

Exploring the Relationship between Applying Information Technology and Achieving Organizational Excellence in State Banks

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Abstract

The present study aims to investigate the relationship between applying information technology and achieving organizational excellence in the state banks of the city of Marivan. The research model is taken from Martinez's information technology and Peters and Waterman's organizational excellence models. Research method is descriptive-correlational. Research population includes all the employees of state banks in the city of Marivan. Among this population, samples containing 120 employees were selected based on Cochran's formula, stratified and simple random sampling. Two questionnaires were used to collect data and their reliability was measured, using Cronbach's Alpha. The reliability of organizational excellence questionnaire was 0/805 and the reliability of information technology questionnaire was 0/758 which are indicative of the reliability of the questionnaires. The validity of the questionnaires was assessed based on experts' opinions. Pearson's correlation, linear regression, and structural equation modeling based on SPSS19 and LISREL8.80 were used for data analysis. The results showed that there is a positive and significant relationship between the dimensions of information technology in administration, communication, decision-making support, and planning with organizational excellence. In other words, there is a significant and positive relationship between applying information technology and achieving organizational excellence.

Keywords: Information technology, Organizational Excellence, State Banks.

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Introduction

Since old times, the search for overall excellence and growth was one of the highly significant concerns of humanity. Humans' mental processes were developed as different management theories and applying those theories to practice led to excellence. By applying each theory to practice, management learned new lessons to achieve excellence. Therefore, nowadays one of the logical, significant and inevitable necessities for each nation that wants to have an active presence in the world is to move towards the progress and prosperity and achieve organisational excellence and from a scientific perspective, this process is called development. Management development is a process by which managers improve their knowledge and skills in three levels of management. This process also paves the way for the improvement of managers' talents and abilities. So it could be argued that organisational excellence is a strong operational tool that can be used for various purposes by the organisations (Jafariqoushchi 2004).

Excellent organisations manage, improve, and make use of all their employees' potential abilities at the individual and group levels. They promote fairness and equality and engage their employees in different activities. They pay attention to their employees, communicate with them and encourage them in a way to motivate and develop a sense of commitment in them (Sarrafizadeh, 2009). According to the previous studies, several factors lead to organizational excellence. For example, in Etemadi's research (2003) new methods of self-assessment, in Sadeghi and Nouri's research (2006) information and communication, in Zegardi and Esmaili's research (2008) information technology, in TaleiGongLou's research (2010) organisational commitment and human resources and in Raisi and others (2009) process improvement are proved to be influential factors in achieving organisational excellence.

However, one of the highly significant subjects of interest for economists and policy makers is the revolution of information technology and communication which is increasingly progressing with the aim of reshaping the material foundation of society (Motola 2006). Many organisations have recognized the significance of information technology and its impact on the speed and accuracy of affairs, customers' satisfaction, support systems, managers' decision-making, and specifically, on the organisational effectiveness. Awareness of such effects has made many organisations to use information technology (Yardeli, 2005). Today in developing countries like Iran, one of the main problems of managing investment in the field of information technology is the lack of control and assessment of programs, performances and results (Albedavi and Keramati, 2004). According to some researchers, the main reason for the failure of organizations to increase productivity include the lack of using information technology, lack of paying attention to the complementary organizational investments alongside investment on information technology (Albedavi and Keramati, 2004). Given the importance of information technology and its influence on organisational excellence, the present research seeks to investigate the relationship between the application of information technology and organisational excellence.

Statement of Problem

Changes in the balance of power in the global economy and increasing competition in the target markets have made countries believe that in order for the presence and survival in the regional and global markets, they should increase their organisational competitiveness. Models of excellence are used as powerful tools for measuring the efficiency and effectiveness of the performance of different systems in organizations. Today the introduction of excellence models is highly welcomed by managers in different organisations of Iran. Many organizations initially viewed it sceptically and the idea that such models have western roots and do not fit Iranian organisations have sometimes been raised as an obstacle, but after getting more familiar with these models and applying them in assessing organizations, managers achieved tangible results and recognized that they can improve their programs by excellence models and move towards organisational excellence by implementing those programs. Organizational excellence models, when being properly applied, are effective tools that can result in the institutionalization of organisational concepts and values, development and implementation of strategic plans, the use of self-assessment procedures, organizational learning and continuous improvement in organizations and also establish the possibility of identifying the best processes and provide benchmarking. Nowadays with the expansion of financial institutions and banks in Iran, attracting customers in order to increase the profit of institution has become one of the main concerns of these institutions.

Among the most significant factors that have affected the profitability goal of such institutions is the performance of branches that are working together in different parts of the country, under the title of a bank or financial institution. Therefore, recognizing assessment tools to evaluate and improve the performance of organisations is undoubtedly very significant. Organisational excellence model is one of the tools to evaluate and compare the performance of organizations with their successful competitors. Considering the high level of organisations' perception of the importance of organizational excellence, the managers of these organizations try to find out factors that can guide their organization towards achieving more organizational perfection. One of the factors that play a major role in achieving organisational excellence is the application of information technology in organizations, especially state banks. Given the importance of state banks in the economic growth and creating the conditions for sustainable development of the country, understanding the factors that lead to organizational excellence in banks is highly significant and influential, therefore, using information technology as the driving force of organisations, specifically state banks, can play a key role in achieving organisational excellence. Given the importance of information technology in organisations and its impact on effectiveness, performance, and organisational excellence, the present study seeks to investigate the influence of dimensions of information technology on different aspects of organisational excellence in state banks of the city of Marivan.

Theoretical Background

Organisational Excellence

Excellence means a set of common beliefs and values such as honesty, fairness to stakeholders, reliability, management commitment, selfless efforts for improvement and etc, excellence means evolution (Eminence). The dictionary meaning of excellence is “the quality of being outstanding or extremely good” (Kim, 2008). Organizational excellence is “the deliberate and logical introduction, establishment and strengthening of change in order to increase organizational effectiveness” (Lotanze, 2000). Organizational excellence is a holistic approach to improve organizational performance (Haringtone, 2005). In the literature, the term quality has a different concept and is viewed as excellence, a value appropriate to be used, compliance with features and requirements, meeting customers’ expectations and some other higher concepts. At first, the term National Quality award was used instead of the term organisational excellence, but later it was renamed to organisational excellence.

The Deming Prize was the first global business excellence model that was introduced in 1951 by the Association of Japanese Scientists and Engineers. The next Quality Award (CAE) was introduced by the Quality Institute of Canada in 1985. The next one was s Baldrige Malcolm quality award which was introduced by the National Institute of Standards and Technology of America in 1987. Then the Australia Quality Award was introduced in 1988 (Fundamental, 2010). The International Business Development Institute introduced ISO 9000 as an international standard for assessing quality management standard in 1987. In 1991, the European Quality Award was developed based on EFQM model. At the same time with European countries, several Asian countries established quality awards in 1990. Most of them used Deming and quality models as reference. For example, India in 1994, Singapore and Japan in 1995, the Philippines in 1997, Fiji in 1998, and Thailand in 2001 designed qualitative models. Malcolm Baldrige excellence models from America, EFQM model from Europe, and Deming Award from Japan were globally recognized and were also announced as the key models for other models and awards (Searle, M. 2005).

In addition to the variety of such models, Peters and Waterman (1982) in an extensive research project, selected 500 companies in 59 different industries in order to investigate organisational change and new management. All these companies had two common features: first, they were among the best in the industry of their own kind. Second, they used new management techniques. The findings of their research were published in a book titled *In Search of Excellence: Lessons from Successful American Companies*. Peters and Waterman (1982) found out eight characteristics of successful companies. These features are considered as influential elements in the organisational excellence and are summarized as follows:

Bias towards Action

Taking action and avoiding immobility in the face of problems means experiment and this is one of the features of outstanding companies that are knows as being profit-making. The task of management is to foster a spirit of experiment in the company, accept little failure and defeat, value the experiments, and support and encourage experimental tasks. It could be argued that bias for action in successful companies includes the following criteria: psychological- organizational criteria, dividing tasks and using the experiences of other organizations.

Continued Contact with Customers

Peters and Waterman considered the feature of close to customers as one of the highly significant features of successful companies. One of the best advices of such companies is to work in accordance with the customers' needs and requirements. Many successful corporations learn success secrets from their customers. Such companies are unique in improving the quality of products, serving the customers and reliability and they are completely in the service of their customers. In other words it can be argued that this feature is a kind of forming company's efforts and in fact, finding a way to better serve the customers.

Operational Autonomy and entrepreneurship

Innovative companies foster many of the leaders and innovators within their organization, encourage employees for innovation by giving them enough freedom for their activities, and support worthy experiments by encouraging risk taking. Implementing innovative programs is a distinguishing feature of successful companies. Such companies develop autonomy in all the levels of their organization by creating a spirit of risk taking. These companies pave the way for innovation by decentralization of tasks, ease of communication, and lack of obstacles in speaking.

Productivity Improvement Via people

Peters and Waterman argue that successful companies consider their typical employees as the main source of raising the quality and productivity of work and consider workers as the source of new ideas. Such companies believe that if the workers be treated based on development, they will appropriately respond to it by their behavior.

Stress on the Key Business Values

Another distinguishing feature of successful companies is their belief in the value system. Because companies, for their reliability and development in work, have to possess a set of true beliefs on which they establish their policies and efforts. So, the most important factor in the success of a firm is its commitment to these values and if an organization wants to accept the challenge of a world full of change, should be ready in the course of moving forward, to change everything except its values and beliefs.

Emphasis on doing what they know best (Sticking to the knitting)

In Peters and Waterman's belief, advantage means commitment to the core task. In their opinion, the most successful companies are those that increase their work scope based on a major skill. In other words, their policy is based on the improvement of work and they never engage themselves in diversity and enlargement. Generally, innovative companies try to enlarge themselves but this enlargement and diversity is always done in an empirical way.

Simple form, lean staff

The structure of the successful companies is highly simple and the number of senior officials in these companies is astonishingly low. Working conditions and structure in successful companies is such that all are aware of the work processes. These companies due to the small size of their units can easily cope with working conditions and as a result, they can simply manage their organisation with greater mental flexibility. Therefore, there is a fundamental element for the survival of the structural form of a successful company and that element is: less lean staff, especially in the administrative units of the company and less organisational levels.

Loose-tight Control

According to Peters and Waterman (1982) successful companies are both centralized and decentralized in the same unit and, in many cases, employees in the forefront of production, research and development have great independence and autonomy, and by simultaneously managing their organization, they show greater interest in their beliefs and values. These companies are highly strict on one hand and on the other hand they provide their employees with maximum autonomy, independence and innovation. They are highly committed to regular communications and quick feedback and never allow the values to be violated. In distinguishing companies, a set of values and rules on discipline, paying attention to details and doing special responsibilities can be the basis for working independence that regularly occurs in the company (Peters and Waterman, 1982).

Information Technology

Information technology is defined as a set of computer systems in the organisation which include database hardware, information network's software, and other tools. In a general definition it is defined as a set of information systems for the use of administrators and managers. It is the technological aspect of an information system (Shi-Ming, 2006) that using it can promote the communication with customers more effectively. The benefits of information technology are: facilitating working processes, increasing efficiency and productivity, reducing costs and increasing accountability, increasing flexibility, creating new opportunities and presence in the global markets (Turban, 2007).

Martinez categorises information technology into six broad categories based on the purposes for which they are used. These categories are: information technology in administration, communication, support decision making, planning, product design, and production control operation. He summarized the measurement criteria of information technology applications in different organisational activities as follows (Sarrafizadeh, 2004). Since state banks' branches are administrative, the two last categories of information technology (product design and production control operation) are not applied in the present research. The other dimensions are as follows:

1. Administration: It includes factoring system or bill exchange, inventory control systems, payroll system, databases, accounting systems.
2. Communication: It includes advertising through the organization's website, direct connection through the organization's website, the organization's intranet,

electronic data exchange with suppliers or customers via EDI, group working through electronic exchange.

3. Decision making support: it includes DSS decision support system and data analysis techniques.
4. Planning: It includes computer-aided planning CAPP, raw material requirements planning MPR, and enterprise resource planning ERP.

Literature Review

Etemadi (2002) in his research concluded that, in order to make changes in the organisations and decrease their immobility, applying new methods of self-assessment and organisational excellence models in Iranian organisations is highly significant and inevitable. Razani (2002) comparing European organisational excellence model, Dyming model and Malcom Baldrige model concluded that European organisational excellence model is more comprehensive than the other two models. The results of Izadi and Maleki's research (2005) demonstrated that the key results of performance, customer, society, and employees have the highest score in organisational excellence model, respectively. Zegardy and Ismaili (2008) in their research concluded that firm size is influential on the level of applying information technology and organisational excellence model. Also Iranian organisations which had broader access to information technology, were more successful in better applying organisational excellence model and achieving higher rates in this model. Talei and Gonglou (2010) investigated the relationship between organisational commitment and organisational excellence. They found out that there is a positive and significant relationship between organisational commitment and organisational excellence. Hakimifard (2010) in his research concluded that leadership criteria, processes, policy, strategy, results in relation to society and key results of performance are in good condition; however, results in relation to human resources and employee criteria are in poor conditions in the organisational excellence model. Sarabandi (2011) in his research found out that firm size influences the level of applying information technology dimensions and organisational excellence model. Also those industries which had greater access to information technologies were more successful in implementing organisational excellence models. Akyus (2005) in his research titled: "Investigating EFQM Organisational Excellence Model in one of the Universities of Turkey" argued that this management style considers all the external and internal expectations of employees in order to be the basis of the employees' performance and the purpose of this style is to give authority to all the employees to promote their teamwork.

Sharma and Talvar (2007) used questionnaires and integration of organisational excellence with Vedic philosophy analysis in their research and concluded that the main focus of leadership should be on value-based leadership in order for sustainable growth and the key factor in excellence model is value and process. Skildsen et al in their study, concluded that the criteria weight of EFQM varies from country to country and what actually happens is not in congruence with the model, has no stability and varies over the years. Kalomora et al (2006) investigated the relationship between excellence criteria and empowering EFQM in order to improve the quality of higher education. They tested their hypothesis by investigating the literature and empirical style in the universities of Spain

and concluded that there is a relationship between the empowering criteria and enabling factors play a major role in achieving organisational excellence. Kalomora and Deldan (2006) carried out a field research and investigated the organisational excellence model in eleven universities of Spain. The results of their study showed that all the enabling factors of this model are influential in identifying the strength of universities and developing them in order to achieve excellence. Tar Juan Jose (2005) did a self-assessment in five state universities of Spain based on organisational excellence model and found out that the process of self-assessment, when done properly, can be used as a strong tool for developing universities and collecting useful and positive results from the university criteria. Valjop and snaho (2003, 2005) in their study titled, “improving the quality of psychiatric care in the public hospitals of Madrid” used organisational excellence model and concluded that organisational excellence model is a good framework for identifying areas that can be improved. They also stated that just one criteria (out of 32 criteria) of this model had no usage and finally the total point for this hospital was 209 in 2003 and for 2005 it was estimated to be 311.

Conceptual Framework

Conceptual framework of the present research is based on Peters and Waterman’s organisational excellence model (1982). This model is used as dependant variable and includes the following eight dimensions:

1. Bias towards Action
2. Continued Contact with Customers
3. Operational Autonomy and entrepreneurship
4. Productivity Improvement Via people
5. Stress on the Key Business Values
6. Emphasis on doing what they know best (Sticking to the knitting)
7. Simple form, lean staff
8. Loose-tight Control

Information technology as categorized by Martinez (quoted by Sarrafizadeh, 2004) is used as the independent variable and includes the following dimensions: administration, communication, support decision making and planning. These dimensions are the basis for the research questions.

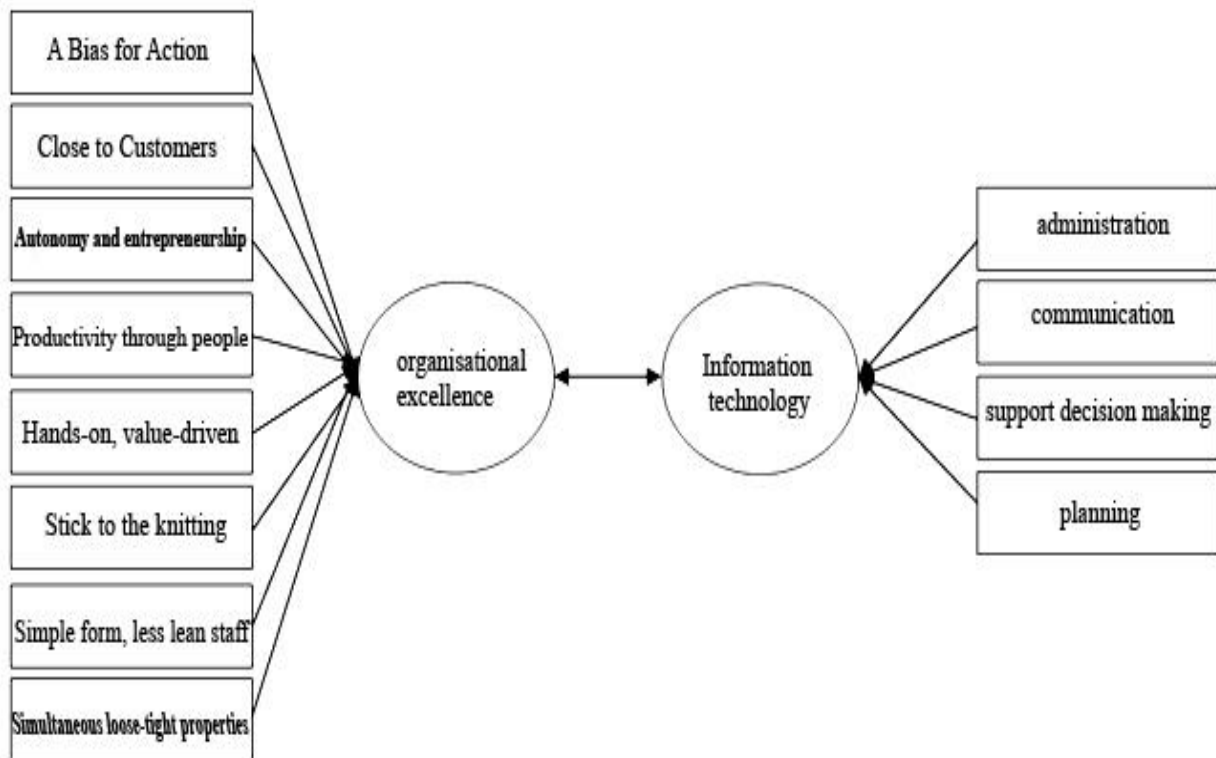


Figure 1 Conceptual model

Research Questions

Major Question

Is there a significant relationship between applying information technology and achieving organisational excellence in state banks?

Minor questions

1. Is there a significant relationship between applying information technology in administration and achieving organisational excellence?
2. Is there a significant relationship between applying information technology in communication and achieving organisational excellence?
3. Is there a significant relationship between applying information technology in decision making and achieving organisational excellence?
4. Is there a significant relationship between applying information technology in planning and achieving organisational excellence?

Methodology

The present research is an applied research in terms of its goal. The nature of the present work is descriptive-correlational and includes a survey methodology. Data collection method is cross-sectional. Its setting is summer 1394, the city of Marivan in Kurdistan province. The population of the present research includes all the personnel of state banks of marivan, including 170 individuals. Of this sample, 120 individuals were selected based on Cochran formula with finite population, estimated error rate ($d=5\%$) and confidence interval 95%. Peters and Waterman's standard questionnaire which was designed in 1984 was used to measure the organisational excellence of the statistical population of research. This questionnaire covers all the eight dimensions of organisational excellence and includes Likert's five scales (very low, slightly low, neutral, moderate, high, extremely high). Also, standard questionnaire of Zegardy and Ismaili (۲۰۰۸) was used to measure the level of applying information technology. This questionnaire includes the Likert's five scale (1= minimum use of information technology, 5= maximum use of information technology). Experts' opinions and Bartlett & KMO test were used to measure the validity of questionnaires. The results showed 0/805 validity for KMO test and 5262/679 for Bartlett test. These tests were significant at the level of 000 which is less than the error rate of $\text{sig} \leq 0/05$ and that is indicative of the validity of questionnaires. The data are suitable for factor analysis. The results of information technology questionnaire test show 4356/245 for Bartlett test and 0/758 for KMO test. These tests were significant at the level of 000 which is less than the error rate of $\text{sig} \leq 0/05$ and this is indicative of the validity of information technology questionnaires. Therefore, the research data are suitable for confirmatory factor analysis.

Moreover, Cronbach's alpha was used to measure the reliability of the questionnaires. The reliability of the organizational excellence questionnaire was 85% and the reliability of information technology questionnaire was 77%. Since these numbers are more than 0/70 so the questionnaires are also reliable (Kalantari, 2008). Statistical methods of Pearson correlation, linear regression and structural equation modelling, using SPSS19 and LISREL8.80 soft wares, were used for data analysis.

Results

Among the total 120 participants, 115(95/8 %) of them were male and 5(4/2%) of them were female. The average age of the participants was 39/90. The youngest participant was 27 and the oldest participant was 57. 12 individuals (10%) were diploma, 36 (30%) associates degree, 60 (50%) were graduate and finally 12 (10%) hold master degree or higher. In addition, 79 participants (43/9%) had five years of working experience, 43 participants (23/9%) had six to ten years of working experience, 18 participants (10%) had eleven to fifteen years of working experience, 19 participants (10/6 %) had sixteen to twenty years of working experience and finally, 21 participants (11/7 %) had more than twenty years of working experience.

Pearson correlation was used to test the hypothesis and investigate the impact of each of the variables. Table one shows the relationship between all dimensions of information technology and organisational excellence which form the main and sub-hypothesis of the present research.

Table1 Pearson correlation between the dimensions of information technology and organizational excellence

Research variables		The first sub-hypothesis	The second sub-hypothesis	The third sub-hypothesis	The fourth sub-hypothesis
		IT on administration	IT on communication	IT on decision making	IT on planning
Organizational excellence	R	0.997**	0.923**	0.886**	0.939**
	Sig	0.000	0.000	0.000	0.000
Bias towards Action	R	0.933**	0.865**	0.829**	0.942**
	Sig	0.000	0.000	0.000	0.000
Continued Contact with Customers	R	0.962**	0.891**	0.935**	0.931**
	Sig	0.000	0.000	0.000	0.000
Operational Autonomy and entrepreneurship	R	0.889**	0.950**	0.916**	0.902**
	Sig	0.000	0.000	0.000	0.000
Productivity Improvement Via people	R	0.890**	0.859**	0.984**	0.988**
	Sig	0.000	0.000	0.000	0.000
Stress on the Key Business Values	R	0.920**	0.817**	0.868**	0.905**
	Sig	0.000	0.000	0.000	0.000
Emphasis on doing what they know best (Sticking to the knitting)	R	0.899**	0.898**	0.922**	0.821**
	Sig	0.000	0.000	0.000	0.000
Simple form, lean staff	R	0.869**	0.810**	0.914**	0.935**
	Sig	0.000	0.000	0.000	0.000
Loose-tight Control	R	0.894**	0.819**	0.855**	0.913**
	Sig	0.000	0.000	0.000	0.000
The main hypothesis	The overall correlation of information technology with organizational excellence			Sig	0.000
				R	0.945**
				N	120

The results of table one demonstrated that administration, communication, support decision making and planning dimensions of information technology have a significant and positive relationship with the dimensions of organisational excellence at the level of sig -000 because this level of signification is less than the error rate of α -5%. Also R rate shows the high correlation between dependant and independent variables. In other words, it shows the significant and positive relationship between information technology

and organisational excellence. On the other hand, this relationship is significant at the level of 1%.

Confirmatory Factor Analysis of the Conceptual Model of Research

Confirmatory factor analysis and goodness-of-fit test were used to evaluate the relationship between the conceptual framework and parameters of the present research based on LISREL software. Table two indicated the relationship between these variables. LISREL output show the relationship between independent variable (information technology) and dependant variable as a non-standard estimation relationship.

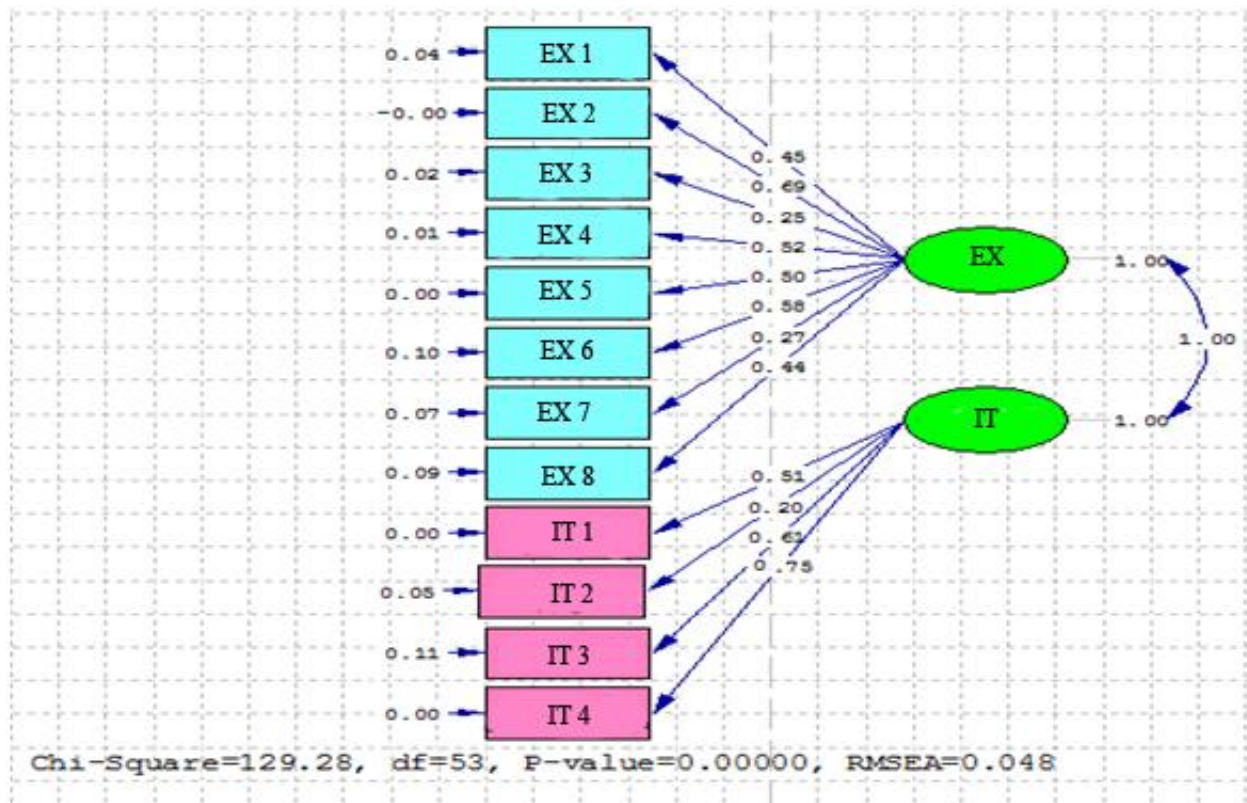


Figure 2: Factor analysis of the conceptual model in nonstandard estimation

According to figure two, P-value and RMSEA are 000 and 0/048 respectively. Since RMSEA is less than 0/1 the model has a good validity. On the other hand, since P-value is less than 0/0, so the selected model is appropriate for the present research. X^2/df which is less than 3, shows the validity of the present model. The conceptual framework of the research is shown next to the confirmatory factor analysis in the standard estimation.

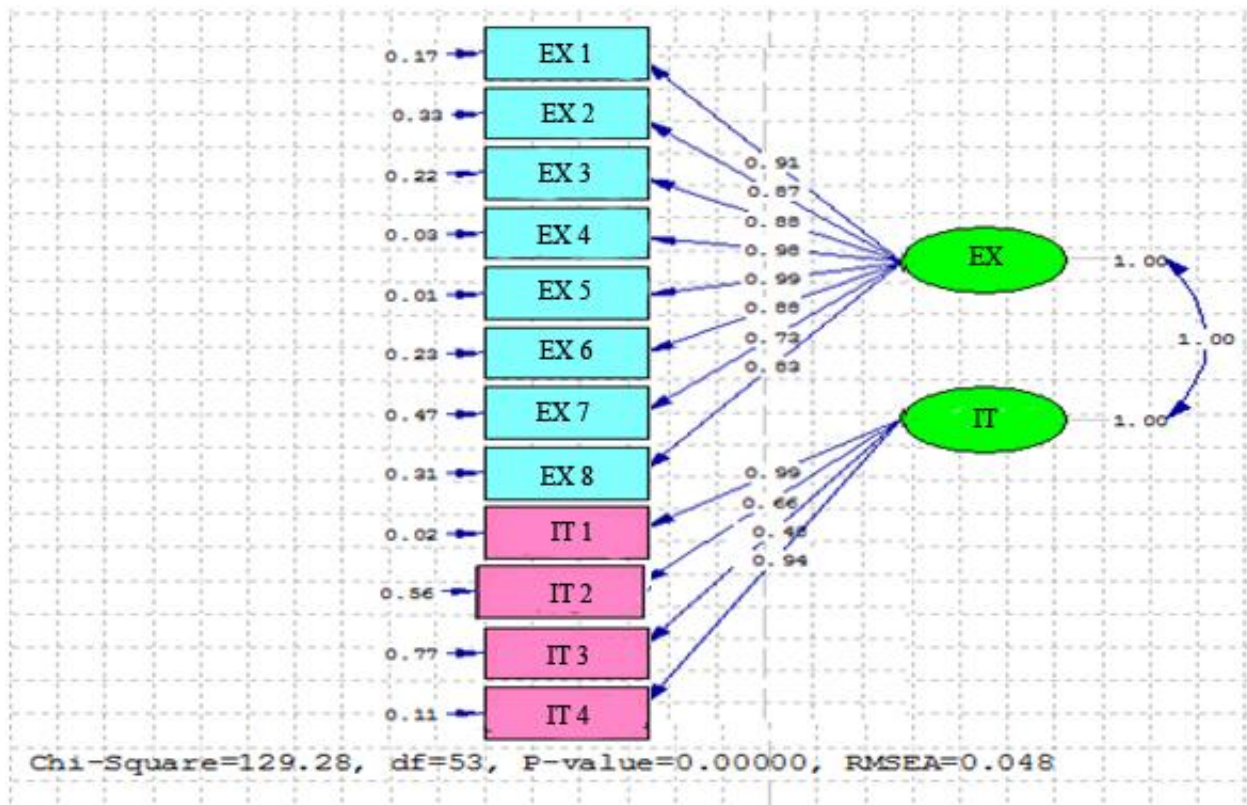


Figure 3: Factor analysis of the conceptual model in the standard estimation

As figure 3 demonstrates, the load factor of variables is 0/3 which is indicative of the correlation between variables and the impact of observed variables on latent variables. All the load factor of the two variables of organisational excellence and information technology have a coefficient near to one and this is indicative of the reliability of the research model. Standard estimation chart is also demonstrated.

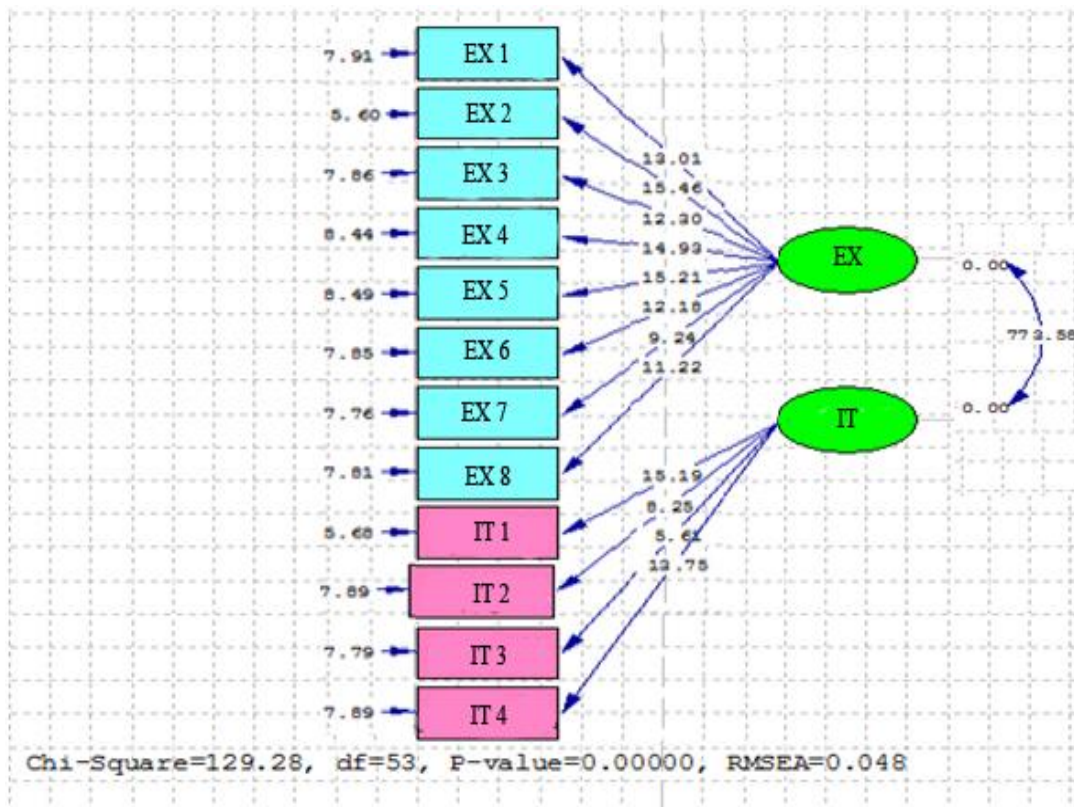


Figure 4 factor analysis of the conceptual model at the signification coefficient

Figure 4 shows the signification of coefficients and parameters of organisational excellence and information technology dimensions of the research model. Numbers which are larger than 2 or smaller than -2, are significant. As shown in figure 4, all the numbers are larger than 2. This is indicative of the positive relationship between information technology and organisational excellence. In other words, information technology has been able to explain organisational excellence in the statistical population of the present research. As shown in figure 4, the administration dimension of information technology (independent variable) with the coefficient of 15/19 had the greatest effect on organisational excellence. Also planning dimension of information technology (13/75), communication dimension of information technology (8/25) and support decision making dimension of information technology are respectively the next influential elements on organisational excellence.

In addition, parameters of CFI, NNFI and SRMR in table 3, with the coefficients of 0/078, 0/09, 0/91 respectively, prove the above fact.

Table 2 Fitness indexes of the conceptual model

Row	Fitness index	A good fitness	Acceptable fitness	Fitness of conceptual model
1	$X^2 = (\text{Chi Square})$	$0 \leq X^2 \leq 3df$	$X^2 \leq 3df$	$X^2=3*df=159(Df=53)$
2	X^2 / df	$0 \leq X^2 / df \leq 2$	$2 \leq X^2 / df \leq 3$	2.44
3	RMSEA	$0 \leq RMSEA \leq 0.05$	$RMSEA \leq 0.08$	0.048
4	SRMR	$0 \leq SRMR \leq 0.05$	$SRMR \leq 0.10$	0.078
5	NNFI	$0.95 \leq NNFI \leq 1.00$	$0.90 \leq NNFI$	0.90
6	CFI	$0.95 \leq CFI \leq 1.00$	$0.90 \leq CFI$	0.91
7	GFI	$0.90 \leq GFI \leq 1.00$	$0.80 \leq GFI$	0.81
8	AGFI	$0.90 \leq AGFI \leq 1.00$	Close to GFI	0.80

Discussion and conclusion

One of the most significant present challenges of organisations is achieving organisational stability and then moving towards improvement and excellence. The remarkable note in this area is the two-way and interactive effects of organizational sustainability and organizational excellence. In other words, it can be argued that achieving organizational sustainability requires moving towards excellence and improvement and achieving organisational excellence results in the survival and stability of organisations. One of the significant factors in achieving organisational excellence is applying information technology in organisations, specially in banks. So, in the present paper the relationship between applying information technology and organisational excellence in state banks was investigated. The results showed that there is a significant, positive and direct relationship between applying information technology and achieving organisational excellence. So, the banks should give priority to using information technology in order to achieve organisational excellence and stay ahead of the competition between organisations.

Given the direct, positive and significant relationship between applying information technology in administration and organisational excellence, it is recommended that the organisations develop their using of information technology in administrative parts. In order to develop organisational excellence, the state banks should use updated information technologies like new versions of software and hardware (such as factoring system or bill exchange, inventory control systems, payroll systems, information database, accounting systems).

Training courses on the principles of organisational excellence and the application of information technology are held for the staff. Given the direct, positive and significant relationship between applying information technology in communication and achieving organisational excellence, it is recommended that the organisations develop their use of information technology in communication. Advertising, direct services through the organization's website, the organization's intranet, electronic data exchange with suppliers or customers via electronic exchange of data and information in the state banks of the city of Marivan should be evaluated as a permanent or long-term program or as a competitive strategy of the organization.

Given the direct, positive and significant relationship between applying information technology in support decision making dimension and achieving organisational excellence, it is suggested that manager, in addition to establishing strong databases for supporting the decisions of the organisation, be familiar with decision support systems such as DSS, data analysis techniques and decision-making techniques of information technology. Given the direct, positive and significant relationship between applying information technology in planning dimension and achieving organisational excellence, it is suggested that organisations give priority to information technology. For a better planning in organisation, managers should use computer-assisted planning systems CAPP, enterprise resource planning ERP, and software and technologies of human resource management.

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