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## **APPLICATION AND NECESSITY OF SOCIAL NETWORKING IN E-COMMERCE (CASE STUDY: ETKA CHAIN STORE)**

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### **ABSTRACT**

E-commerce is one of the best examples of employing ICT for economic purposes. Today not using social networks as a new method of internet marketing hinder optimal selling of products and providing appropriate services at online stores. This study examines the use and necessity of using social networks in e-commerce (Case study: Etk online store). The purpose of this research is applied and it's done by descriptive method. By Cochran formula at error level of 5% the number of samples is about 384 customers and experts in online stores. Descriptive statistics, tables and charts are employed to describe the data and also to analyze the data and explain the relationship between variables, the Pearson correlation coefficient was used. Results showed that for being effective in online stores each and every five major infrastructure (IT infrastructure, cultural infrastructure, commercial infrastructure, legal infrastructure and social networking infrastructure) effect the growth of e-commerce as predictor variables.

**Keywords:** *E-Commerce, E-Marketing, Online Store, Social Network*

### **INTRODUCTION**

E-commerce is a kind of paperless trade (Cassidy j, 2002). In fact; e-commerce is a new way of business that is done electronically and by using Networks and Internet. This technique has grown in recent years and is expected to go further. E-commerce has wider applications, which includes not only buying and selling via the Internet But also other aspects of business, such as purchasing, inventory of goods, manage the production, distribution and logistics of goods and after-sales service are covered. However, the broad concept e-commerce is e-business (Turban et al, 2008). E-marketing is the use of electronic channels of communication with customers to spread marketing messages. This type of marketing is the process of creating and maintaining mutually beneficial relationships with customers through activities online activities to facilitate the exchange of ideas, goods and services in a way that will achieve the goals of both parties (Rafi, Mohammad et al ,2002). Online store (virtual) is a website that customers can login to and then select and purchase their required products from numerous products available in the store. So the virtual store is a type of store that utilizes cyberspace (Internet) to offer and sell products (Athitakis, M. and Mullaney, T. J.,2004). Social network is a collection of individuals (organization or other social entities) that are related by a set of social relationships, such as exchange of information, Cooperation or friendship. Network analysis is done based on the analysis of communications in a community. So a network is determined as a set of objects (or nodes) and a set of relations. A social network is a community structure among actors (individuals or organizations), so the social network shows the ways that of actors are connected. These methods can include social acquaintance from accidental acquaintance to family relationship (Cranmer, Skyler J. and Bruce A. Desmarais, 2011). If the Internet is called the most important event in the history of mankind at the end of the second millennium, the emergence of social networks can be the biggest impact to this event in the third millennium. In summary it can be said

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that the network services include web-based online services, sites or platforms include that people share their ideas and interests with others (bashash 2013).

**Literature & Theoretical**

The use of electronic technology to conduct business has a relatively long history. In fact, the need for e-commerce is derived from the public and private sector demand for use of information technology. In general, mutations in information technology have passed two twenty-year periods and are now in its third term growth.

1955 - 1974: the era of electronic funds transfer

1975 - 1994: The era of management information systems (MIS)

1995 - 2014: Age of the Internet

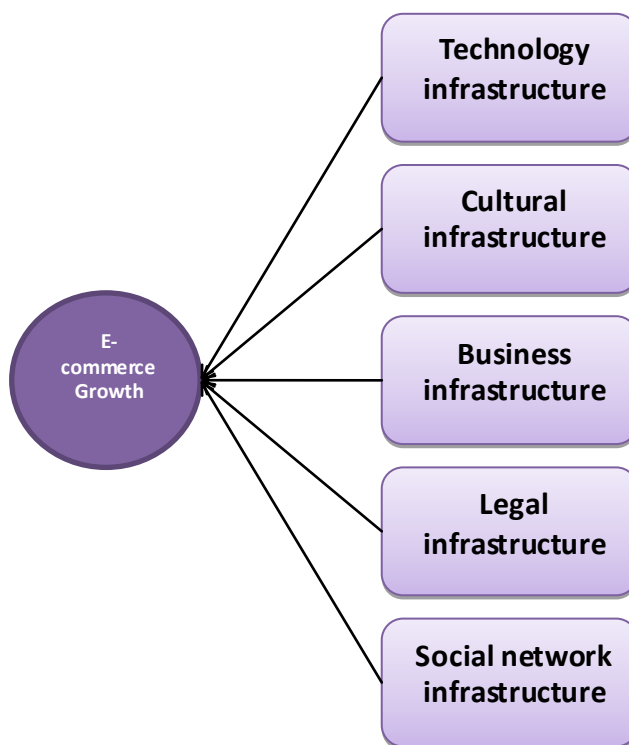
Almost every twenty years, e-commerce facilities are provided in accordance with the capabilities of information technology of the very era. ATM machines and credit cards emerged during the first twenty years of age; then in the second period the electronic data interchange and the international banking system was provided. But in the third period with the development of the Internet and its commercial applications, we experienced a major change in this process; So that in the evolution of e-commerce, we can see a tangible difference between traditional electronic commerce and the online one. To achieve the benefits of e-commerce, companies must overcome the challenges and barriers to e-commerce (hanafi zadeh 2008).

**Table 1 – Synthesis of authoritative articles on the subject of e-commerce implementation**

| Result   | Subject   | Researcher                                   | Year |
|--|---|--|------|
| Barriers and disincentives are divided into internal and external factors.     | Review the Inhibitor of the implementation of electronic commerce in distribution systems | Ihlstrum, C. & Magnusson, M. and scupola, A. | 2005 |
| Barriers are cost, limited number of users and security issues.                | Factors influencing the willingness of organizations to use e-commerce                    | Kaynrk, Tatglv and cola                      | 2005 |
| Barriers between the two groups are very difficult and inappropriate.          | A basic model of electronic commerce adoption barriers                                    | Macgregor, R.C. and Varzalic, L.             | 2005 |
| Critical success factors are useful in IT implementation.                      | Implementation barriers and critical success factors in e-commerce                        | Taylor and Murphy                            | 2004 |
| Giving E-commerce model to investigate the factors facilitating and inhibiting | E-commerce development in small and medium towns  | Rao, Metz and Monge                          | 2003 |
| Studying infrastructure (cultural, communicational, business and governmental) | E-business strategy and the factors influencing the growth of electronic commerce         | Javalgy and Ramsay                           | 2001 |

E-commerce is one of the wide applications of Internet and its development depends on infrastructures such as ICT, social, cultural, commercial, legal and social networks. The absence of any of these infrastructures can be considered a major obstacle in the implementation of e-commerce. The above infrastructures are necessary utilizing strategic interest of e-commerce and to support the growth of e-commerce.

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**Figure 1- Conceptual Model**

Main question: What are the factors of sales increase in online stores?

According to the conceptual model of this study, there are five main hypotheses:

- 1- IT infrastructure is related to the E-commerce
- 2- Cultural infrastructure is related to the E-commerce
- 3- Commercial infrastructure is related to the E-commerce
- 4- Legal infrastructure is related to the E-commerce
- 5- Social networking infrastructure is associated with increased sales in online stores

### Social Networks Analysis

Social network analysis has changed from an implied industry to analytical ferry for paradigm, through theoretical and related research. Analytical arguments from detail to the whole components and from structure to behaviour all examine global networks; in which all strings are defined as special relationships among populations. In detail, severe networks for their members are less useful than networks with large numbers of poor connections to individuals outside the main network.

Most of open networks with social relations and weak strings stand a better chance of achieving their ideas and getting new achievements than the close networks with long strings. In other words, a group of friends who are just in touch with each other share the same achievements. But a group of people who have contact with other social sectors are more likely to have access to a wider range of information. People who have connection with a variety of networks rather than many connections within a single network may be more success. Similarly, individuals can practice to play a role as an intermediary in the communication between the two networks that are not connected (This is called filling structural holes) (Rose et al, 2005). Social network have also been used to explore how interactions between organizations and describe the many informal connections that connects the executers and it was quite successful in intra personal relations of staff in different organizations. Social networks play a key role in business success and business development. Networks provide ways for companies to gather information, to avoid

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competition, and even collude to set prices and policies (Mercarder, J, et al, 2006). Based on the conceptual model of the research e-commerce with ICT infrastructure, communication infrastructure, cultural infrastructure, legal infrastructure, governmental infrastructure and commercial infrastructure all contribute to increase the sales in online stores. The question is that, what is the role of social networks as a new media to improve sales in online stores? The importance of social networks in e-marketing can be better understood by a few helpful ideas from active and successful e-marketing experts that are as follows:

#### Necessity of using social networks

We use social networking because it is the latest e- marketing and will create waves among our audience. If we get to know that why social networking can help to advance our marketing objectives then we have clearly identified goals and we are ready to take the next step.

#### Identifying strategies for marketing purposes

You might believe that social networks can give you anything in a definite time, but you may well need to focus on specific outputs. Identify your goals clearly and then build the social network upon them.

#### Network selection according to market

If your market is B2C, then you have to use Facebook, twitter and LinkedIn; if it is B2B, then LinkedIn is the best choice then you can refer to other to online channels. If you are a tradesman or an exporter then websites such as Alibaba would serve you fine.

#### Advantages of e-marketing in social networks

- Almost all segments of society can be found in these networks
- Popularity in these networks affects the ranking of your website in search engines
- You can answer questions and interact with them closely
- By publishing a picture, video or interactive content can attract thousands of fans.
- Activity in these networks makes many people view your profile and see your Products.

### RESEARCH METHOD

The purpose of this research is applied and it's done by descriptive method and it is a correlation. The population is all the customers of online stores, of which 384 clients were selected by simple sampling method using the Cochran formula. Measurement tool is the questionnaire and the questions are ranked using a five-item Likert scale range from very low to very high. To collect data and information we use library resources, internet articles, brochures, and Theses. The questionnaire that is used in this study is a standard questionnaire and it has been used in various studies and enjoys high degree of external validity. In this study, after collection of data from the sample, they were entered into SPSS; and then Cronbach's alpha coefficients were calculated and it was determined 0.76 which is in the acceptable range. In Table 2, Cronbach's alpha levels are shown separately for each of the variables.

**Table 2 - Alpha levels of each variable**

| Variable Alpha status | Cronbach's alpha | Variable                  |
|-----------------------|------------------|---------------------------|
| Acceptable            | 0.724            | Tech. infrastructure      |
| Acceptable            | 0.791            | Cultural infrastructure   |
| Acceptable            | 0.758            | commercial infrastructure |
| Acceptable            | 0.761            | Legal infrastructure      |
| Acceptable            | 0.758            | Questionnaire             |

### Research Findings

Descriptive statistics show that 66.1 percent of respondents were male and 33.9% were female. 198 out of 384, i.e. 51.6% of people had 20 to 30 years of age and had the highest volume among other stages. About 75% of online shoppers have a bachelor's degree or higher and also have At least one account in

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one of the social networks. Also, most users of online stores are employees (58%) who enjoy ample time to find products on the Internet. Our findings indicate that the products that are advertised by word of mouth in social networks were sold 55.2%, products that are sold by e-shop websites were 23.3% and in the end products that are sold by advertising websites were 21.6% But according to the main hypothesis we want to know whether the technology, culture, commercial, legal, and social networks infrastructures, has effects on e-commerce? There is a similar correlation technique called regression, which helps to predict value of one variable from the value of other variables. These predictions are achieved from the regression line. So we used the multiple regression method to test the question. It should be noted that e-commerce variable was entered into the analysis as the dependent variable or criterion and 5 infrastructures (technological, cultural, commercial, legal, and social networks) were entered into the analysis as predictor variables.

**Table 3 - Analysis of variance and statistical characteristics of regression, to predict e-commerce from infrastructures (technological, cultural, commercial, legal, and social networks)**

| SE                | R <sup>2</sup>     | R     | P     | F                         | Mean SQ. | Deg. of freedom | Sum SQ. | Index             |
|-------------------|--------------------|-------|-------|---------------------------|----------|-----------------|---------|-------------------|
| <b>Model</b>      |                    |       |       |                           |          |                 |         |                   |
| 2.71              | 0.86               | 0.93  | 0.000 | 487                       | 3603     | 5               | 18017   | <b>Regression</b> |
|                   |                    |       |       |                           | 640      | 104             | 66580   | <b>Remaining</b>  |
| T                 | BETA               | SEB   | B     | Index                     |          |                 |         |                   |
| 2.81**            |                    | 1.88  | 4.10  | Variable                  |          |                 |         |                   |
| 25.22**           | 0.49               | 0.050 | 1.26  | Constant                  |          |                 |         |                   |
| 15.87**           | 0.31               | 0.077 | 1.22  | Technology Infrastructure |          |                 |         |                   |
| 2.89**            | 0.054              | 0.007 | 0.019 | cultural Infrastructure   |          |                 |         |                   |
| 18.07**           | 0.388              | 0.08  | 1.49  | Commercial Infrastructure |          |                 |         |                   |
| 12.82**           | 0.274              | 0.066 | 0.84  | Legal Infrastructure      |          |                 |         |                   |
|                   |                    |       |       | Social Infrastructure     |          |                 |         |                   |
| <b>p&lt;0.05*</b> | <b>p&lt;0.01**</b> |       |       |                           |          |                 |         |                   |

The variance R<sup>2</sup> = 0.86 and observed P is significant (F<0.05). Based on the above results infrastructure variables (technology, culture, commercial, legal, and social network) is effective in predicting the e-commerce. Regarding the significant relationship between the predictor variables of technological, cultural, commercial, legal and social network with criterion variable (e-commerce), the results in the regression coefficients Table indicate that the impact of different factors is as follows: technologic (β=0.49), cultural (β=0.31), Commercial (β=0.54), Legal (β=0.31), social network (β=0.27). According to the statistic t, it is estimated that these variables can predict changes of e-commerce in people that indicates the relation of these infrastructures with e-commerce.

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**Table 4- Pearson correlation coefficient between technology infrastructure, cultural, commercial, legal and social networking with e-commerce**

| Pearson correlation | Sig.  | Count | Option                |
|---------------------|-------|-------|-----------------------|
| 0.60**              | 0.000 | 384   | <b>Technology</b>     |
| 0.55**              | 0.000 | 384   | <b>Cultural</b>       |
| 0.14*               | 0.003 | 384   | <b>Commercial</b>     |
| 0.65**              | 0.000 | 384   | <b>Legal</b>          |
| 0.49**              | 0.000 | 384   | <b>Social Network</b> |

p≤0.05\*      p≤0.01\*\*

According to the regression Table (3) and Correlation Table (4) the hypotheses was tested using regression and correlation. Given the number of samples (n = 384) it is concluded that the infrastructures (technology, cultural, commercial, legal, and social network) have significant correlation with e-commerce in the Alpha level of 0.01. Though this study confirms the hypothesis and the null hypothesis is rejected, we can say with confidence level of 99% that there is a significant relationship between the above-mentioned infrastructures and E-commerce.

**DISCUSSION & CONCLUSIONS**

There is a significant relationship between the technology, cultural, commercial, legal, and social network infrastructures and E-commerce. This result is consistent with the results Javalgy and Ramsay. Ramsay and Javalgy's research have not studied Social network as an infrastructure and a new media because of its novelty, but in this study it is presented as one of the main factors in the growth of e-commerce.

It is obvious that the growth of E-commerce would absolutely result in the development of e-shops as its subsets. In order to develop technology infrastructure number of installed in computers per year, investments in information technology, internet home users and business users, amount of investment in E-commerce and telephone lines, television and cell phones should be developed and increased. Cultural elements such as language, education, life style and value systems have a direct impact on technological innovation and entrepreneurial spirit. A country's level of expertise in the IT field is achieved through Internet User's familiarity with technology, Level of training and experience is a very important factor influencing the growth of e-commerce. Capabilities of transport, energy, communications and computers are important for e-commerce, as much as commercial infrastructures. Commercial infrastructures include availability, convenience, and quality of support services such as banks and financial institutions, hardware manufacturers, access to expert programmers, data access providers, Network access providers, Web service providers, Web design and market research organizations that are essential for understanding customer needs. If government policies aimed at encouraging and promoting service industries such as information technology, then environment, technological and economical atmosphere improves that leads to better relations with the international community. A dynamics a social network is achieved by excellent design of pages, placing widget in a website or blog, share valuable content, having up-to-date pages, being responsive to comments, using email marketing, event setup, use other social networks, advertisement and promotion, and offline procedures.

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