

**THE EFFECTS OF RISK AND BENEFIT PERCEPTIONS ON ATTITUDES OF
CUSTOMERS TOWARDS B2C WEB SITES**

Yrd. Doç. Dr. Mustafa Emre Civelek
**Istanbul Commerce University, Business Administration Faculty, International
Logistics Department**

Abstract

Customers have risk perception and benefit perception regarding online shopping. These perceptions are influential on their attitudes towards the online shops. The aim of this research is to clarify the effects of risk and benefit perceptions on attitude toward site and net benefit perceptions of the customers. Risk perception is composed of product risk and financial risk dimension. Negative effects of product risk and financial risk on attitude toward site were found statistically significant. Benefit perception is composed of shopping flexibility and product selection. Positive effects of shopping flexibility and product selection on attitude toward site were found statistically significant. Positive effect of attitude toward site on net benefit was found statistically significant. Important finding of this paper is that perception of the customers regarding internet play a role in the attitude towards B2C web sites.

Keywords: *B2C, Net Benefit, Attitude Towards Site, Risk Perception, Benefit Perception*

**RİSK VE FAYDA ALGILARININ MÜŞTERİLERİN B2C WEB SİTELERİNE
KARŞI TUTUMLARI ÜZERİNE ETKİLERİ**

Özet

Müşterilerin internet üzerinden alışveriş ile ilgili risk ve fayda algıları bulunmaktadır. Bu algıları onların çevrimiçi mağazalara karşı oluşturdukları tutumları üzerinde etkilidir. Bu araştırmanın amacı müşterilerin siteye karşı tutumları ve fayda algıları üzerinde risk ve fayda algılarının etkisinin açıklanmasıdır. Risk algısı ürün riski ve finansal risk boyutlarından oluşmaktadır. Ürün riski ve finansal riskin siteye karşı tutum üzerinde negatif etkisi olduğu istatistiksel olarak anlamlı bulunmuştur. Fayda algısı alışverişte zaman ve mekân esnekliği ile ürün çeşitliliği boyutlarından oluşmaktadır. Alışverişte zaman ve mekân esnekliği ile ürün çeşitliliğinin siteye karşı tutum üzerinde pozitif etkisi olduğu istatistiksel olarak anlamlı bulunmuştur. Siteye karşı tutumun net fayda üzerine etkisi istatistiksel olarak anlamlı bulunmuştur. Bu araştırmanın önemli bulgusu müşterilerin internet ile ilgili algılarının B2C sitelerine karşı geliştirdikleri tutumlarında rol oynamasıdır.

Anahtar Kelimeler: *B2C, Net Fayda, Siteye Karşı Tutum, Risk Algısı, Fayda Algısı*

Introduction

The number of Internet users is increasing rapidly every year. As a result, the number of people shopping on the internet is also increasing. But the vast majority of Internet users still do not shop online. Considering this situation, it is seen that there is a great potential on the internet especially in B2C field. In order to make use of this potential, it is necessary to determine the factors that affect the attitudes of internet users towards online shops and their hesitations against online shopping. The most important aspect of an electronic commerce business is its website. The success of the website is the most important influence that affects the success of the business. The most important factor that determines the success of a website is that the site is preferred by the customers among other competing sites. In this preference, the determining factor is the attitude of the customer. This attitude is the result of the shopping experience of the customer. As a result, the customer has a net benefit perception about the site. There are prejudices and perceptions about shopping on the Internet, regardless of the web site used by Internet users. These are risk perception and benefit perception. These perceptions have appeared over a long period of time and will change over time. Attitudes towards the website are directly related to the quality of the service and system that the web site provides. But it can be said that users' prejudices about shopping from the internet are influential on their attitudes towards the site. The aim of this research is to demonstrate this relationship and to test it statistically. In order to clarify the success criteria of the websites of B2C electronic commerce businesses, a conceptual model has been proposed. The proposed model is thought to contribute to electronic commerce literature.

1. Background

Risk perception consists of two dimensions as product risk and financial risk. The product risk perception refers to the perception that the consumer already has about the product that he has not bought yet and that it is related to shopping on the internet. This dimension is not related to the site, but rather refers to the general perception of shopping on the internet that consumers have before shopping on any site. The Product risk perception is mainly caused by the fact that the consumer cannot have a close look at the product during shopping on the internet. The financial risk perception, which is another sub-dimension of the risk perception dimension, refers to the general perception of the security of the consumers who are shopping on the internet without any site specificity. Generally referring to, consumers are disturbed by sharing their credit card information and personal information on the internet. Belief of consumer that online shop may not send product is one of the factors that cause this problem (Çemberci, Sözer, & Civelek, 2013).

Benefit perceptions consists of two dimensions, shopping flexibility and product selection. Shopping flexibility refers to general perception regardless of any site. This perception is about the users think that they can shop on internet whenever and wherever they want. Product selection dimension refers to the general perception that users are more independent of shopping on the Internet than in any other shopping area, and that product variety is higher than in classical shops (Çemberci, Sözer, & Civelek, 2013). Attitude toward the site dimension is defined by Chen et al. Based on the Technology Acceptance model proposed by Wixom and Todd: Attitude toward the site refers to the intention of using the site and shopping on the site (Wixom & Todd, 2005). As this research is based on B2C sites, attitude toward the site dimension must be understood as the customers' intention to make purchases from the site (Chen, Rungruengsamrit, Rajkumar, & Yen, 2013). The net benefit is defined by Wu and Wang as the perceived benefit of the site generated by the user (Wu & Wang, 2006). According to Seddon, the net benefit relates to the value judgments of the users. It is essentially the difference between the cost and the user's future benefit expectation (Seddon, 1997).

2. Hypothesis Development and Conceptual Model

2.1. The Relationship between Product Risk and Attitude Toward Site

One of the factors which are playing role on the purchase decision of the consumers through internet is risk perception (Civelek & Sözer, 2003). Risk perception consists of product and financial risk perceptions (Bianchi & Andrews, 2012). Attitude toward site refers to behavioural intention to use the web site (Chen, Rungruengsamrit, Rajkumar, & Yen, 2013). There is negative relation between product risk and intention to shop online (Çemberci, Sözer, & Civelek, 2013). Therefore, the following hypothesis is developed:

H₁: Product Risk affects Attitude Toward Site negatively.

2.2. The Relationship between Financial Risk and Attitude Toward Site

Financial risk has an effect on the purchase decision of the customers on internet (Civelek & Sözer, 2003). There is negative relation between financial risk and intention to shop online (Çemberci, Sözer, & Civelek, 2013). Therefore, the following hypothesis is developed:

H₂: Financial Risk affects Attitude Toward Site negatively.

2.3. The Relationship between Shopping Flexibility and Attitude Toward Site

There is a relation between benefit perception and online shopping intention (Chen-Yu & Seock, 2002). Benefit perception composed of shopping flexibility and product selection (Szymanski & Hise, 2000). Shopping flexibility positively affects intention to shop online (Çemberci, Sözer, & Civelek, 2013). Therefore, the following hypothesis is developed:

H₃: Shopping Flexibility affects Attitude Toward Site positively.

2.4. The Relationship between Product Selection and Attitude Toward Site

Product selection has positive effect on the purchase decision of the customers on internet (Civelek & Sözer, 2003). Product selection positively affects intention to shop online (Çemberci, Sözer, & Civelek, 2013). Therefore, the following hypothesis is developed:

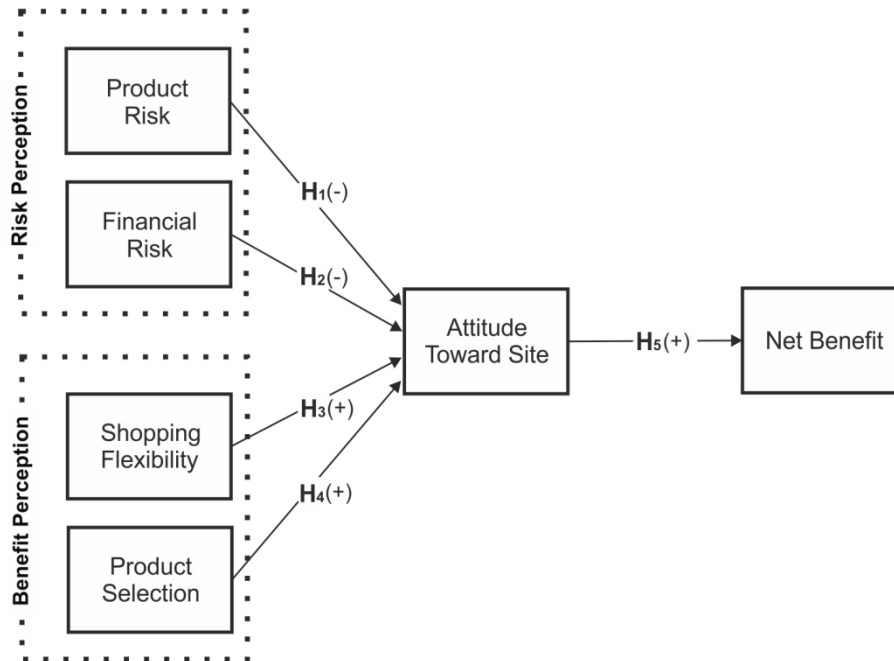
H₄: Product Selection affects Attitude Toward Site positively.

2.5. The Relationship between Attitude Toward Site and Net Benefit

Causal relationship between intention to use and net benefit was proposed in the DeLone and McLean model (DeLone & McLean, 2003). In the information success model net benefit dimension was included as dependent variable (Petter, DeLone, & McLean, 2008). Therefore, the following hypothesis is developed:

H₅: Attitude Toward Site affects Net Benefit positively.

Figure 1. Conceptual Model



3. Research Methods

In this research quantitative data was used and five point Likert scale survey was conducted. Firstly the validity and reliability of the scales were determined. Confirmatory factor analysis (CFA) was used to analysis of the convergent validity. In order to assess discriminant validity, average variance extracted values (AVE) were calculated. Cronbach alpha and composite reliability (CR) values were found to analyse the reliability of the scales. Structural equation model which is a multi-variable statistical method was used to test the hypotheses put forward in the conceptual model. Structural equation model was used due to clarifying direct and indirect relationships between variables in a single model (Meydan & Şeşen, 2011). This method is good for eliminating measurement errors (Byrne, 2010). AMOS and SPSS statistics programs were used for analyses.

3.1 Measures and Sampling

The scales adopted from prior studies were used for the measurement of dimensions. Six dimensions was measured by using 5 point Likert scales ranging from strongly disagree to strongly agree. The scale developed by Chen et al. (2013) was used for Attitude Toward Site (Chen, Rungruengsamrit, Rajkumar, & Yen, 2013). The scale which was developed by Wu and Wang (2006) was used for Net Benefit dimension (Wu & Wang, 2006). The scale which was developed by Forsythe et al. (2006) was used for product risk, financial risk, shopping flexibility and product selection dimensions (Forsythe, Liu, Shannon, & Gardner, 2006).

The data was collected through online survey. The sample of the research consists of 407 people who purchase goods or services from e-commerce web sites. Frequency of the demographic variables are as follows: 54.8 % of the respondents are female, 40.2% of them have university degree and 41.5% of them are between 25-35 years old.

3.2 Construct Validity and Reliability

After the data purification process 17 items were included in the confirmatory factor analysis. Confirmatory factor analysis was performed on the scales by using AMOS 23 for assessing convergent validity (Anderson & Gerbing, 1988). CFA results indicated that the model was an adequate fit: $\chi^2/DF = 2.805$, CFI=0.950, IFI=0.950, RMSEA= 0.067. CMIN is the likelihood ratio chi-square test. CMIN/DF ratio is under the threshold level of 3 (Bagozzi & Yi, 1990). This shows the conformity of the initial model and acquired model. Furthermore, other fit indices exceeded their recommended thresholds.

Table 1. Confirmatory Factor Analysis Results

Variables	Items	Standardized Factor Loads	Unstandardized Factor Loads
Product Risk	PR3.3	0.884	1
	PR2.2	0.745	0.838
Financial Risk	FR8.5	0.736	1
	FR7.4	1.075	1.435
Shopping Flexibility	SF12.4	0.707	1
	SF11.3	0.911	1.050
	SF10.2	0.873	1.100
	SF9.1	0.793	0.974
Product Selection	PS14.2	0.782	1
	PS15.3	0.796	0.917
Attitude Toward Site	AT53.5	0.683	1
	AT52.4	0.696	1.102
	AT51.3	0.879	1.209
	AT50.2	0.774	1.177
Net Benefit	NB61.4	0.829	1
	NB60.3	0.679	0.998
	NB58.1	0.572	0.788

p<0.05 for all items

Confirmatory Factor Analysis Results are shown in Table 1 and standardized factor loads of each item are larger than 0.5 and significant. These values show the convergent validity of the scales. To assess discriminant validity, average variance extracted values were calculated. Results are close to or beyond the threshold level (i.e. 0.5) (Byrne, 2010). Reliability of each construct individually calculated. Composite reliability and Cronbach α values are close to or beyond the threshold level (i.e. 0.7) (Fornell & Larcker, 1981). Descriptive statistics of the constructs, composite reliabilities, average variance extracted values, Cronbach α values and Pearson correlation coefficients are shown in Table 2. Additionally, in Table 2. The diagonals indicate the square root of AVE values of each variable.

Table 2. Construct Descriptives, Correlation and Reliability

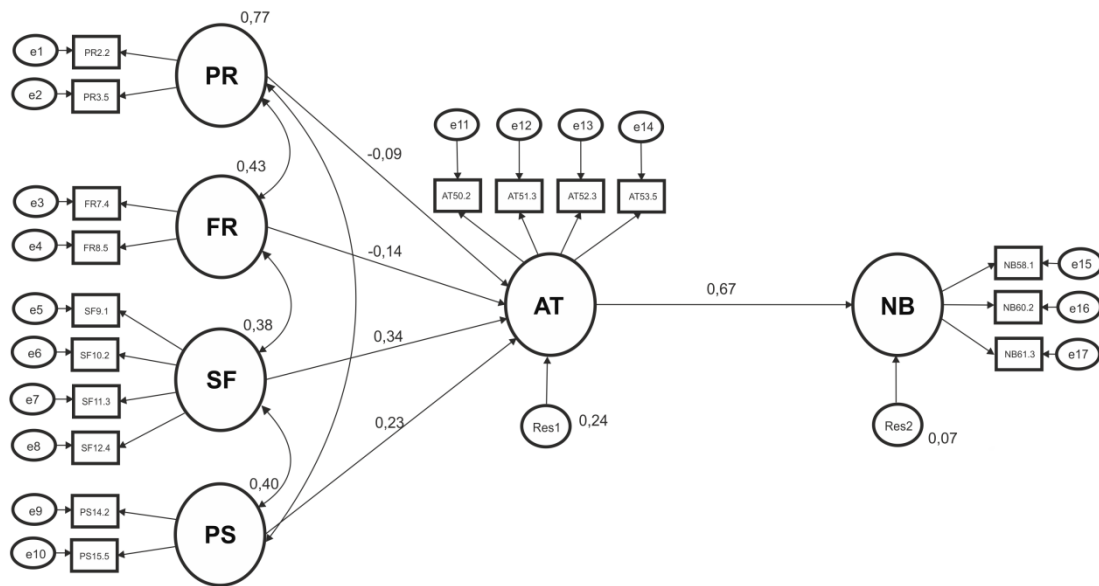
Variables	1	2	3	4	5	6
1.Product Risk	(.817)					
2.Financial Risk	.177*	(.921)				
3.Shopping Flexibility	-.254*	.057	(.824)			
4.Product Selection	-.315*	.019	.634*	(.789)		
5.Attitude Toward Site	-.259*	-.065	.475*	.436*	(.762)	
6. Net Benefit	-.226*	-.086	.474*	.405*	.651*	(.701)
Composite reliability	.800	.916	.894	.767	.846	.739
Average variance ext.	.668	.849	.680	.623	.581	.492
Cronbach α	.794	.883	.886	.764	.848	.733

*p < 0.05

3.3 Test of Hypotheses

Conceptual model was analyzed by using AMOS 23. The absolute and relative goodness-of-fit indices of the structural model were evaluated. In this analysis, the following indices were used: The absolute goodness of fit indices are the root mean square error of approximation (RMSEA) and the χ^2 goodness of fit statistic. The relative goodness of fit indices are the comparative fit index (CFI) and the incremental fit index (IFI).

Figure 2. Results of SEM Analysis



Note: $\chi^2/DF = 2.725$, CFI = 0.950, IFI = 0.950, RMSEA = 0.065

As shown in Figure 2, structural model fit indices adequately indicate model fit. χ^2/DF value is 2.725 and under threshold level (i.e. under 3). CFI and IFI values are 0.950 and 0.950 respectively. RMSEA is 0.065. As shown in Table 3, when H_1 , H_2 , H_3 , H_4 and H_5 are accepted. These results of the hypothesis tests indicate significant negative relationship between product risk and attitude toward site and between financial risk and attitude toward site.

Table 3. Hypotheses Test Results

Relationships	Standardized Coefficients	Unstandardized Coefficients
Product Risk → Attitude Toward Site	-0.125*	-0.088*
Financial Risk → Attitude Toward Site	-0.145*	-0.138*
Shopping Flexibility → Attitude Toward Site	0.339*	0.340*
Product Selection → Attitude Toward Site	0.240*	0.235*
Attitude Toward Site → Net Benefit	0.849*	0.668*

*p < 0.05

These results of the hypothesis tests indicate significant positive relationship between shopping flexibility and attitude toward site and between product selection and attitude toward site. And also these results of the hypothesis tests indicate significant positive relationship between attitude toward site and net benefit.

Conclusion

Negative effects of product risk and financial risk on attitude toward site were found statistically significant. Benefit perception is composed of shopping flexibility and product selection. Positive effects of shopping flexibility and product selection on attitude toward site were found statistically significant. Positive effect of attitude toward site on net benefit was found statistically significant. Important finding of this paper is that perception of the customers regarding internet play a role in the attitude towards B2C web sites. The managerial contribution of the findings for the web site managers is to provide a better understanding of the shopping experience of their customers. Scientific contribution is to better understand the relationship among the dimensions related to web site success.

References

- Anderson, J., & Gerbing, D. (1988). Structural Equation Modelling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin*.
- Bagozzi, R. P., & Yi, Y. (1990). Assessing Method Variance in Multitrait-Multimethod Matrices: The Case of Self-reported Affect and Perceptions at Work. *Journal of Applied Psychology*, 75(1), 547-560.
- Bianchi, C., & Andrews, L. (2012). Risk, trust, and consumer online purchasing behaviour: a Chilean. *International Marketing Review*, 29(3), 253-275.
- Byrne, B. M. (2010). *Structural Equation Modeling with AMOS*. New York: Routledge Taylor & Francis Group.
- Chen, J., Rungruengsamrit, D., Rajkumar, T., & Yen, D. (2013). Success of Electronic Web Sites: A Comparative Study in Two Countries. *Information & Management*, 50(6), 344-355.
- Chen-Yu, J., & Seock, Y. (2002). Adolescents' clothing purchase motivations, information. *Family and Consumer Sciences Research Journal*, 31(1), 50-77.
- Civelek, M. E., & Sözer, E. G. (2003). *İnternet Ticareti: Yeni EkoSosyal Sistem ve Ticaret Noktaları*. İstanbul: Beta Basım.
- Çemberci, M., Sözer, E., & Civelek, M. (2013). The Determinants of Intention to Shop Online and Effects of Brand Equity on e-Store Patronage. *The Determinants of Intention to Shop OnlinJournal of Global Strategic Management*, 13(1), 125-145.
- Delone, W. H., & McLean, E. (2003). The DeLone and McLean Model of Information Systems Success: a Ten-Year Update. *Journal of Management Information System*, 19(4), 9-30.
- Fornell, C., & Larcker, D. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39-50.
- Forsythe, S., Liu, C., Shannon, D., & Gardner, L. (2006). Development of a Scale to Measure the Perceived Benefits and Risks of Online Shopping. *Journal of Interactive Marketing*, 20(2), 55-75.
- Petter, S., DeLone, W., & McLean, E. (2008). Measuring Information Systems Success: Models, Dimensions, Measures, and Interrelationships. *European Journal of Information Systems*, 3(17), 236-263.
- Seddon, P. B. (1997). A Respecification and Extension of the DeLone and McLean Model of IS Success. *Information Systems Research*, 8(3), 240-253.
- Szymanski, D., & Hise, R. (2000). E-satisfaction an initial examination. *Journal of Retailing*, 76(3), 309-322.

**7th International Conference of Strategic Research on Social Science and Education
(ICoSReSSE)**

13-15 October, 2017 • Titanic Deluxe Belek/Antalya/Turkey

Wixom, B. H., & Todd, P. (2005). A Theoretical Integration of User Satisfaction and Technology Acceptance. *Information Systems Research*, 16(1), 85-102.

Wu, J.-H. W., & Wang, Y.-M. (2006). Measuring KMS Success: A Respecification of the DeLone and McLean's Model. *Information & Management*, 43, 728-739.