring respondents experience with Internet (of less than 4 years) and with online shopping (namely, the respondents who purchased more than once from the Internet) that display associated p-values of less than 0.05, we would reject the null hypothesis and conclude that the regression coefficients for these two predictors has been found to be statistically different from zero. In relation to the other predictor that measures the experience with Internet of more than 6 years, the null hypothesis would not be rejected and the regression coefficient for this variable is not statistically different from zero, given the proposed model. These results show that people who have been using the technological development of Internet are more eager and opened to try and use e-commerce on a substantial number of occasions.

Similar overall conclusions can be assessed in relation to the other scores that observe the predictor variables in the model while explaining the scores of respondents' frequency of online shopping of more than 6 times per year relative to 4-6 times and 2-3 online purchases relative to 4-6 times of approaching e-commerce.

Nonetheless, the relationships for frequency of online purchases of 2-3 times relative to 4-6 times, in the last year, the Wald test statistic for predictors measuring respondents experience with Internet of more than 6 years plays a major role in this model, given the value of 0.031 of the significance level, and rejection of the null hypothesis associated with it, implying that the regression coefficient is statistically different from zero.

This result is contradictory with the previous section of the model, when we examined a high frequency (more than 6 times) of online shopping relative to a medium frequency (4-6 times). Another relationship that was deemed important in the model based on the Wald statistic and its p-value (of less than 0.05) that studied the predictor of respondents' experience with online shopping of approaching e-commerce more than once, by concluding that the regression coefficient is statistically different from zero. In relation to the other predictor that measures the experience with Internet of less than 4 years, the null hypothesis would not be rejected and the regression coefficient for this variable is not statistically different from zero, given the proposed model (Wald=0.035; Sig.=0.318).

## **6. Conclusion**

### **6.1. Theoretical Contributions**

Evidently, the Internet has impacted retailing in several ways. Though its impact on search has been widely studied, its relationship of online shopping frequency has not been studied to a great extent in relation to consumer experience with Internet and e-commerce. Sexton, Johnson, and Hignite (2002, pp. 402--410) report that e-commerce consumers with more than three years of online experience were found to be almost twice as likely to make online purchases as those with limited Internet experience.

The future growth of electronic commerce depends largely on how potential customers view the relatively new cyber-retail medium. While web design and security issues continue to play a critical role in shaping the success of online retailing, understanding the demographic profiles of Internet users is equally important for deploying an effective online marketing strategy. This paper takes this stream of literature of e-services to examine the relationship between experience with internet in general, and online shopping, in particular, and frequency of e-purchases, while considering the sex of the respondents as a passive influencer. The relationships for frequency of online purchases of 2-3 times relative to 4-6 times, in the last year, the Wald test statistic for predictors measuring respondents experience with Internet of more than 6 years plays a major role in this model, implying that the regression coefficient is statistically different from zero. This result is contradictory with the previous section of the model, when we examined a high frequency (more than 6 times) of online shopping relative to a medium frequency (4-6 times). These results show that people who have been using the technological development of Internet are more eager and opened to try and use e-commerce on a substantial number of occasions.

## 6.2. Implications for Managers

As Internet use continues to increase, it will become increasingly important to understand the implications of its use not only on search behavior, but also on purchase behavior. Ultimately, firms are interested in what consumers purchase and the factors that play a role in that purchase choice. By using multinomial logistic regression, online companies can create profiles of people who are most likely to be interested in online purchases, based on their previous experience with e-commerce and should develop marketing plans accordingly.

Many online retailers routinely collect data from consumers and prospects. Our findings indicate that it is possible to use these data to assign consumers to observe consumers' experience with Internet and online shopping (especially by tracking their online journey, if they used the 'Help' section on the e-commerce website). Once companies establish the experience level of consumers, they can target specific consumer segments with marketing information about the benefits of online shopping in order to change perception and develop conative constructs (intention to buy, loyalty, and so on). It is therefore possible, for managers to generate specific strategies that would be designed specifically for the experienced or inexperienced target segments. Such differential strategies (due especially to the unique characteristics of Internet, such as interaction and customization) will help enhance the attractiveness of this new retailing medium to current and potential customers.

## 6.3. Limitations of the Study

This study is also limited in a few ways. First, we have categorical survey data and not observational data. This creates limits regarding the choice modeling approaches we may use. While the representativeness of the sample can always be improved, for this research special efforts were made to have high response rates and for the sample to be reflective of the target population. Lastly, we have no data on specific types of products or services that respondents purchased online or intend to buy. This information would make for a more interesting study and may provide additional insights into our results.

Despite the above limitations, there are several ways in which this area of research may be extended. It would be interesting to see if a similar pattern discovered in this research holds for the interaction with other variables, such as age and culture. Also, similar analyses could be conducted on other product categories.

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