

# The Effect of Using Information Technology on Iran Insurance Company Performance in Mashhad

Fatemeh Hoseinpoor<sup>1\*</sup>, Hassan Danae<sup>2</sup>, Hamed Haghtalab<sup>3</sup>

<sup>1</sup>Department of Business Management, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran

\*Corresponding Author E-mail: [fa.hoseinpoor@yahoo.com](mailto:fa.hoseinpoor@yahoo.com)

Received: 13 May 2017, Revised: 26 June 2017, Accepted: 10 July 2017

## ABSTRACT

In this paper applications and fields of application of information technology in the insurance industry to assess the impact to explore the impact of information technology on the Iranian insurance companies in terms of five factors increase insurance penetration, reduction of costs, Reducing non-productive activities, increasing the promote safety and increasing the speed operation. To achieve the objectives of the research methods documents and a questionnaire was used. The population of the study are managers and experts in Iran Insurance Company in Mashhad city that The 56 subjects were selected the method of data analysis, descriptive statistics (frequency tables, standard deviation) and inferential statistics (Student t test, one-sample, one-way ANOVA, etc.) is used. The results of the significance level ( $p = 0.000$ ) and 99% confidence show that IT has been influential, Iran Insurance Company in Mashhad.

**Keywords:** Information Technology, Insurance Industry, Electronic.

## Introduction

The new and dynamic business environment of today, the cost of entering a trade has declined and This led to the creation of a competitive environment in which it is difficult, Distance between producers and consumers has decreased due to the extensive use of communication technology, The choice and bargaining power of customers has increased. In this space, a new generation of customers has grown who are not only affordable but they demand customized products, customized services are demanding better and timely access to goods and services. Like all other industries, the insurance industry needs to adapt new

changes made in connection with the business of the world. Information Technology development has provided the Actual and potential capacities for insurance industry. The nature of the insurance company is required to move in the direction of customer-orientation and with success in retaining and attracting customers, giving continuity to survive. In between although other factors such reasonable rates, good service, acceptable network, inform and advertising have a vital role to attract customers but sing information technology can be one of the key secrets of success in business, insurance companies will be

considered. In developed countries, many insurance companies attempt to provide online insurance services including insurance sales, Potential insured insurance needs analysis and after-sale services, such as maintaining account information online at any one of the insured, Management and affairs of insured claims and issuance group insurance. These measures causes reduce insurance costs and reduce the time of issuance of insurance policies are expensive (Hasanzadeh and Kazemnezhad, 1390).

Our applying for insurance, technology and electronics, is a young country and has a long way to reach the desired position and Requirement for an experienced electronic development in Iran, using the successful experiences of other countries and international organizations. IT development began simultaneously with the initial steps in the privatization and almost from the beginning of the '80s that Little by little footsteps on the economy emerged from private banks and insurance. This coincidence led to industries and companies, building its structure to develop information technology and it as their greatest competitive advantage to exploit and the move from the traditional to the modern constructions and new structures began. Being simultaneously reduced costs and tougher competition, indicating transfer of power and choice to customers (Rahmaty, 2005).

Insurance companies to provide services with fewer funds are required to use computers and technology, in other words, the level of impact of information technology, useful information for managers in order to provide the optimal decision (Internet, 2003).

Using Information Technology Insurance provides opportunities to improve the quality of services provided to citizens, they are every minute of the day to the intelligence services and the insurance policy issued by

inquiry compensation rates and have access. Electronic insurance settlement and the use of information technology in the interaction between insurance companies and customers can countless benefits such as the ability to provide services at all times, day or night, without calling for compensation, providing fast and reliable services, insurance and fraud prevention the insurance company is trying to increase revenue, so it seems expanded use of information technology in insurance, Is inevitable and necessary (Karimy, 1383). The combination of these factors has caused many countries to speed policies in the field of e-commerce and promote it to prepare (Shahidi, 2003).

Therefore, by applying effective strategies, particularly in the development of information systems, effective steps to increase the quality and quantity of services provided to clients and their absorption and effective management of these companies can be harvested (Asuesheh, 2003).

In this paper applications and fields of application of information technology in the insurance industry to assess the impact to explore the impact of information technology on the Iranian insurance companies in terms of five factors increase insurance penetration, reduction of costs, Reducing non-productive activities, increasing the promote safety and increasing the speed operation.

The main objective of this study was to determine the effects of applying information technology on Iran insurance company in Mashhad. Five variables were used to measure performance. These five variables are, increase insurance penetration, reduction of costs, Reducing non-productive Activities, increasing the promote safety and increasing the speed operation.

### **Research Literature**

The result of Taghizadeh in 2005 indicated that Use of information technology in organizations, causes the increase the speed

and reduce the time to provide services to users is access to information. Therefore, the effectiveness of the organization is enhanced. Ebrahimi (2002) identified in a study titled *Effects of Information Systems / Information Technology (IT / IS) on the Structural Dimensions system that IT is affecting the structure of the organization.*

Mohammadi (2004) was studied the effect of information technology on structural dimensions system in National Iranian Oil Company. Structure in three dimensions: complexity, concentration and recognition using pattern Robbins is considered. As a result information technology causes Centralization reduction in company.

Sanaei (2004) in his Ph.D. thesis, titled "Examine the effect of automation on organizational productivity", identified Using information technology to reduce corruption, increase speed and accuracy in performing the task is done.

MotaghiSabet's research showed that IT can reduce costs and improve product quality. IT is an approach that deals with the organization of the data collection, storage, management, use and transfer of information.

Lavan (1998) in research on management information systems and information technology discussed IT can cause data to be collected more easily and reducing the need for staff.

Daft (2003) *Organization Theory and Design* suggests that new technologies will lead to enrich staff and Staff should make more use of their innate talents and abilities of the brain Thereby increasing their job satisfaction is

Blocky, Vynsky in (2003) defines in the *Management Information* that one of the competencies needed for competitive advantage in the future, including changes in information management, quality improvement and time will be.

## Research Methodology

Statistical population of all managers and experts working in the city of Mashhad in Iran's insurance supervision are. A total of 124 managers and experts were working. To determine the necessary sample size, the eq. (1) is used and statistical software, especially software, is used Ncss Pass 2007.

$$n = \frac{Npq}{(N-1)D + pq} \quad (1)$$

The (p), compared with subjects studied supporters (who conducted the study investigator was uncertain than before),  $q=1-p$ ,

$D = \frac{B^2}{4}$  and B the error bound.

If B = 0.1 and P = 0.5 is chosen Also, due to the size of the population is composed of 124 people, we have:

$$n = \frac{124 \times 0,5 \times 0,5}{(124-1) \times 0,025 + 0,5 \times 0,5} = 55,61$$

The minimum sample size required is 56 managers and experts.

In this study, the data was analyzed using descriptive statistics (Frequency tables, graphs, descriptive and distributional parameters such as mean, standard deviation and ...) and inferential statistics (Student t-test as an example, ANOVA test and ...) are.

## Variables Definition and its Measure

- **Information Technology:** Consists of all types of technology used for processing, storing and transmitting information electronically. The main component of Information Technology, Hardware, Software, communications facilities and other words is considered.

For the purpose of equipment, such as computers, communications equipment, networks, facsimile (fax) and electronic package handling applications. IT systems in order to be more precise, the study used each

of the various technologies, including automation systems, word processing programs such as WORD, electronic filing, fax, Computer, Internet, data processing software, such as EXCELL, accounting and HR software is. This variable was measured with questions 1 to 5. (1. Use of information technology has given rise to the current insurance services in current markets are. 2. Use of information technology has given rise to the current insurance services in new markets are. 3. Application of information technology led to the introduction of new insurance services in current markets are. 4. Application of information technology led to the introduction of new insurance services in new markets is. 5. Use of information technology will lead to the identification of new customers.)

**-Penetration Rates:** Using information technology can be additional costs and administrative personnel, and customer service (internal costs), fees paid to middlemen and reduce the total cost of the insurance affairs.

This variable, with questions, (6. Application of Information Technology in Iran insurance company will reduce personnel costs. 7. Application of Information Technology in Iran insurance company will reduce advertising costs. 8. Application of Information Technology in Iran insurance company will reduce wage) will be measured.

**- Increasing The Promote Safety:** Reducing corruption and a closer look at the damages and losses and reduce errors in the conduct of timely payment of insurance. Questions that measure this variable include: (9. Application of Information Technology in Iran insurance company will reduce marketing costs. 10. Application of Information Technology in Iran insurance company will reduce monitoring and control activities. 11. Application of Information Technology in Iran insurance company will

reduce Administrative activities. 12. Application of information technology, organizational activities will lead to effective performance. 13. Use of information technology will reduce paperwork. 14. Application of Information Technology in Iran insurance company will reduce Customers visiting branches and Iran insurance agencies. 15. Application of information technology is reducing the need for Iran Insurance Agents. 16. Application of information technology is reducing organizational hierarchy.)

**- Increasing The Speed Operation:** Reduce the time taken to issue such insurance policy, determine the amount of damages, compensation time and ... Insurance to customers and dealers. This variable was measured with questions 17 to 20. (17. Application of information technology to reduce error in issuing the insurance policy is in Iran insurance company. 18. Application of information technology to reduce errors in determining the amount of damages will be in the Iran insurance company. 19. Application of information technology to reduce rates of insurance fraud by the insured to the Iran insurance company. 20. Use of information technology, thereby, avoid paying an indemnity insurer Iran is repeated.)

**-Reduction of Non-Production Activities:** Reduce additional administrative procedures and reduction in paperwork and less refer customers to the branches and representative and reduction in extra activities, insurance activities. Questions that measure this variable include: (21. Use of information technology, accelerate the issuance of the insurance policy in Iran insurance company. 22. Application of information technology, lead, staff awareness of how the work environment is. 23. Application of information technology, accelerate the renewal of an insurance policy is in Iran insurance company. 24. Application of information technology, thereby, accelerating the damage

assessment will be in the Iran insurance company. 25. Application of information technology, accelerate payment of compensation shall be determined by the Iran insurance company.)

### Research Hypotheses

#### Main Hypothesis:

**H<sub>0</sub>:** Use of information technology, has effect on Iran Insurance company performance in Mashhad

#### Secondary Hypotheses:

**H<sub>01</sub>:** Use of information technology, has effect on penetration.

**H<sub>02</sub>:** Use of information technology, has effect on reducing costs.

**H<sub>03</sub>:** Use of information technology, has effect on Reduction in non-productive activities.

**H<sub>04</sub>:** Use of information technology, has effect on Increased safety.

**H<sub>05</sub>:** Use of information technology, has effect on Tweaking the insurance operations.

#### 3.4 Testing the Research Hypotheses method

In this research, for the research literature, the library method, and analysis of documents and other databases such as the Internet have been used. Also, to test hypotheses and collect data to assess the viewpoints of experts, the questionnaire used.

### Results of Testing the Research Hypotheses

#### Results of Testing the Main Hypothesis

As it can be seen in table 1, the results of testing the main hypothesis reject the H<sub>0</sub> and confirm the H<sub>1</sub>. Considering the significance level of 0.005, it can be observed that the number is less than Alfa (0.05) according to the table.

**Table 1.** The results of testing the main hypothesis

The Main Hypothesis	Mean	Std. Deviation	t	Degree of freedom	Significance level	Lower bounds of confidence interval	Upper bounds of confidence interval
The impact of IT on performance	3.6057	0.55244	8.205	55	0.000	0.4578	0.7537

According to the Student t-test statistic and P-Value derived from it, such as the amount equal to 0.000, and the significance level of the test (with 0.01 level of significant) is much smaller ( $P\text{-Value} = 0.000 < \alpha = 0.01$ ), the results strongly reject the null hypothesis at a significance level of %1 is. Therefore, test

results can be concluded with 99% confidence that the respondents believe: "IT has an impact on performance in Iran insurance company."

### Results of Joint Testing of the Research Secondary Hypotheses

#### The First Sub-Hypothesis

**Table 2.** The results of testing the first sub- hypothesis

The Main Hypothesis	Mean	Std. Deviation	t	Degree of freedom	Significance level	Lower bounds of confidence interval	Upper bounds of confidence interval
The impact of IT on performance	3.6643	0.80644	6.164	55	0.000	0.4483	0.8803

Engines of Creation Glossary average influence on the penetration of information in Iran Insurance Company equal to 6/3 is, and

the significance level of the test (which equals 0.01 by default) is much smaller ( $P\text{-Value} = 0.000 < \alpha = 0.01$ ), the results strongly

reject the null hypothesis at a significance level of  $\alpha$ . Therefore, test results can be concluded with 99% confidence that the respondents believe:

"IT has an impact on penetration in Iran insurance company."

### The Second Sub-Hypothesis

**Table 3.** The results of testing the second sub-hypothesis

The Main Hypothesis	Mean	Std. Deviation	t	Degree of freedom	Significance level	Lower bounds of confidence interval	Upper bounds of confidence interval
The impact of IT on performance	3.2723	0.78230	2.605	55	0.012	0.0628	0.4818

Given that the average effective rate of Engines of Creation Glossary Information on cost reduction equal to the Iran Insurance Company 3/3 is  $\alpha$ , and the significance level of the test (which equals 0.01 by default) is much smaller ( $P\text{-Value} = 0.012 < \alpha = 0.01$ ), the results strongly reject the null hypothesis

at a significance level of  $\alpha$ . Therefore, test results can be concluded with 99% confidence that the respondents believe:

"IT has an impact on reducing costs in Iran insurance company."

### The Third Sub-Hypothesis

**Table 4.** The results of testing the third sub-hypothesis

The Main Hypothesis	Mean	Std. Deviation	t	Degree of freedom	Significance level	Lower bounds of confidence interval	Upper bounds of confidence interval
The impact of IT on performance	3.4617	0.63304	5.458	55	0.000	0.2922	0.6313

Given the views of respondents, the average effective rate of Engines of Creation Glossary Information on cost reduction in Iranian insurance company equal to 5/3 is according to the Student t-test statistic and P-Value derived from it, such as the amount equal to 0.000, and the significance level of the test (which equals 0.01 by default) is much smaller ( $P\text{-Value} = 0.000 < \alpha = 0.01$ ), the

results strongly reject the null hypothesis at a significance level of  $\alpha$ . Therefore, test results can be concluded with 99% confidence that the respondents believe:

"IT has an impact on non-productive activities in Iran insurance company."

### The Fourth Sub-Hypothesis

**Table 5.** The results of testing the fourth sub-hypothesis

The Main Hypothesis	Mean	Std. Deviation	t	Degree of freedom	Significance level	Lower bounds of confidence interval	Upper bounds of confidence interval
The impact of IT on performance	3.7634	0.80963	7.056	55	0.000	0.5466	0.9802

Results of this theory mean  $\pm$  SD, respectively 80. And 7/3 are obtained, and the significance level of the test (which equals

0.01 by default) is much smaller ( $P\text{-Value} = 0.000 < \alpha = 0.01$ ), the results strongly reject the null hypothesis at a significance level of  $\alpha$ .

Therefore, test results can be concluded with 99% confidence that the respondents believe:

"IT has an impact on safety in Iran insurance company."

### The Fifth Sub-Hypothesis

**Table 6.** The results of testing the fifth sub-hypothesis

The Hypothesis	Main	Mean	Std. Deviation	t	Degree of freedom	Significance level	Lower bounds of confidence interval	Upper bounds of confidence interval
The impact of IT on performance		3.8893	0.55126	12.072	55	0.000	0.7417	1.0369

Engines of Creation Glossary Information on cost reduction in the average influence of Iran Insurance Company equal to 8/3. According to the Student t-test statistic and P-Value derived from it, such as the amount equal to 0.000, and the significance level of the test (which equals 0.01 by default) is much smaller ( $P\text{-Value} = 0.000 < \alpha = 0.01$ ), the results strongly reject the null hypothesis at a significance level. Therefore, test results can be concluded with 99% confidence that the respondents believe:

"IT has an impact on speed in Iran insurance company."

### Conclusion

After analyzing the main hypotheses about the impact of IT on each of the performance factors, This section examines the significant differences between the various factors and the significant differences, comparisons between the components is discussed. Therefore, since the function of the penetration factor of 5, reducing costs, reducing non-productive activities, safety and speed has been established, Is needed to evaluate and compare the effectiveness of each of the components of variance test (ANOVA) was use And the following statistical hypotheses formed;

$$\begin{cases} H_0 : \mu_1 = \mu_2 = \dots = \mu_5 \\ H_1 : \mu_i = \mu_j ; \exists i, j = 1, 2, \dots, 5 \end{cases}$$

In this hypothesis, subjects in the mean scores for the impact of IT on firm performance is insured as follows:

$\mu_\lambda$ : Average impact of information technology variable penetration;

$\mu_\gamma$ : Average impact of information technology on reducing variable costs;

$\mu_\varphi$ : Average impact of IT components to reduce non-productive activities;

$\mu_\xi$ : Average impact of information technology on safety components;

$\mu_\theta$ : The mean scores on the impact of information technology variable speed;

Is. Accordingly, if at least one pair of means is significantly different, the null hypothesis was rejected and it is concluded that the degree of influence of the seven components of the study, significant difference exists.

"The impact of technology on performance factors studied five insurance companies are not the same?"

Generally as a result, all hypotheses were confirmed by the results of the main hypothesis impact of information technology on the Iranian insurance companies accepted.

**References**

Asuesheh, A. (2003). "Application of Information Technology in Modern Organizations". M.S. thesis.

Blocky, j., and Vynsky, A. (2003). "Information Management". Translated by interpreters study design productivity in industry (Ministry of Industry), First edition, Tehran: Basir publications.

Daft, R. (2003). "Organization Theory and Design", Translated by Ali Rezayian, Seyed Mohammad Arabi, Third Edition, Tehran: Office of Cultural Studies.

Ebrahimi, M.R. (2002). "Effects of Information Systems / Information Technology (IT / IS) on the Structural Dimensions system in Kowsar Economic Organization". M.S. thesis.

Hasan-Zadeh, A., and Kazem-Nezhad, M. (2010). Eighteenth National Conference and the Fourth International Conference of Insurance, Energy Research, December.

Internet (2003). "The role of information technology in organizations", Journal of Economic Abrar, 20 and 21 January.

Karimy, A. (2003). "The role of information technology in the insurance industry", Journal of Asian, no 30-31, pp 15-20.

Lavan, Kont C and Lavan, Jane Prys (1998). "Management Information Systems Organization and Technology", Translated by Abdolreza Rezaei-Nejad, Second edition, Tehran: Arya Institute.

Mohammadi, M. (2004). "The impact of information technology on organizational structure of the National Iranian Oil Company", M.S. thesis.

Rahmaty, M. (2005). "The impact of electronic commerce on the insurance industry". Journal of New World Insurance, no 96.

Sanaei, V. (2004). "Examines the effect of automation on organizational productivity in Central Petroleum Refining and Distribution Company". M.S. thesis.

Shahidi, M. (2003). "Electronic Commerce and Insurance". Journal of New World Insurance, no 62, pp 319-287.

Taghizadeh, E. (2005). "Effect of IT on organizational effectiveness"(Libraries, museums and documentation centers Razavi).

**How to cite this article:** Fatemeh Hoseinpoor, Hassan Danae, Hamed Haghtalab, The Effect of Using Information Technology on Iran Insurance Company performance in Mashhad. *International Journal of Advanced Studies in Humanities and Social Science*, 2017, 6(3), 206-213. [http://www.ijashssjournal.com/article\\_83927.html](http://www.ijashssjournal.com/article_83927.html)