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The Study of Impact of Electronic Commerce Activities on Enhancing Customer Equity and Purchase Intention (Case Study: Customer Product Group of Shahrekord Iran Khodro)

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Abstract

Current study entitled "Investigating the impact of E-commerce on enhancing the Purchase Intention and customer value" attempts to investigating the important role of customers in IranKhodro group branches in Chaharmahal va Bakhtiari province of Iran. In this study regarding the research model, there are a major hypothesis (Which is investigating the impact of E-commerce on customer value) and nine lateral hypotheses (That investigate the impact of E-commerce on earned value, relationship value and brand equity, the impact of earned value on purchase intention and customer value, the impact of relationship value on purchase intention and customer value, the impact of brand equity on purchase intention and customer vale and the impact of purchase intention on customer value).

This study can be considered as an applied research from purpose point of view and descriptive-survey with regards to the nature and method (type of correlation). Survey Participants and respondents to the questionnaire were 170 customers of IranKhodro group branches in Chaharmahal va Bakhtiari province of Iran which were selected by simple random sampling method. Because of the customers of IranKhodro are large in number in this province, we just surveyed a sample of them.

In this study, literature search methods were used to gather information related to the study's topic and applied a 32 question questionnaire designed by researcher to collect required data in order to support or reject the hypotheses. The questionnaire was reviewed

and acknowledged by both supervisor and advisor. Alpha coefficient of 0.98 was calculated for the questionnaire. To explain gathered data, this study has applied descriptive statistics such as mean, standard deviation, frequency and percentages. Furthermore, a series of parametric tests such as multivariate linear regressions, t-test, ANOVA, and non-parametric test such as Kolmogorov-Smirnov and Friedman test carried out to examine study hypotheses. Moreover, SPSS and Amos software were used in order to analyse and summarize collected data. Regarding the results of structural equals DF and GFI measures were in good conditions. According to the results all of study's hypotheses were supported. Also the results showed that the ninth lateral hypothesis with the path coefficient of 0.893 has the most impact and the fifth lateral hypothesis with the path coefficient of 0.222 has the least impact on dependent variable. Finally, the results revealed that E-commerce has the significant impact on customer value.

Keywords: E-commerce, Earned Value, Relationship Value, Brand Equity, Purchase Intention and Customer Value

1. Introduction

Nowadays, electronic commerce is considered as one of the main methods of achieving competitive advantage in the companies. On the other hand, customer focus is the main method of organizations' surviving in today's competitive world. It also is considered as one of the important methods of entering global market. Electronic commerce can be helpful in attracting more customers for companies because of several reasons such as decreasing cost, time, and energy in attracting new customers. Indeed, brand and customers work together for creating new products, services, values, and commercial models. However, brands can be offered and create a powerful relationship with customers (Zhang and Leder, 2006). Electronic commerce can be effective in increasing product quality, agility, and accessing customers and markets. On the other hand, it can be helpful in decreasing costs and time of accessing new customers and markets. This is why that many companies attempt to implement electronic commerce in their organizations and use them in action successfully. As a result, the managers will be able to improve their organization's conditions through understanding and applying these methods. On the other hand, many customers attempt to purchase their goods and services through internet because of its different reasons. Convenience, more access to information, and time saving capability are the main reasons of using internet as a channel for purchases (Cho and Lee, 2008). Consumers' purchases can be influenced by different factors. Although many factors can be controlled by marketers, but some of them cannot be controlled by them. Nevertheless, understanding these factors and considering them can help marketers in recognizing their customers' needs (Kim et al., 2010). Nowadays, internet-based marketing communications are developed as a developing instrument of electronic commerce in terms of brand. Indeed, customer and brand communicate with each other without any time and place limitation. As a result, the traditional one-way relationship has been changed to a two-way one. In this method, brands and customers work together for creating and offering new products, services, values, and commercial models. Brand can be offered and achieve a powerful relationship with customers (Kim et al., 2010).

2. Literature review

2.1. The nature of electronic commerce

Nowadays, electronic commerce is considered as the most profitable sector in the industry, economy, and culture. On the other hand, the importance of World Wide Web has been increased in terms of commerce and electronic government so much that many of the efforts and activities cannot be done without electronic commerce and government in the third millennium (Sanayei, 2011). Indeed, globalization and rapid changes are two main characteristics of 21th century especially in terms of technology. It has challenged countries and organizations. In this regard, information and communication technology (ICT) has an important role in countries and organizations' success or failure. The importance of ICT is so much that it can influence and cover many aspects of individual and collective life. Economy and commerce are two main areas that can be influenced by technology. As a result of electronic commerce development, this has been changed (Khodadad et al., 2005). Online purchase is one of the main aspects of technology changes through electronic commerce. Online purchases, however, have changed consumer behavior and not only offer diversified opportunities for customers, but also can be helpful in accessing information and comparing different prices (Coo et al., 2009).

2.2. Electronic marketing mix

This is a key concept that defines techniques and instruments for organizations by which the companies can create value for their customers. Indeed, the concept of marketing mix has been known with emergence of 4P. But Denis et al. have developed it to 7C in terms of electronic markets and products. It includes consumers' ease and convenience, customers' value and benefits, customers' cost, relations and communications with customers, assets management, customer priority, and customer electoral right. In this regard, internet fairs need better services instruments such as rapidly and timely delivery of products, access to support phone, returned goods facilities. Indeed, internet fairs have to work with clicks and chat rooms for communicating with their customers in creating and providing them with a desirable experience from in their interactional buying (Denis et al., 2004).

H1: electronic commerce influences the customers' perceived value significantly.

H2: electronic commerce influences the communication equity among customers significantly.

H3: electronic commerce influences the product brand equity of the customers significantly.

2.2. The identity of value

There are two main complementary approaches in measuring and evaluating value. The first refers to perceived value by products and services customers. When perceived value is more than suggested values by competitors, the organization will be able to maintain its position in the competitive market and also achieve success opportunities. The second refers to measuring value that a customer or a group of customers provide for organization. In other words, the organizations attempt to maintain and promote valuable customers continuously for increasing repurchases motivations among customers (Ounce, 2002).

2.3. Customer equity

The customer is considered as intangible assets. It should be remembered that the value every customer adds to the organization is not limited to the profit or his/her transaction with organization. But it is the total profit that the customer adds to the organization in long-term period (Kamar and George, 2007). This is why that maintaining and promoting long-term

customer-relationship with customers is focused by marketing professionals. Indeed, it has been convinced that customer-value improvement and management influences shareholders' value. This is the factor that reflects long-term performance (Broths et al., 2003). Limon et al. (2004) recognized and presented three types of value:

2.4. Customer perceived value

This refers to the customers' explicit evaluation of a brand's usefulness. Indeed, this refers to the perception of lost things in comparison with obtained things (Woggle et al., 2008). Quality, price, and services are three main effects of perceived value (Limon et al., 2004). The main focus of marketing concept is that achieving organizational goals depends on recognizing customers' needs and effort for satisfying them in a more desirable and effective manner than competitors (Coo et al., 2009).

H4: there is a significant relationship between perceived value and customer equity.

2.5. Brand equity

It refers to a set of brand assets and liabilities (Yan, 2006). Customer-based brand equity (CBBE) improves organizations' competitive position and financial performance. Brand equity consists of five dimensions including brand awareness, brand association, perceived quality, brand loyalty, and other brand assets. Brand equity has several benefits for organization and its producers. For example, higher brand equity of a company leads that the customers behave the brand positively. As a result, the customers repeat their purchase and also introduce that brand to their relatives and friends (word of mouth communications) (Kim et al., 2010). The authors and researchers believe that customer equity is influenced by brand equity. The reason is that the sustainable customer value is influenced by customers' brand identification. They also point out that brand identification is the customers' intangible mental evaluation.

H5: brand equity influences customer equity significantly.

2.6. Relationship equity

The concept of relationship equity refers to this believe and opinion that a brand may be important and valuable, but it is not sufficient for attracting and maintaining customers (Limon et al., 2004). In other words, customers evaluate products implicitly and explicitly, but they may not purchase it in the future for different reasons. For example, change in individual positions and effects of marketing efforts by other companies are the main effective factors on the customers' decisions in future times (Oliver, 1999).

H6: relationship equity influences customer equity significantly.

2.7. Purchase intention

The results of different studies revealed that the customers' purchase intention influences their motivation and preferences in purchasing an especial brand (Kim et al., 2010). Internet (online) purchase is one of the main aspects of technology change through electronic commerce. As a result, such purchases change consumer behavior. It not only offer appropriate purchase opportunities for customers, but also help the customers in accessing information rapidly and comparing with other competitors (Cho et al., 2008). Therefore, discussion on the important effective factors on the customer purchase intention in online environments needs concentration on the information accessibility (Cho et al., 2008). Information access not only increase customers' information about products and services, but also paves the ground for services personalization and convenience in order to preserve the customers and increase products quality predictability. As a result, the customers' information needs will be satisfied

through securing and offering professional information for them. Indeed, this refers to a degree by which the information can be used by customers for predicting their potential satisfaction in the future purchases (Lee, 2005).

H7: perceived value influences customers' purchase intention significantly.

H8: relationship equity influences customers' purchase intention significantly.

H9: brand equity influences customers' purchase intention significantly.

H10: the purchase intention influences customer equity significantly.

3. The conceptual model of study

The conceptual model of study has been presented in figure 1. The relationships between variables of this model refer to the research hypotheses.
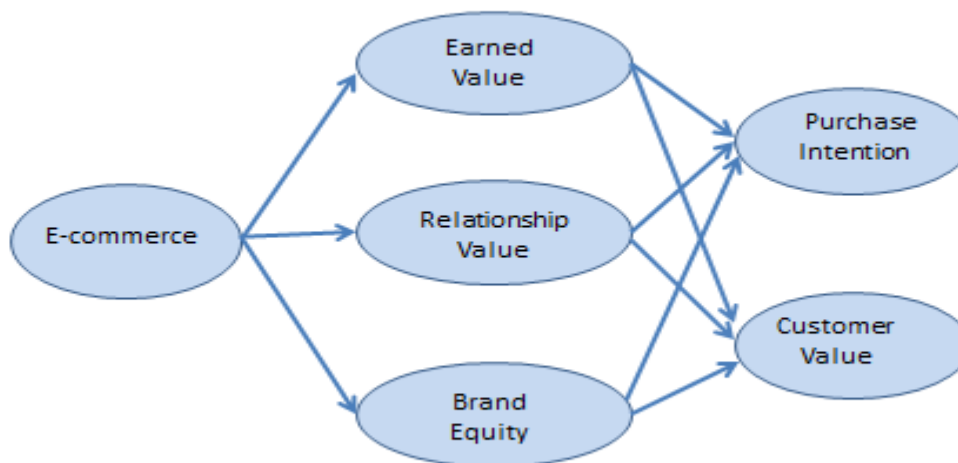

Fig1: The conceptual model of study

4. Research methodology

This study is a descriptive research from methodological view and is a practical one from purpose perspective. Also this study is a correlational research from identity view.

The relationship between research variables will be analyzed based on the research purposes in this study. Also the relationship and its type between independent and dependent variables will be examined in this study. In order to collect the research data, library and field study methods have been followed. This is why that it can be said that this study is a field study based on identity and research methodology. Finally, it should be said that this study is a descriptive-survey study.

5. Statistical population and sample

The statistical population of this The Study of Impact of Electronic commerce activities On Enhancing customer equity And Purchase Intention in customer product group of Chaharmahal

va Bakhtiari Iran Khodro. This population consists of 186 persons. Because this population was as small as that it is not necessary to sampling.

6. Data-collection method

In order to collect the research data for testing the research hypotheses, a questionnaire has been used with 32 items. 4 questions of this questionnaire refer to the demographic variables including gender, age, educational levels, and job experiences and the remaining 32 questions refer to the research variables. About 186 questionnaires have been distributed among respondents that176 of them were submitted by respondents. Unfortunately, 6 questionnaires were not indicated completely by respondents and so 170 questionnaires were used in final analysis.

7. Reliability and validity of the questionnaire

Although the questionnaire has been standardized by its developer, but it is better to examine its reliability and validity. This is why that reliability and validity of this questionnaire has been examined and its results have been indicated in the following section.

7-1. Validity of the questionnaire

Validity refers to this fact the data-collection instrument can measure the research variables. The importance of validity is that the insufficient and inappropriate instrument can make the research and its finding unusable and invalid. Validity of every data-collection instrument can be measured and determined by any expert in that field. In order to this, the academic experts and professors were asked to review the questionnaire and indicate their modifications and corrections.

7-2. Reliability of the questionnaire

When a data-collection instrument is reliable that there is a powerful correlation between scores and observation and actual scores. In order to examine reliability of this questionnaire, Cronbachs' Alpha Coefficient has been used in this study. In order to this, 32 questions of 32primary questionnaires have been entreated to the SPSS and then its coefficient was calculated that is 0.98 . These findings have been indicated in table 1.

Table 1: Scale, frequency of the questions, and Cronbachs' Alpha coefficient of the questions

Variables	Scale type	Number of questions	Cronbachs' Alpha coefficient
E-commerce	Likert six-point	6	0.90
Brand Equity	Likert fuore-point	4	0.86
Earned Value	Likert six-point	6	0.85
Relationship Value	Likert five-point	5	0.88
Customer Value	Likert five-point	5	0.92
Purchase Intention	Likert six-point	6	0.92
Total	Likert teirty three-point	32	0.98

8. Data analysis

8-1. The respondents' demographic characteristics

As indicated in past section, five questions have been developed for describing the respondents' demographic characteristics. As the results of descriptive statistics indicated, 61.8% of the respondents were male and 38.2% of them were female. From age view, 45.3% of the respondents had >25 years old that indicate they are young respondents. About 48.8% of the respondents had academic educational levels (M.Sc.). Finally, the findings showed that 55.9% of the respondents had >2 Internet Shopping . These results have been indicated in table 2.

Table 2: the respondents' demographic characteristics

Variable	Levels	%	Variable	Levels	%
Gender	Male	61,8	Educational levels	Under Diploma	6/5
				Diploma	13/5
				Less than M.Sc.	21/8
	Female	1.4		M.Sc.	48/8
				M.A.	9/4
Age	>25	45/3	Internet Shopping	>2	55/9
	26-30	38/2		2-5	24/1
	31-40	12/9		5-9	7/6
	41-50	1/8		9-15	5/9
	<50	1/8		<15	55/9

8-2. Measurement model

Generally, two main models are tested in the structural equation models. The first is measurement model for latent variables. This model refers to the factor loadings of observed variables for latent variables. The goodness of fit measures has been indicated in the following table for all of the latent variables. As indicated in table 3, all of the goodness of fit indexes is in acceptable and in desirable range.

Table 3: the goodness of fit indexes for structural equation modeling

The fit indices	indexes	Secondary model
	NPAR	19
	DF	2
	P >0.05	0/327
Implicit	CMIN (Chi Square)	2/233
	AGFI >0.9	0/944
	GFI >0.9	0/966
Comparative	TLI > 0.9	0/998
	NFI > 0.9	0/997
	CFI > 0.9	1
Thrifty	PNFI > 0.5	0/133
	PCFI > 0.5	0/133
	RMSEA <0.08	0/026
	CMIN/DF < 0.5	1/116

8-3. Structural model

It is necessary to test the structural model after testing the measurement model. It is possible through structural equation modeling. In order to this, the Amos has been employed. The conceptual model of this study has been showed in figure 2. In order to use Amos, it is should be remembered that γ refers to the effects of external variables on the internal variables and the β refers to the effects of internal variables on each other. In order to examine significance of β and γ, it is necessary to examine t-value of every path. If the t-value is more than 2 and is significant, it can be said that all of the paths are confirmed. Therefore, it can be said that all of the research hypotheses are confirmed and all of the paths are significant
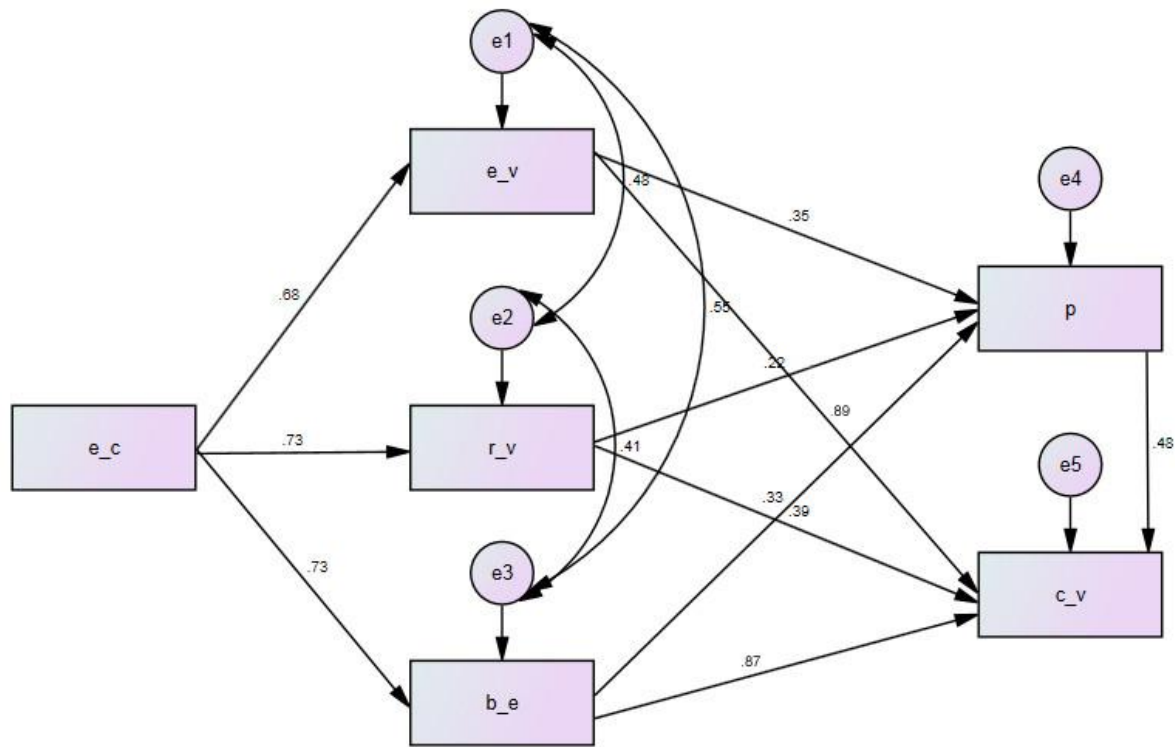
Fig2: the model of study (path analysis model)

The coefficient of path can be examined through P-value. If the value is less than 0.05, the coefficients are acceptable and vice versa. Therefore, it can be said that all of the research hypotheses are confirmed. The results of examining direct and indirect effects of independent variables on dependent variable have been indicated in table 4.

Table 4. Examining direct and indirect effects of independent variables on dependent variable

	Secondary hypotheses	Standard coefficient	Standard error	C.R. Critical ratio	p-value	Result
E-commerce ---> Earned Value	H1	0/675	0/049	11/901	***	Is confirmed
E-commerce ---> Brand Equity	H2	0/734	0/048	14/035	***	Is confirmed
E-commerce---> Relationship Value	H3	0/725	0/052	13/7	***	Is confirmed
Earned Value ---> Customer Value	H4	0/839	0/229	6/598	***	Is confirmed
Earned Value ---> Purchase Intention	H5	0/335	0/080	4/786	***	Is confirmed
Relationship Value ---> Customer Value	H6	0/386	0/067	5/982	***	Is confirmed
Relationship Value ---> Purchase Intention	H7	0/222	0/065	3/326	0/001	Is confirmed
Brand Equity ---> Customer Value	H8	0/868	0/231	6/520	***	Is confirmed
Brand Equity ---> Purchase Intention	H9	0/327	0/074	4/471	***	Is confirmed
Purchase Intention ---> Customer Value	H10	0/483	0/077	6/866	***	Is confirmed
***P is less than 0.001						

In order to examine the direct and indirect effects of independent variables on the dependent variable, it is necessary to examine the total, direct, and indirect effects for internal variables.

Table 5: total, direct, and indirect effects

Dependent variable	Independent variable	Direct effect	Indirect effect	Total effect
Purchase Intention	Earned Value	0/36	0	0/36
	Relationship Value	0/22	0	0/22
	Brand Equity	0/33	0	0/33
	E-commerce	0	0/68×0/36	0/24
	E-commerce	0	0/73×0/22	0/16
	E-commerce	0	0/73×0/33	0/24
customer equity	Earned Value	0/9	0	0/9
	Relationship Value	0/39	0	0/39
	Brand Equity	0/87	0	0/87
	E-commerce	0	0/68×0/9	0/61
	E-commerce	0	0/73 ×0/39	0/28
	E-commerce	0	0/73×0/87	0/63
	Purchase Intention	0/48	0	0/48

9.   Conclusion and empirical suggestions

The results of structural equation modeling revealed that there is a significant positive relationship between electronic commerce and brand equity; perceived value and customer purchase intention; relationship equity and customer purchase intention; customer purchase intention and customer equity; brand equity and customer purchase intention; brand equity and customer equity; customer purchase intention and customer equity. Based on the results of this study, the following empirical suggestions can be offered. With regard to this fact that the involvement of brand in the electronic commerce as a marketing effort is done for creating relationship with customers and increasing company's profit, it is expected that electronic commerce influences customer equity motivations positively. Therefore, preparation and implementation of appropriate data bases and facilities can be effective in customer convenience. On the other hand, investment in advertisement can be effective in increasing customers' awareness in order to create a positive attitude in the customers toward online purchase and electronic commerce. For this purpose, officers and managers of Iran Khodro Company have to attempt to implement especial incentive policies for perceiving new ideas from their customers. The use of up-to-date and efficient services, internet communications

speed, and responsibility and accountability are the main effective methods in achieving quality purposes, but also create a powerful image from that brand in the customers' mind. On the other hand, agencies of Iran Khodro should do their commitments of their contracts with customers in the internet purchases. It is possible to recall advertisements in terms of especial services and creating ongoing relationship with in order to preserve and attract new customers. The customers' convenience access to the information includes data about the results of productive operational efforts, competitive conditions, modern technologies, job methods, and ideas for company's performance improvement. On the other hand, the companies should publish their reports on past performance such as sale and brand reports in order to inform their customers. Also it is suggested that the company use strong protection and IT security systems such as SSL for this purpose. Providing an image for company as an economic organization is one of the main methods that can be used by Iran Khodro Company for creating customer retention leverages. On the other hand, it is necessary that the company offer new products with differentiated image for attracting new customers. Offering the functional, affective, and self-oriented benefits that can be effective in creating values for customers through brand is a reliable method in this area. It is should be remembered that affective benefits are positive senses that the customers have toward brand in terms of ownership experiences and brand using. Indeed, much of the functional benefits have a set of senses.

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