

# Exploring the Relationship between Computerization and Marketing Performance Case Study: Snowa Company

Mojtaba Molaahmadi, Morteza Raei Dehaghi, Abdolrahim Arghavan

**Abstract**—The present study aims to explore the effect of computerization on marketing performance in Snowa Company. In other words, this study intends to respond to this question that whether or not, is there any relationship between utilization of computerization in marketing activities and marketing performance? The statistical population included 60 marketing managers of Snowa Company. In order to test the research hypotheses, Pearson correlation coefficient was employed. The reliability was equal to 96.8%. In this study, computerization was the independent variable and marketing performance was the dependent variable with characteristics of market share, improving the competitive position, and sales volume. The results of testing the hypotheses revealed that there is a significant relationship between utilization of computerization and market share, sales volume and improving the competitive position.

**Keywords**—Computerization, e-marketing information, information technology, marketing performance.

## I. INTRODUCTION

WE live in a world known as the global village and in an era that is referred to as the information era. Today, the importance and role of information and communications in development of countries (especially organizations) is known to all and is even regarded as one of the development indexes [1]. At the beginning of the 21<sup>st</sup> century, the world was encountered with considerable changes in all dimensions especially competitions in the market, technological innovations and customer needs. These changes improved a major part of business priorities and strategic perspective [2]. Due to the increased environmental changes, organizations need proper and on-time information to perform their tasks. Information technology can eliminate the need of the organization to information through utilization of different information and communication technologies. On the other hand, offering the best performance in marketing field has converted into the most basic challenge for managers of manufacturing companies. Thus, they try to achieve superior performance by means of different techniques [3].

Entekhab Investment Development Group is the major holding investor in industry, commerce and social services

Mojtaba Molaahmadi is a Ph.D Student in Islamic Azad University, Dehagh Branch, Dehagh, Isfahan, Iran.

Morteza Raei Dehaghi is Assistant Professo in the Department of Industrial Management, Dehagh Branch, Islamic Azad University, Dehagh, Isfahan, Iran, (e-mail: dr\_mraeidehaghi@yahoo.com.ph)

Abdolrahim Arghavan is Master of Business Administration, Islamic Azad University, Mobarakeh Branch, Mobarakeh, Isfahan, Iran.

that acts as the biggest manufacturer of home appliances in Iran and is developing and planning in the field of steel, oil and upstream industries. The industrial sector of this group has seven great manufacturing complexes with an infrastructure equal to three hundred thousand square meter that is the biggest manufacturer of home appliances in Iran. Snowa, Daewoo Electronics, Bost and Tecnogas are four prominent national and international brands of Entekhab Group that satisfy an extensive range of tastes and needs of different market levels. Entekhab Group is at the top of home appliances market in Iran with a considerable difference with other manufacturers. According to Pearce and Kluyver's studies, the final purpose of strategy is to stabilize superior performance in long-term. Success of strategies of any company can be reflected in its performance and the company's performance can be the success level of a company in value creation for different market segments but generally, performance of business firms is determined based on achieving business purposes through different units of these companies. Nowadays, information plays an important role as a vital and determining asset in success of companies [4]. Hence, there is an ever-increasing need for information management. Given that information is the strategic section of marketing in competitive markets, the need to information has directed the companies to use key and applied information technologies. Computerization as an element of information technology has become common in marketing organizations increasingly. Under these circumstances, computerization helps users collect, save and convert data into information as well as transfer and manage the information at high speeds through the use of hardware and software [5].

Due to the recent changes in business markets and development of competitive processes, organizations look at business environments more precisely and try to recognize its new capacities and needs better. The most important common element among different businesses that directs their planning and strategies is information. Development of information technology has created deep changes in purposes, the executive procedure, and organizational productions and structures. Information technology gives this opportunity to the organizations to omit many repetitive and parallel tasks and do a high volume of hand activities by computer systems and find a suitable opportunity for work reviews and planning with more ease [6]. Today, changes are occurred so rapidly that appropriate tools are needed to keep pace with such fast speed. Information and communications technology as a

powerful tool has already been helpful in many aspects. Information technology can be regarded as the convergent point of electronics, data processing, and communications [7].

The issue that has occupied marketers' mind to a large extent at the present is internet. Generally speaking, online marketing can be defined in this way: "doing all or one part of marketing activities through the internet in order to realize the purposes of marketing plans". In the current world, efficiency and helpfulness of information has become possible by means of the information technology. The use of information has led to an extensive change in administrative affairs and information systems in a sense that electronic transfer of data, documents, and correspondences has become possible via computer and telecommunication lines. Because of the effect of internet on commerce and formation of the bases of digital economics to achieve the purposes of modern marketing in electronic transactions, internet marketing has been considered basically and is regarded as the key factor in competitiveness of global markets. Increased speed of calculation, fast processing of information, the possibility of searching and increased precision, omission of unessential intermediaries, and electronic realization of tasks have affected the process of transaction, decreased time of doing the transactions, and increased productivity. The value of marketing and e-commerce is increasing day by day [8]. In this regards several studies have been conducted about the matter including [12]-[21] This study focuses on the question that whether or not there is a significant relationship between computerization and improving the competitive position in Snowa Company.

## II. THEORETICAL PRINCIPALS

Computerization has been defined as an element of technology for information management that is used in the form of hardware and software to collect, save and change data into information as well as transfer and manage the information at high speeds [9].

Marketing performance refers to the ability of the organization to increase sales, improve competitive position of the company, develop new product, improve product quality, decrease delivery time of products or services to customers, extend market share and so on in comparison with other competitors in a specific industry [10].

Porter acknowledges that organizations should achieve competitive advantage because of the effects of internet on profitability of organizations. Competitive advantage from Porter's viewpoint is achieved in two ways:

- A) Reduction of transaction costs (increasing of efficiency),
- B) Achieving superior price.

It is possible and operational to combine these two states to achieve competitive advantage. The internet improves total value chain of the organization via facilitation and acceleration of on-time information transaction. On the other hand, because internet is a free and open bed and has public standards, it needs less investment in comparison with other technologies. Among the advantages of internet, below are the advantages of internet that decrease the operating expenses of the company:

- lower cost of communications,
- lower inventory level,
- lower transaction cost,
- reduction of human errors,
- reduction of temporal cycle of logistics,
- reduction of transportation cost,
- decreased use of paper, etc. [11].

## III. METHODOLOGY

The main purpose of the study was to explore the relationship between computerization and marketing performance in Snowa Company. This study is functional from objective aspect. It is a descriptive-correlational-non experimental study from methodological aspect. The researcher intended to respond to a real question through a research process. This is a field study in terms of how it is executed.

The most important purpose of this study was to explore the effect of computerization system on marketing performance of Snowa Company in Isfahan province during the time period 2013-2014. Conceptual framework of the study was designed through historical study, exploration of the existing documents and the internet websites.

The statistical population included 60 marketing managers of Snowa Company in Isfahan province. Type of the research sample was improbable and selective. The main purpose in this study was to evaluate the effects of computerization establishment on a group of variables. Thus, only those managers should be accepted as the sample members who are working with such system. This sample included all marketing managers in Snowa Company who enjoy computerization in their section. The required data were collected by census giving the limitation of accessibility to the statistical population, thus included the whole statistical population. Sixty marketing managers of Snowa Company who used the computerization system completed the questionnaires and evaluated the computerization system for the determined variables. Questionnaire was a tool of data collection that was designed after interviewing some managers with regard to the combination and total design of the questionnaire in the framework of research questions and hypotheses. In order to ensure the research tool and confirm its accuracy, the questionnaires were distributed among a number of managers in a pilot study and then the final questionnaire was prepared after eliminating its problems.

The independent variable was computerization that the researcher intended to study it with the dependent variable, i.e. marketing performance (improving the competitive position, market share, and sales increase) which was evaluated through the questionnaire.

Cronbach's alpha was employed to measure the reliability of the questionnaire that was equal to 96.8% and considered appropriate. First, the research data were analyzed based on descriptive statistics methods (mean, standard deviation, frequency, frequency percentage) using tables and diagrams. Then, Spearman correlation coefficient (if Pearson correlation is normal) was used to obtain the relationship between

components of marketing performance and computerization. Statistical analysis were carried out using SPSS 16 and Excel software.

#### IV. DATA ANALYSIS

In order to analyze the data and information based on the pre-defined purposes, the data related to each variable were described in the form of statistical numerical characteristics as shown in Table I. Then, the hypotheses were tested using

suitable statistical models and finally, the final analysis and conclusion were done.

TABLE I  
 MEAN OF VARIABLES

	Number	The lowest	The highest	Mean	Standard deviation
Computerization	38	1.00	4.75	3.1228	0.75827
Sales volume	42	1.55	4.45	3.3095	0.65063
Competitive position	36	1.57	4.57	3.0595	0.71173
Market share	36	1.70	4.40	3.1528	0.65487

TABLE II  
 TESTING THE HYPOTHESES

		Computerization	Market share	Competitive position	Sales volume
	Number	38	42	36	36
Normal parameters	Mean	3.1228	3.3095	3.0595	3.1528
	Standard deviation	0.75827	0.65063	0.71173	0.65487
Degree of difference	Absolute	0.155	0.136	0.130	0.228
	Positive	0.105	0.097	0.097	0.091
	Negative	-0.155	-0.136	-0.130	-0.228
	Kolmogorov-Smirnov	0.953	0.885	0.780	0.850
	Normality Level	0.323	0.414	0.578	0.048

#### V. TESTING THE HYPOTHESES

Pearson correlation coefficient was used to test hypotheses 1 and 2 and Spearman correlation coefficient was used to test the third hypothesis. It is noteworthy that Kolmogorov-Smirnov test was employed to test the normality of data as a presupposition for Pearson correlation coefficient. Because values of the variables of market share (0.41), competitive position (0.57) and computerization (0.32) are more than 0.05, they are considered to be normal. But sales volume (0.48) which was less than 0.05 is not normal.

#### VI. DISCUSSION AND CONCLUSION

The relationship between computerization system and marketing performance of Snowa Company in Isfahan province was analyzed in this study. Pearson correlation coefficient was used to test hypotheses 1 and 2 and Spearman correlation coefficient was used to test the third hypothesis. The data on computerization and marketing performance during the time period 2013-2014 were employed to carry out this study. The results of analyzing the findings related to hypothesis 1 showed that mean score of the effect of computerization on market share in Snowa Company was equal to 3.30 and its standard deviation was equal to 0.650. Mean comparison of the score of responses with assumed mean (equal to 3) revealed that the observed  $t$  is significant at level  $p < 0.05$ ; thus, the use of computerization more than the average level is effective on market share. Similarly, analysis of the findings related to the second hypothesis showed that mean score of the effect of computerization on competitive position in Snowa Company was equal to 3.05 and its standard deviation was equal to 0.711. Mean comparison of the score of responses with assumed mean, revealed that the observed  $t$  is significant at level  $p < 0.05$ ; thus, the use of computerization

more than the average level is effective on competitive position.

Finally, analysis of findings related to the third hypothesis showed that mean score of the effect of computerization on sales volume in Snowa Company was equal to 3.15 and its standard deviation was equal to 0.654. Mean comparison of the score of responses with assumed mean, revealed that the observed  $t$  is significant at level  $p < 0.05$ ; thus, the use of computerization more than the average level is effective on sales volume. Therefore, there were no evidences to reject the hypotheses with the defined indexes of sales increase, market share and improving the competitive position. Also, firms that are able to utilize the technology rapidly and effectively and recognize the existing modern patterns of customers, competitors and employees' information will have competitive advantage. The firm that uses computerization can measure the progress of projects rapidly and easily, manage the market, and create changes. Establishment of an efficient and effective computerization system through modern achievements of the information and communication technologies either at firms' level or at the level of making efficient and rapid communications with the related bodies is a vital and important subject. If it is ignored in a firm, not only circulation of the current affairs becomes disrupted and slow but also it prevents the firm from achieving its purposes and missions. Likewise, computerization and especially the internet have changed the business environment and market of products and services. Hence, many firms and companies have begun to use electronic tools and methods including e-commerce to be active in a global competitive environment.

Considering the results of this study, it is suggested that manufacturing companies enhance the accessibility level of their managers and employees to the internet to facilitate communications (improvement of internal and permanent relation with customers), marketing research as well as

improving the commercial status of the firm (launching new products, degree of information, and customers' mental image of the firm). Also it is suggested to perform personnel affairs of managers through the internet and the firms use the internet to offer more information and more advertisements to customers.

#### REFERENCES

- [1] H. Madani, "The effect of automation systems on organizational communications," *Tadbir Monthly Magazine*, vol. 174, pp. 132-149, 2009.
- [2] M. Soltani, and R. Heidari, "The effect of information technology on the organization.," *Academic J. of MA Students of Accounting and Financial Man., J. of Man.*, vol. 40 & 41, 2005, pp. 103-118.
- [3] H. Vazifedust, "Evaluation of the effect of specific characteristics and environmental factors on marketing performance of food exporting companies in Khorasan province," *Basirat J.*, vol. 38, 2002, pp. 154-175.
- [4] A. Sarafizadeh, A. "The effect of information technology on efficiency of value chain of cooperatives," *Tadbir Monthly Magazine*, vol. 4, pp. 29-54, 2011.
- [5] R. Kalaei, "The effect of internet on marketing performance of life insurance," *Iranian J. of Insurance Research*, vol. 2, 2012, pp. 83-114.
- [6] T. Hosseini, "Implementing conceptual e-marketing and the assessment tool to measure nine capabilities of firms to pass from traditional marketing to e-marketing," *Tadbir Monthly Magazine*, vol. 57, pp. 120-132, 2005.
- [7] H. Mirfakhr-e-din, "Characteristics of virtual organizations," *Tadbir Monthly Magazine*, vol. 117, pp. 56-67, 2002.
- [8] H. Vefghi, "The effect of information systems and information technology on information flow of labor market," *J. of Labor and Society*, vol. 60, pp. 44-52, 2006.
- [9] R. Gholipour, "The effect of information technology on organizational structure and labor force structure," *Man. Culture*, vol. 7, pp. 127-154, 2005.
- [10] S. Parvizi, "The role of information and communications technology (ICT) in developing life insurance," *Tadbir Monthly Magazine*, vol. 153, pp. 75-82, 2008.
- [11] M.E. Porter, "Competitive advantage: Creating and sustaining superior performance," 2nd Ed. New York: Free Press, 1998.
- [12] A. Sarafizadeh, "Identification of prohibitive factors of effective utilization of information technology from the viewpoint of tax affairs employees in Tehran province," *J. of Man.*, vol. 48 & 49, 2011, pp. 26-39.
- [13] M.R. Faraji, "The effect of information technology on organizational productivity," *J. of Man.*, vol. 86, 2012, pp. 44-49.
- [14] S.H. Azizi, H. Hosseini, and KH. Shaban Elahi, "Identification of obstacles and strategies of using e-commerce," *Iranian J. of Trade Studies*, vol. 37, 2006, pp. 63-89.
- [15] H. Mirfakhraei, "Characteristics of virtual organizations," *Tadbir Monthly Magazine*, vol. 117, pp. 51-60, 2002.
- [16] M. Aradli, "The effect of information technology on total quality management," *J. of Man.*, vol. 165, 2013, pp. 17-31.
- [17] M. Arabi, "Exploring environmental obstacles and proposing a suitable model to use e-commerce in Iran," *J. of Ind. Man.*, vol. 6, 2005, pp. 57-67.
- [18] M. Arabi, (2012). "An integrated model of production, marketing, and business and its effect on performance of the organization," *Studies on Change Management and Improvement*, vol. 64, pp. 89-116, 2012.
- [19] SH. Azizi, "Competitive advantage in e-commerce," *Tadbir Monthly Magazine*, vol. 143, pp. 28-49, 2006.
- [20] R. Eslami, "The effects of information technology on customization capability of manufacturing plants," *Academic J. of MA Students*, vol. 7, pp. 65-89, 2009.
- [21] S. Fathi, "Relationship between information technology and performance of business firms," *Iranian J. of Trade Studies*, vol. 42, 2008, pp. 263-299.