Investigating different factors influencing on customer retention in e-business

Mohammad Hassan Mohebian Araghi*

Department of Management and Social Sciences, North Tehran Branch, Islamic Azad University, Tehran, Iran

ABSTRACT

This paper presents an empirical investigation to study the impact of brand value, service quality, customer trust and internet knowledge on customer retention. The study adopts a questionnaire originally developed by Jurisic and Azevedo (2011) [Jurisic, B., & Azevedo, A. (2011). Building customer–brand relationships in the mobile communications market: The role of brand tribalism and brand reputation. Journal of Brand Management, 18(4), 349-366.] and distributes it among some people who purchased LED television from a well-known Korean manufacturer in city of Tehran, Iran. Using structural equation modeling, the study has determined positive effects of brand value (β = 0.377, Sig. = 0.0001), service quality (β = 0.204, Sig. = 0.0001) and internet knowledge (β = 0.280, Sig. = 0.0001). However, the study does not find any statistical evidence to confirm the effects of customer trust on customer retention.

1. Introduction

During the past few years, there have been extreme competitions among producers of technology manufacturers. These businesses attempt to build strong brands (Aaker, 2012). They try to develop new products and services and increase the features of their devices to attract customers (Kelle et al., 2011). There are literally many studies devoted on factors influencing on market development (Kapferer, 2012). Jurisic and Azevedo (2011) outlined the Portuguese mobile communications market from the relationship-marketing point of view, and reviewed the antecedents of customer–brand relationships. They reported that customers have different levels of access to the same level of behavior towards their brand, reputation, tribalism or satisfaction with any particular brand. Walker and Johnson (2006) tried to find people use, or choose not to use, three kinds of technology-enabled service including internet banking, telephone bill-paying, and internet shopping services. They reported that willingness to apply the internet and telephone for financial and shopping services was impacted by the individual sense of personal capacity or capability to engage with these service systems, the perceived risks and relative benefits associated with their implementation, and the extent to which contact with service personnel was preferred or deemed necessity. Bearden and Etzel (1982)
differenced in reference group effect between publicly and privately consumed products and luxuries and necessities.

2. The proposed study

This paper presents the effects of various factors on customer retention in e-business. The study adopts the framework earlier developed by Jurisic and Azevedo (2011) with the following structure,

![Fig. 1. The proposed study](image)

Based on the framework of Fig. 1, the following four hypotheses can be derived.

1. Internet knowledge influences positively on e-business customer retention.
2. Service quality influences positively on e-business customer retention.
3. Customer trust influences positively on e-business customer retention.
4. Brand value influences positively on e-business customer retention.

The study has been executed among regular customers who purchase LED television supplied by a Korean manufacturer named LG in city of Tehran, Iran. The questionnaire consists of 67 questions where 8 questions are associated with customer trust, 15 questions are related to brand value, 22 questions are devoted to service quality, 12 questions are related to internet knowledge and 10 questions are assigned to customer retention. The sample size is calculated as follows,

\[ N = \frac{Z_{\alpha/2}^2 \times p \times q}{\varepsilon^2}, \]

where \( N \) is the sample size, \( p = 1 - q \) represents the probability, \( z_{\alpha/2} \) is CDF of normal distribution and finally \( \varepsilon \) is the error term. For our study we assume \( p = 0.5, z_{\alpha/2} = 1.96 \) and \( \varepsilon=0.05 \), the number of sample size is calculated as \( N=384 \). In our survey, 43% of the participants were female and 57% of them were male. In addition, Fig. 2 demonstrates the summary of personal characteristics of the participants.

![Fig. 2. Personal characteristics of the participants](image)
Based on the information of Fig. 2, most participants were middle-aged people with good university education. Conbach alphas have been calculated for customer trust, brand value, service quality, internet knowledge and customer retention as 0.767, 0.818, 0.741, 0.733 and 0.792, respectively. These are well above the minimum acceptable level of 0.70, which validates the overall questionnaire of the survey. Next, we verify the normality of various variables of the survey using Kolmogorov–Smirnov test and Table 1 shows details of our findings.

### Table 1
The summary of Kolmogorov–Smirnov test

| Variable          | KS value | Sig.  | Result                  |
|-------------------|----------|-------|-------------------------|
| Customer trust    | 1.242    | 0.092 | Normally distributed    |
| Brand value       | 0.858    | 0.453 | Normally distributed    |
| Service quality   | 1.196    | 0.115 | Normally distributed    |
| Internet knowledge| 0.672    | 0.757 | Normally distributed    |
| Customer retention| 0.718    | 0.680 | Normally distributed    |

As we can observe from the results of Table 1, all components of the survey are normally distributed. The proposed study of this paper uses structural equation modeling to examine different hypotheses of the survey. The average variance extracted (AVE) for customer trust, brand value, service quality, internet knowledge and customer retention are 0.581, 0.599, 0.643, 0.571 and 0.587, respectively. These values are within acceptable limits and we therefore use the results of structural equation modeling to verify the hypotheses of the survey.

### 3. The results

In this section, we present details of our findings on testing various hypotheses of the survey. Fig. 3 shows details of our investigation.

![Fig. 3. The results of t-value for the implementation of structural equation modeling](image)

As we can see from the results of Fig. 3, all components preserve significant t-value statistics. Table 2 demonstrates the results of coefficients as well as t-value statistics.
Table 2
The results of testing various hypotheses of the survey

| Hypothesis                  | β   | t-value | Sig.     | Result   |
|-----------------------------|-----|---------|----------|----------|
| Brand value → Customer retention | 0.377 | 3.933  | <0.001   | Confirmed|
| Service quality → Customer retention | 0.204 | 4.197  | <0.001   | Confirmed|
| Customer trust → Customer retention | 0.076 | 0.982  | >0.05    | Rejected |
| Internet knowledge → Customer retention | 0.280 | 3.863  | <0.001   | Confirmed|

4. Discussion and conclusion

In this paper, we have presented an empirical investigation to study the impact of brand value, service quality, customer trust and internet knowledge on customer retention. The study has adopted a questionnaire and distributed among some people who purchased LED television from a well-known Korean manufacturer. Using structural equation modeling, the study has determined positive effects of brand value ($\beta = 0.377$, Sig. = 0.0001), service quality ($\beta = 0.204$, Sig. = 0.0001) and internet knowledge ($\beta = 0.280$, Sig. = 0.0001). However, the study did not find any statistical evidence to confirm the effects of customer trust on customer retention.

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References

Aaker, D. (2012). *Building strong brands*. Simon and Schuster.
Bearden, W. O., & Etzel, M. J. (1982). Reference group influence on product and brand purchase decisions. *Journal of consumer research*, 9(2), 183-194.
Jurisic, B., & Azevedo, A. (2011). Building customer–brand relationships in the mobile communications market: The role of brand tribalism and brand reputation. *Journal of Brand Management*, 18(4), 349-366.
Kapferer, J. N. (2012). *The new strategic brand management: Advanced insights and strategic thinking*. Kogan Page Publishers.
Keller, K. L., Parameswaran, M. G., & Jacob, I. (2011). *Strategic brand management: Building, measuring, and managing brand equity*. Pearson Education India.
Walker, R. H., & Johnson, L. W. (2006). Why consumers use and do not use technology-enabled services. *Journal of Services Marketing*, 20(2), 125-135.