The Impact of Application of Electronic Commerce on the Customer Relationship Management (Case Study)

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Abstract: This research aims to investigate the impact of application of e-commerce on the customer relationship management in “Expansion of Collaboration Bank” in East Azarbaijan. The method of the research is descriptive and the data were collected by questionnaire in order to investigate the effect of e-commerce on the customer satisfaction, loyalty and trust. The statistical population involves all managers, stuff and customers of Expansion of Collaboration Bank in East Azarbaijan. 100 people of the statistical population were selected by random sampling method and 90 people completed the questionnaires. Validity and reliability of the questionnaire were tested by Cronbach alpha technique and contextual method respectively. Software spss20 and statistical regression were employed for analysis of the data. The results show that e-commerce affects on the customer relationship management in Expansion of Collaboration Bank. According to results of hypotheses 1, 2 and 3, e-commerce is most effective on satisfaction, loyalty and trust of the customers.

Key words: e-commerce, Customer Relationship Management, Customer Satisfaction, Customer Loyalty.

INTRODUCTION

e-commerce and e-business are obvious affairs in Digital Economics. e-commerce is one of the main issues of recent years considered by the researchers, authors and organizations. e-commerce is a broad scope involving purchase at home, banking at home, purchase of stock, tendering, collaboration and etc (Turban, 2005). In e-commerce, attraction, trust, satisfaction and preservation of the customer are important for organizations. e-commerce involves following sub branches of e-business, e-marketing and Smart cards. In literature of the research, trust, satisfaction and loyalty of the customers of “Expansion of Collaboration Bank” are considered in customer relationship management (Cho & Park, 2001). According to the importance of the customer as a main element of survival of an organization and emphasis of CRM on this element, improvement of services, customer satisfaction, reduction of expenditure and relationship with millions customers can be considered as necessities of application of CRM in an organization. This research aims to investigate which variables of the customer trust, satisfaction and loyalty affects significantly on e-commerce. The importance of this issue is shown by competition among banks for attraction and preservation of Expansion of Collaboration Bank customers in East Azarbaijan.

2-Review of Literature:

2-1) The Concept of e-commerce:

Chaffy (2002) defines e-commerce from different viewpoints:

- Communication: transferring of information, goods, services and payment by electronic devices;
- being on time: on time goods purchase;
- service offering: tools that reduce cost and increase speed and quality;
- Commercial process: on time purchasing of information and goods.

According to Rayport & Jaworski (2001), e-commerce involves transfer of technology among individuals and inner organization electronic activities that facilitates such affairs. e-commerce reduces costs of marketing (Bruno et al, 2008). By emphasize on the government, business and consumer in transaction by internet, Table 1 involves all imaginable e-commerce conduction. Among nine models shown by this Table, only models B2C and B2B depict electronic commerce. Among CRM models, model B2B affects significantly on CRM and it leads to achieving values like loyalty and satisfaction in examination of customers (Jeans, 2010).
Table 1: e-commerce models (KUMAR, 2012).

<table>
<thead>
<tr>
<th>Government</th>
<th>Business</th>
<th>Consumer</th>
</tr>
</thead>
<tbody>
<tr>
<td>G2G</td>
<td>G2B</td>
<td>G2C</td>
</tr>
<tr>
<td>C2G</td>
<td>C2B</td>
<td>C2C</td>
</tr>
</tbody>
</table>

2-2-Concept of Customer Relationship Management:

Customer relationship management (CRM) dates to primary period of shaping human civilization. In 1980, database marketing was changed especially in order to form service provider groups for establishing relationship with customers and using customer's information for targeting and implementation of the commercial programs (Sepdes & Smit, 1992; Robertz, 2001). Different definitions have been offered for CRM like management concepts:

CRM: multi-dimensional strategy that helps to comprehension, prediction and meeting needs of customers. CRM involves grouping of customers and providing proportionate and different services. CRM consists of customer, relationship and management (KUMAR, 2012, 41). CRM is one of the main concerns of organization. The organizations seek effective relationship for promotion of organizational value by enhancing of quality of relationship with more advantages (Bahro, 2012, 500). The factors affecting the CRM are as follows:

2-2-1-Customer Satisfaction:

Customers are capital and resources of a company. Customer satisfaction leads to increase of benefit market share and improve of quality. Customer satisfaction model involves four steps: identification of customer, recognition of needs and expectation of customer, examination of customer comprehension and implementation of plans. Implementation of the customer satisfaction measuring system is considered as the main indicator of improvement of performance necessary in today organization especially in banking industry. Different models and methods have been offered for measuring customers satisfaction in banking industry; in Toepfer model, customer and customers satisfaction indicators are quality of services, service offering cost, services availability, services characteristics and services management (Toepfer, 1999, 302).

2-2-2-Customer Trust:

Trust means acceptance of validity of an individual and system based on the results. This kind of trust is belief in other party. By improvement of the relationship with a company, trust and customer relationship is increased. In a virtual organization, trust is the main challenge for the management. Customer trust is affected by different factors and variables. In order to provide the research conceptual framework, a new model has been offered for the first time with three criteria by using e-commerce specialists viewpoints.

2-2-3-Customer Loyalty:

Customer loyalty is an inner commitment leading to repurchase or reuse of a service or product. Marketing propositions impact potentially on the change of customer behavior (Oliver, 1999). Stone and Jacobs (2000) suggest some effective factors on loyalty:

- On time and correct delivery;
- Account accuracy;
- Information provided for customers;
- Respond to request and questions;
- Effective comprehension support.

Customer loyalty indicators have been offered by effective factors model:

Fig. 1: Conceptual framework of effective factors on e-commerce (Khodad Huseini et al, 1998, 103).
2-3. The Effect of e-commerce on the Customer Relationship Management:

e-CRM is a combination of software and hardware, applied programs and commitment of manager’s plans for enhance of customer services quality and customer preservation. Indeed, it is a tool for measuring performance of an organization for increase of benefits and customer loyalty relative to company products. e-CRM is an interaction between service providers and customers. The main advantage of e-CRM and CRM help to enhance identification and categorization of the customers for increase of loyalty and general advantages (Bahro, 2012, 500).

Table 2: Studies on e-commerce and CRM.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Subject</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devendra Kumar (2012)</td>
<td>The effect of e-commerce on CRM in Delhi</td>
<td>The direct effect of e-commerce on CRM as a process that used for obtaining more information about needs and behavior of the customer in order to powerful relationships</td>
</tr>
<tr>
<td>Bahru (2012)</td>
<td>The effect of CRM on consumer behavior</td>
<td>Organizations seek effective communication in order to increase organizational value by improvement of quality with more advantages</td>
</tr>
<tr>
<td>Jean et al(2012)</td>
<td>The importance of information and customer satisfaction in strategic management of e-commerce</td>
<td>The main focus of e-commerce and e-business and technology for management is utilization of information in order to achieving goals</td>
</tr>
<tr>
<td>Majad &amp; Seoder (2012)</td>
<td>The effect of e-commerce and CRM on companies success</td>
<td>Increase capability of companies (planning, data collection and implementation) by using CRM</td>
</tr>
<tr>
<td>Deflains &amp; Winn (2008)</td>
<td>The effect of Econ consuming market and commerce</td>
<td>Reduction of costs of marketing by using e-commerce</td>
</tr>
<tr>
<td>Nemani Pour &amp; Jirebandi (2011)</td>
<td>Proposing a new model for CRM related to e-commerce</td>
<td>Investigation of the preservation of customer relationship and increase customer satisfaction</td>
</tr>
<tr>
<td>Jens Berfenfel (2010)</td>
<td>CRM</td>
<td>Among e-commerce models, Model B2B is more effective on CRM and it leads to achievement of values like customer satisfaction and loyalty</td>
</tr>
<tr>
<td>Elahi &amp; Hassan Zadeh (2009)</td>
<td>Framework for examination of acceptance of e-commerce in Iranian companies</td>
<td>These reaches were conducted in 27 Iranian firms by the positive relationship between acceptance of e-commerce and steps of development of e-commerce in firms</td>
</tr>
<tr>
<td>Dinami &amp; Dawson (2008)</td>
<td>CRM in service provider and retailer firms in Japan: promotion of loyalty and financial income</td>
<td>There is a direct and positive relationship between CRM and financial performance and ordering</td>
</tr>
<tr>
<td>Farshidi (2006)</td>
<td>Investigation of CRM activities in Iran banks electronic banking</td>
<td>Preservation and increase of loyalty and capability of high benefits, reduction of cost, no need to more customer attraction</td>
</tr>
<tr>
<td>Keli, Gilbert &amp; Matice (2003)</td>
<td>How CRM could increase customer loyalty</td>
<td>The direct effect of CRM on increase customer satisfaction</td>
</tr>
<tr>
<td>Popli &amp; Rao (1999)</td>
<td>CRM in India banks</td>
<td>CRM as a comprehensive attitude for creation, preservation and expansion of customer relationships</td>
</tr>
<tr>
<td>Lothgren &amp; Tambour (1996)</td>
<td>Productivity and customer satisfaction</td>
<td>By measuring of efficacy and efficiency of customer satisfaction in a network model average increase is seen in productivity</td>
</tr>
</tbody>
</table>
3- Research Background:

e-commerce and CRM are the main variables of the research. CRM involves customer trust, satisfaction and loyalty of the customers of Expansion of Collaboration Bank. Several studies have been conducted on e-commerce and CRM.

Research Analytical Model:

Following model was proposed. Satisfaction is the main variable that leads to relationship with bank. In e-commerce, since trust is virtual and important factor, it is necessary to establish a relationship between trust and application of e-commerce. In other hand, loyalty is a relationship between bank and customer by significant effect in application of e-commerce. This research uses three dimensional models involving: 1-customer satisfaction; 2-customer trust; 3-customer loyalties for examination of CRM.

Research Hypothesis:

1- e-commerce affects on customer satisfaction of East Azarbaijan “Expansion of Collaboration Bank”.
2- e-commerce affects on customer trust of East Azarbaijan “Expansion of Collaboration Bank”.
3- e-commerce affects on customer loyalty of East Azarbaijan “Expansion of Collaboration Bank”.

Methodology:

This research is descriptive and applied from goal view point. Library method was used for completion of literature and research background. Questionnaires were distributed in the field study section. The data were collected by a questionnaire distributed among 100 stuff, supervisors and managers of the Expansion of Collaboration bank branches in East Azarbaijan. Likert scale was employed for measuring variables and finally hypotheses were analyzed by regression method.

The validity of the questionnaire was determined by study of the expert and professors view points. After collection of the studied questionnaire and view points and correction of some questions, it was concluded that the mentioned questionnaire is highly valid. The author used Cronbach alpha for assurance of validity. Following table shows validity of the variables calculated by SPSS.

<table>
<thead>
<tr>
<th>Variable</th>
<th>e-commerce</th>
<th>Satisfaction</th>
<th>Loyalty</th>
<th>Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach alpha</td>
<td>0.72</td>
<td>0.71</td>
<td>0.73</td>
<td>0.70</td>
</tr>
</tbody>
</table>

Data Analysis:

The data were analyzed by using SPSS 20 and the percentage was calculated for description of the qualitative specifications and regression was used for test of variables.

I) Test of first Hypothesis:

<table>
<thead>
<tr>
<th>Variable</th>
<th>No nstandard coefficient</th>
<th>Standard coefficient</th>
<th>t</th>
<th>Significant level</th>
<th>Drubin Watson</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>SD</td>
<td>Beta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.476</td>
<td>0.399</td>
<td></td>
<td>3.7</td>
<td>0.000</td>
<td>1.841</td>
</tr>
<tr>
<td>e-commerce</td>
<td>0.577</td>
<td>0.097</td>
<td>0.537</td>
<td>5.8</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

According to regression and table 3 information, it is seen that the data are in significance level of p=0.000 and t=3.700. e-commerce affects on customer satisfaction of Expansion of Collaboration Bank in East Azarbaijan (Xₐ: e-commerce and Y: customer satisfaction).

Y = 1.476 +0.577eₐ

II) Test of Second Hypothesis:
According to regression and table 4 information, it is seen that the data are in significance level of p=0.000 and t=4.134. e-commerce affects on loyalty of Expansion of Collaboration Bank customers in East Azarbaijanm (X2: e-commerce and Y: customer loyalty).

\[ Y = 1.595 + 0.579X_2 \]

### III) Test of Third Hypothesis:

According to regression and table 5 information, it is seen that the data are in significance level of p=0.000 and t=4.879. e-commerce affects on trust of Expansion of Collaboration Bank customers in East Azarbaijan (X3: e-commerce and Y: customer trust).

\[ Y = 2.162 + 0.396X_3 \]

**Finally:**

<table>
<thead>
<tr>
<th>Number of hypothesis</th>
<th>Title of hypothesis</th>
<th>Confirmation or rejection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>e-commerce affects on customer satisfaction of Expansion of Collaboration bank customers in East Azarbaijan.</td>
<td>Confirmed</td>
</tr>
<tr>
<td>2</td>
<td>e-commerce affects on customer loyalty of Expansion of Collaboration bank customers in East Azarbaijan.</td>
<td>Confirmed</td>
</tr>
<tr>
<td>3</td>
<td>e-commerce affects on customer trust of Expansion of Collaboration bank customers in East Azarbaijan.</td>
<td>Confirmed</td>
</tr>
</tbody>
</table>

**Fig. 4:** Direct effect of e-commerce on customer satisfaction, loyalty and trust.

**5- Conclusion:**

According to expansion of sciences and application of new technology in banking, employing e-commerce and e-banking in recent years and utilization of internet and AMT lead to customer satisfaction. According to public culture, bank easy service providing is accompanied by customer satisfaction. e-banking could help to reduce costs and operations volume. Bank affairs are conducted every day and facilitation of these affairs leads to customer satisfaction of bank services. e-commerce affects on rapid ordering and rapid delivery systems and finally on customer loyalty. e-commerce attracts customers and provides customer long term relationship. By this trend, the stuff and customers could conduct banking affairs in appropriate way in secure environment. e-commerce could increase trust and security in monetary transactions. In electronic banking, the banks encounter less with customers and it causes to reduction of the stuff stress and rapid and politely responds of them.
REFERENCES

Turban, Efraim, Kelly, Rainer Rax, E. Potter Richard, 2005. Introduction to Information Technology, USA.