Studying the Relationship between Organizational Innovation and System thought in Service Organization

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Abstract
In this research, we study the relationship and effect of organizational innovation and its dimensions on system thought and the relationship between these two variables have been evaluated in better adaption process of service organizations with the environment and society. To collect data after defining validity and reliability, organizational innovation questionnaire of choopani & et al (2012) and system thought have been used0 the case statistical society includes all employees of water and sewage firm, regional water firm, and regional power firm of sistan and baloucheestan. Also, sampling method is according to the classification method that employees with two year diploma to high education have been selected that the number of irreversible questionnaire have been 149 in total three societies after distribution of questionnaire. After analysis and decomposition of information using lisrel and spss 19 software and regression statistical, methods and spearman correlation coefficient it has been identified that there is meaningful and positive relationship between organizational innovation and system thought. There was also significant and positive relationship between three dimensions of organizational innovation (production innovation, administrative innovation and process innovation) with the system thought.

Keywords: organizational innovation, production innovation, administrative innovation, process innovation, system thought

Introduction
Today, innovation subject has paid attention between scientists and researchers of different fields and has much importance in the organizations of high change and evolution for competition with competitor organizations in the evolution cycle (Vaezi et al, 2010). Innovation has been identified as the main conductor of the organizations for high profitability, growth and flourishment (Elmquist et al, 2009). All organizations need new thoughts and new ideas for survival. New thoughts effect on organizational body. In our age, we must preserve innovation

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and recreation route to prevent its destruction and stagnation (Alvani, 2010, 229). Innovation has a long term, because human seeks new ways to perform his/her works (Aqha davood et al, 2012). In the economical theories, it is nearly one century that innovation has been recognized as motor power of economical development and growth (Choopani et al, 2012). Innovation comes from latin word “innovative” means constructing a new think. Innovation is a process, at first it allows person to climb up own image to sky, that falls it on the ground and engineers (idea engineering) to convert it to idea, then it converts idea to practical, useful and suitable ideas through idea management. (Creativity) converts idea to product, service and process and at last, innovative process is completed by commercialization of product, service and new or developed processes in the market. In other words, creativity is necessary for the innovation. But we must pay attention that there is a long distance from the creativity to innovation and usually entrepreneurs ease this distance. Innovation has the important role in the economical development and has been paid attention by many researchers and the considerable studies has been performed in this domain. It is the application of ideas and the new behavior (Ahmadian et al, 2011). Innovation and creativity are the concepts that always accompany with various livelihood, economical and social activation of human and from the long time ago, the people or nations could have more innovation in their activities, have been more successful. Iran in agricultural age, is one of the successful countries because of its innovations in recovery of water and production methods in organizational or tool procedures and it has able to be on of the top countries a long time because of this technical and social power. By the advent of Industrial Revolution in the west science and affair management according to the various expertise, innovations organized in various productive fields accidentally and discretely and then extended so that today the competition between countries is more. On the base of promote programs of innovation and technology (Ebadi. 2011, 7). Innovation provides comprehensive and total view with respect to organization and its elements. Actually, system thought is fundamental principle of learner organization and a strong tool to ease the organizational learning (Sharifi et al, 2009). System thought is a framework to consider patterns and procedures and understands mutual communications between its elements, especially it is very important to consider the world with all complexities as a whole (Beikzad et al, 2012, 88). In the present research, we want to measure the relationship of organizational innovations and its components with system thought.

**Review on research background and theoretical framework**

**Organizational innovations**

One of the most important and complexity problem that today organizations face to it, innovation (Almir et al. 2004, 5). After efficiency in decades of 1950 and 1960, quality in decades of 1970 and 1980, flexibility in decades of 1980 and 1990, we live in innovation age (Janson, 2004, 1). Managers must design new work environment as such that are instigators of creativity and continuous route of presenting of new thought. Managers must care to perform good idea, actually the modified or new process. In addition, they must assure of economical plans about production of products and presenting the new services (Rezaeian, 2009, 106). As example, Faster and Ceplan found that among 500 firms of standard index, only 45 firms had remained in annual index of 1997. Among 12 top firms of Davjonz index in 1900, only one firm
continues to his life: general Electric (Teid et al, 2012, 10). Usually this word in general meaning is considers as the new product or phenomenon that has been created by man. But in the more precious meaning and in technology management domain, the more especial definition is presented for it that differs from concepts like creativity and invention. For innovation, various views have been presented that here we infer some of them: This concept has been proposed by Shomptir for the first time in 1934 that has been recognized by innovation description and considered as the process of establishing new commercial name, products, service and processes and its effect on the economical development. After that different scientists explained differently this concept for long time survival. And innovation has been considered as very important factor in the organizations. The past literature of innovation had two important procedures: goal-based: concentration on innovation and topic-based: concentration on the topics like country, industry, organizations and groups that invented and performed the innovation. Organizational innovations has been described as a formation of new important and useful services or products in the organizational environment (Vaezi et al, 2010). In Cot et al (2012) research, innovation means: renewal in structure, process or borders of one organization by purpose of access to thrift in use of workforce or capital source and or improved ability for satisfying customer needs, for example: teaming, diversifying staff skills and management system. Generally, innovation is a process of creative idea and change to product, service and methods of operation (Nazeri zadeh, 2003, 2). Conter believes that innovation includes the formation of idea, acceptance and performing new ideas in the process, products and service (Aqha Davood et al, 2010). Organizational innovations includes the acceptance of one opinion or behavior that is fresh for industry, market or public environment of the organization (Mazloumi et al, 2013). Innovation includes the new methods of the management, new organization, new marketing concepts and new big firms (Battisti et al, 2010). The new methods in the knowledge to perform the performance are management and new processes in order to change strategy, organization structure, administrative methods and system (Damanpour et al, 2011). According to Elmire & Mouris (2004), innovation process bases on three theoretical dimensions. As shown in figure 1
Hang & et al (2010) consider organizational innovation as three dimensions including:

- Product innovation: promotion of service and product combination
- Process innovation: improving combination and efficiency of internal operations
- General innovation of organization: includes improving competitive advantage, cooperation profitability, decrease of costs, improving staff productivity and improving asset flow of organization (Mazloumi et al, 2003).

Choopani & et al (2002) express three dimensions for organizational innovation that include:

1- Production innovation: it means that to what extent organization is pioneer in presenting service, allocation of financial (sources to research and development and so on. Actually, this innovation emphasizes on the change of manager view and strength of technical knowledge source of organization and complexity of structure and lack of concentration (Bahrami et al, 2011). Key indices of the measurement of this dimensions include:
   - Pioneering in offering new services (productions)
   - Developing new service (productions) in the framework of training people, teams in the organization
   - Developing goods (serviced) for new group of customers (Choopani et al, 2002).

2- Process innovation: It consists applying improved or new methods of production. Distribution and or delivering service. In fact, it means that to what extent organization applies new technology and examines the new methods. Organization usually uses this kind of innovation to create competitive advantage (Bahrami et al, 2011). Key indices of measurement of this dimension include:
   - Change in service or production process
   - Seeking new methods and ways to perform affairs
   - Pioneering in offering new methods and ways of production

3- Administrative innovation: It means to what extent organization managers use new management system and so on in the management (the same). It relates to change in the organizational structure and administrative processes. So that innovation of administrative organization has close relationship with administrative activities of organization and indirect relationship with work activities of organization (Bahrami et al, 2011). Key indices of the measurement of this dimension include:
   - Seeking new administrative system (like attraction system, recuirement and so on).
   - Pioneering in offering new administrative system
   - Establishing structures and relationships inside new organization (Choooani et al, 2012).

**System thought**

System thought is a new view that exists the different insight by the concentration on one general image and internal and external nitration in lieu of dividing general image into smaller parts. In system niew, thought process is ring-shaped nor direct line, namely there isn't just one cause and effect and has been constructed by one series of cause and effect processes (Shahreyari, 2011).

System thought is a conceptual framework to solve problems that it will occur through concentration on the problems. Solving problems is obtained by finding pattern for increase of organizational understanding and attention to problem. The obtained results of System thought
depends on manner of establishing system, because System thought is established from current relations between different parts of system. System thought includes the various features that we can infer to mutual dependency between system parts, holism, searching purpose, change of input to output, negative anthropology, feedback, co-ultimate, multi-terminal and co-additive (Amini et al, 2013). One of the important subjects in the System thought is to pay attention to feedback. It is one of the mechanisms that exists in some systems. Feedback is a process that one signal passes from cause and effect chain so that it effects on itself (Moazeni et al, 2011).

In System thought, organizations can be as follows:
1. Human with different raison dimensions and various materials and intellectual aspects.
2. The existence of wide information network to easy decision-making
3. Attention to organizational environment
4. Equipment and technology (Qhalei et al, 2011)

Research Background
This research is new and so far researcher hasn’t studied this topic despite studying various research and scientific references. Therefore, for more familiarity with performed researches, we study some researchers, that are close to this topic.

Jadidi et al (2012) in their article by title “studying the effect of organizational learning (Marsik & vatkeniz model) on organizational innovation” concluded that each seven dimensions of continuous learning, team learning, delegation of authority to employee, radical system, system communication, research, dialoge and strategic leadership for learning effect on organizational innovation.

It was also identified that system communication variable has the most impression on the organizational innovation comparing standardized Beta coefficient.

In the other research by title “the relationship of organizational learning components with innovation level in insurance industry” Sehat & Abbaspour (2012) showed that we can promote innovation level in organization by strengthening organizational learning components namely management commitment, system view, suitable and open space for experiment, transformation and integration of knowledge. In other word, organizational learning is used as competitive advantage on one hand, and innovative increase in organization is exploited to preserve this competitive advantage because of organizational learning on the other hand.

Shahabi & Jalalian (2011) performed research by topic “studying the relationship between knowledge inertia, organizational learning and organizational innovation in company of oil and gas production in west and showed that knowledge inertia effects on the organizational learning directly and organizational learning effects on organizational innovation through organizational learning indirectly.

In the other research, Matoqhi et al (2010) performed research as “Tendency role to learning on innovation and organizational performance". The finding show the positive effect of axial learning on innovation. As a whole, positive and meaningful effect of commitment to learning on innovation comes from a worth that organizations attach importance for learning, so learning culture is shaped on organization and organization commits oneself to learning values, understanding reasons and its effects.
In Amini et al’s (2012) research has been performed to measure system thought and 1000 senior managers of Tehran medical science university have been participate as sample. They concluded that the system thought factor is desirable among many managers in university.

**Conceptual model of research**

After expressing theoretical and research background, we offer conceptual model (figure 1). Dimensions of organizational innovation have been considered according to Choopani et al (2012).

![Conceptual model](image)

According to the Conceptual model, research hypothesis are as follows:

**The main hypothesis**

There is significant relationship between organizational innovation with system thought.

**The minor hypothesis**

There is significant relationship between production innovation with system thought.
There is significant relationship between process innovation with system thought.
There is significant relationship between administrative innovation with system thought.

**Methodology**

This research is descriptive and correlation kind. And library method has been used to collect information about theoretical foundation through studying books, magazines and foreign and domestic articles adapted from the related internet about organizational innovation and system thought.
Statistical society includes: a service of people or units that has at least one common attribute (Sarmad et al, 1999. 177).
Statistical society all employees of regional power, regional water firms and water and sewage firm of sistan and balouchestan province. Statistical sample includes a series of attributes that is selected from one, section, one group or bigger society, so that these series represent qualities of features of that section, group or bigger society (Khaki, 250, 1008).
In this recent research, classification sampling method is used. Employees were divided in two classes by super diploma to high and super diploma to low education degree. Questionnaire was just distributed between employees with super diploma to high education certification. In table 1, we showed the number of employees with super diploma to high education degree in three regional water. Power and sewage water firms:
Table 1: The number of employees with super-diploma to high degree in the studied firms:

<table>
<thead>
<tr>
<th>REGIONAL WATER</th>
<th>REGIONAL POWER</th>
<th>REGIONAL WATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>55</td>
<td>65</td>
</tr>
</tbody>
</table>

After distribution of questionnaire among all employees with super-diploma to high degree, the number of collected questionnaire have been shown in table 2:

Table 2: The number of collected questionnaire of the studied firms:

<table>
<thead>
<tr>
<th>WATER AND SEWAGE</th>
<th>REGIONAL POWER</th>
<th>REGIONAL WATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>52</td>
<td>51</td>
<td>46</td>
</tr>
</tbody>
</table>

In all research kinds, whether those are described for the actual situation on or those designed for the study of relationships between phenomena and variables, researcher must collect data and measure or describe variables. The applied tool is questionnaire. Questionnaire is one of the most common research tools that is used in most behavioral science researches. Questionnaire are classified into closed and open classes (Sharifi, 2001, 165-183). The present research is closed kind. Therefore, in the present research, the methods of collecting information includes:

Library studies such as studying foreign and domestic magazines and books in the database (internet) for access to the theoretical foundation and use of other researcher experiences.

Use of questionnaire as the main tool of collecting information for access to the considered data.

In this research, 20 questions and two questionnaires were used to measure organizational innovation variables and system thought. In addition, four questions have been used to measure demographic variables. Then, the characteristic of each questionnaire has been mentioned.

1. Organizational innovation questionnaire: To provide this tool, first by studying past researcher and background, components have been identified and studied that most authorities and researcher have been emphasized on it. Finally, three dimensions of production innovation, process innovation and administrative innovation have been extracted for providing questionnaire. This questionnaire has been designed considering these three dimensions and has 16 questions. It is a combination of Jimnz et al (2008), Peyadz (2006), Prajgo and Sohel (2006) questionnaire (Choopani et al, 2012).

In designing questionnaire, five-choice spectrum of Likert has been used that is one of the most common measurement scales.
Table 3: Comparison of questionnaire questions of tendency to organizational innovation with its components

<table>
<thead>
<tr>
<th>Questions related to each minor scale</th>
<th>Minor scale</th>
<th>Questions related to each scale</th>
<th>scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>7, 6, 5, 4, 3, 2, 1</td>
<td>Production innovation</td>
<td>Questions 16 to 31</td>
<td>Tendency to organizational innovation</td>
</tr>
<tr>
<td>13, 12, 11, 10, 9, 8</td>
<td>Process innovation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17, 16, 15, 14</td>
<td>Administrative innovation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. System thought questionnaire: Neefe's (2001) standard questionnaire has been used to measure system thought. This questionnaire consists 4 questions that has been designed according to organizational learning dimensions of sange's (1992) view.

3. Questionnaire of demographic characteristics: it is used to obtain questionnaire, age, gender, education degree, service record variables have been used.

Research Validity
In the recent research, conceptual validity method has been used. Because conceptual validity has been used when the empirical validity isn't possible. Actually, researcher measurement concept by items and criteria (Khaki, 2009. 291). According to standard questionnaire, researcher has used factor analysis of confirmation for validity test in addition to reference to view of experts and masters.

In confirmation method, it is identified that data match with factor structure or not. In two figure 2, 3 we has studied this topic. In the below figures, the numbers between apparent variables (questions) hidden variables or structures are called factor load or factor weight that show correlation and load amount that one apparent variable creates on hidden variable and must be more than 0/3. In the first figure that measures validity of organizational innovation and its dimensions, it is shown that factor load of question 12 is lower that 3% thus it is omitted from model. In second figure, that measure validity of system thought, it is shown that all factor loads are bigger than 3%. Therefore, questionnaire of system thought has good validity.
Trust or Reliability of research
One test is reliability, when there are high correlation in the observes scores and real scores. Various factors are effective on validity and reliability such as 1) undefined terms, 2) unjustification of questionnaire, 3) lack of homogeneity and harmony of responders, 4) change of conditions and grounds of asking question, 5) internal and external situation of tool, 6) lack of proportion of various phases of research process (Ranji Jifroudi, 2010). Kronbakh alpha method has been used to determine reliability and finally kronbakh alpha coefficient in obtained 0/839 and 0/867 for questionnaire of organizational innovation and system thought respectively. Both questionnaires have the necessary reliability because kronbakh alpha coefficient is more than 0/7.
Data analysis
According to the received questionnaires from 149 statistical samples, demographic information obtained as follows:

Table 4: a summary of demographic data

<table>
<thead>
<tr>
<th>Accumulation percent</th>
<th>Frequency percent</th>
<th>Frequency number</th>
<th>Sub groupe</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.6</td>
<td>21.5</td>
<td>32</td>
<td>Below 30</td>
</tr>
<tr>
<td>74.3</td>
<td>52.3</td>
<td>78</td>
<td>30 to 40</td>
</tr>
<tr>
<td>93.9</td>
<td>19.5</td>
<td>29</td>
<td>40 to 50</td>
</tr>
<tr>
<td>100</td>
<td>6</td>
<td>9</td>
<td>50 to high</td>
</tr>
<tr>
<td>21.6</td>
<td>57.7</td>
<td>147</td>
<td>Age</td>
</tr>
<tr>
<td>100</td>
<td>40.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>58.5</td>
<td>15.4</td>
<td>23</td>
<td>Man</td>
</tr>
<tr>
<td>100</td>
<td>61.7</td>
<td>92</td>
<td>Woman</td>
</tr>
<tr>
<td>77.7</td>
<td>22.1</td>
<td>33</td>
<td>Education degree</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>15.5</td>
<td>14.1</td>
<td>21</td>
<td>Below 5</td>
</tr>
<tr>
<td>42.6</td>
<td>28.2</td>
<td>42</td>
<td>5 to 10</td>
</tr>
<tr>
<td>65.5</td>
<td>22.8</td>
<td>34</td>
<td>10 to 15</td>
</tr>
<tr>
<td>85.1</td>
<td>19.5</td>
<td>29</td>
<td>15 to 20</td>
</tr>
<tr>
<td>100</td>
<td>14.8</td>
<td>22</td>
<td>20 to high</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Service record</td>
</tr>
</tbody>
</table>

As data are ranked, Spearman correlation has been used to obtain correlation between data. The main hypothesis: There is significant relationship between organizational innovation with system thought.

This hypothesis has been defined as the statistical hypothesis as follows:

Null hypothesis: there isn't significant correlation between organizational innovation and system thought.

Opposition hypothesis: there is significant correlation between organizational innovation and system thought.

\[
H_0 : \mu \leq 3 \\
H_1 : \mu > 3
\]

Table 5: A summary of Spearman's correlation coefficient test about the relationship of organizational innovation and system thought.

<table>
<thead>
<tr>
<th>Test result</th>
<th>Significant level</th>
<th>Correlation coefficient</th>
<th>Second variable</th>
<th>First variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is relationship</td>
<td>.000</td>
<td>0.562</td>
<td>System thought</td>
<td>Organizational innovation</td>
</tr>
</tbody>
</table>
According to information of table 4, it is considered that in significant level sig=0.000 Spearman correlation coefficient is 0/562 between organizational innovation and system thought, thus, there is positive and correlation between two above variables. Therefore, by confidence more than 99 percent, null hypothesis is rejected and research hypothesis is accepted. And it is concluded that there is significant and direct relationship between organizational innovation and system thought. In three researched organizations.

First minor hypothesis: There is significant relationship between production innovation and system thought.

This has been defined as the statistical hypothesis as follows:

Null hypothesis: there isn’t significant correlation between production innovation and system thought.

Opposition hypothesis: there is significant correlation between production innovation and system thought.

\[
\begin{align*}
H_0 : \mu & \leq 3 \\
H_1 : \mu & > 3
\end{align*}
\]

Table 5: A summary of Spearman correlation coefficient test about the relationship of production innovation and system thought.

<table>
<thead>
<tr>
<th>Test result</th>
<th>Significant level</th>
<th>Correlation coefficient</th>
<th>Second variable</th>
<th>First variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is relationship</td>
<td>.000</td>
<td>0.520</td>
<td>System thought</td>
<td>Production innovation</td>
</tr>
</tbody>
</table>

Information of table 5 indicates that in the significant level sin=0/000, spearman correlation test is 0/520 between production innovation and system thought in the studied organizations. Thus, there is positive and significant correlation between two above variables. Thus, with confidence more than 0/99, null hypothesis is rejected and research hypothesis accepted and it is concluded that there is direct relationship between production innovation and system thought in the studied firms.

Second minor hypothesis: there is significant relationship between process innovation and system thought.

Null hypothesis: there isn't significant correlation between process innovation and system thought.

Opposition hypothesis: there is significant correlation between process innovation and system thought.

\[
\begin{align*}
H_0 : \mu & \leq 3 \\
H_1 : \mu & > 3
\end{align*}
\]

Table 6: A summary of spearman correlation coefficient test about process innovation and system thought.

<table>
<thead>
<tr>
<th>Test result</th>
<th>Significant level</th>
<th>Correlation coefficient</th>
<th>Second variable</th>
<th>First variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is relationship</td>
<td>.000</td>
<td>.516</td>
<td>System thought</td>
<td>Process innovation</td>
</tr>
</tbody>
</table>
According to information of above table 6, it is observed that in significant level sig=0.000, spearman correlation coefficient id 0.516 between process innovation and system thought. In the water and sewage, regional power and regional water organizations. Therefore with confidence 99%, null hypothesis is rejected and opposition hypothesis accepted and it is concluded that there is opposite and significant relationship between process innovation and system thought in the mentioned cooperation.

Third minor hypothesis: there is significant relationship between administrative innovation and system thought.

This has been defined in statistical hypothesis as follows:

Null hypothesis: there isn't significant correlation between administrative innovation and system thought.

Opposition hypothesis: there is significant correlation between administrative innovation and system thought.

Table 7: A summary of spearman correlation coefficient test about administrative innovation and system thought.

<table>
<thead>
<tr>
<th>Test result</th>
<th>Significant level</th>
<th>Correlation coefficient</th>
<th>Second variable</th>
<th>First variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is relationship</td>
<td>.000</td>
<td>.492</td>
<td>System thought</td>
<td>Administrative innovation</td>
</tr>
</tbody>
</table>

The finding of table 7 indicate that in significant level sig 0.000, spearman correlation is 0.492 between administrative innovation and system thought in the studied firms. Therefore, by confidence 99%, null hypothesis is rejected and opposition hypothesis is accepted and it is concluded that there is positive and significant relationship between administrative innovation and system thought.

In this research, Regression is used to show the effect of organizational innovation in system thought. Then, step by step regression test is used to show input effect of each dimensions on independent variable on dependent variable

Table 8: Summary of linear regression test to show the effect of organizational innovation on system thought.

<table>
<thead>
<tr>
<th>Significant variable</th>
<th>t</th>
<th>adjusted R²</th>
<th>R²</th>
<th>R</th>
<th>Dependent variable</th>
<th>Independent variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>.000</td>
<td>7.809</td>
<td>.297</td>
<td>.302</td>
<td>.549</td>
<td>System thought</td>
<td>Organizational innovation</td>
</tr>
</tbody>
</table>

As it is identified in table 8, significant level, is equal to 0.000 that show significant level of whole model.
If statistic significant level is small (lower than 0.051), then independent variables define well variations of the dependent variable.
In above table, R is equal to the correlation coefficient of course, the difference of R with correlation coefficient is that R is between Zero and +1 and on the other hand, it is never zero. Square R or \( R^2 \) in the above table is equal to square of correlation coefficient or determination coefficient. Adjusted square R or adjusted \( R^2 \) is a determination coefficient that has been adjusted. Determination coefficient shows variance value of dependent variable that has been explained by independent variables. Here, \( R^2 \) has been equal +0/302 namely variable of organizational innovation has been only explained 30/2 percent of variance (variation) of system thought variable. The bigger (t) and smaller significant level cause that independent variable (predictor) has higher effect on the dependent variable. Here t has been 7/809.

Also to explain the role of each one of components of the organizational innovation on system thought, step by step multiple linear regression model has been used, in this analysis, organizational innovation components are as predictor variables and system thought is as criterion variable.it is necessary to mention that in step by step regression, the order of entering variables is according to correlation coefficient. The results of this test have been presented in table 9.

<table>
<thead>
<tr>
<th>Significant level</th>
<th>F</th>
<th>( R^2 )</th>
<th>( R )</th>
<th>variables</th>
<th>step</th>
</tr>
</thead>
<tbody>
<tr>
<td>./000</td>
<td>25.352</td>
<td>.154</td>
<td>.393</td>
<td>Production innovation</td>
<td>1</td>
</tr>
<tr>
<td>./000</td>
<td>27.064</td>
<td>.282</td>
<td>.531</td>
<td>Process innovation</td>
<td>2</td>
</tr>
<tr>
<td>./000</td>
<td>21.054</td>
<td>.316</td>
<td>.562</td>
<td>Administrative innovation</td>
<td>3</td>
</tr>
</tbody>
</table>

As shown in table 9 at the first step, variable of production innovation has been entered to regression equation because of the highest correlation coefficient with dependent variable and just explained 15/4 percent of variance of system thought variable considering that the observed F, it is equal to 25/352. This determined variance value is in significant level sig=0/000 at the first step.

At the second step, variable of process innovation entered to regression equation after production innovation because of the highest correlation coefficient with dependent variable and set \( R^2 \) to 28/2 percent and have increased 12/8 percent of explanation power, considering that the observed F it is equal to 27/064, this explained variance value in significant on sig=0/000 level at the second step.

At the final step, variable of administrative variable has been entered to regression equation and set \( R^2 \) to 31/6 percent and increased ¾ percent of explanation power considering that the observed variable value, it is equal 21/054. This explained variance value is significant is sig=0/000 level at the third step.
Evaluating Structural section of model

After testing research hypotheses, it is necessary to propose structural model that show the relationship between present variables of research. In studying structural section of research model, we pay attention to the relationship between external and internal hidden variables. Here, the purpose is that is it accepted by data, the theoretic relationship between variables in compilation phase of the conceptual framework? Or not. In the present research, modeling technique of structure equations has been used in order to study structural model.

![Figure 5: research structural model in standard approximation](image)

Table 10: the obtained results of nikoyi test of fitness in research structural model

<table>
<thead>
<tr>
<th>RMSEA</th>
<th>P-value</th>
<th>DF</th>
<th>$X^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>0.04583</td>
<td>13</td>
<td>9.22</td>
</tr>
</tbody>
</table>

Table 10 shows the structural model between the organizational innovation and dependent variable of system thought in standard approximation and the effect amount of each one of variables and or items to explain variance of variable scores or the main factor. For the above structural model, we can compare components according to factor load and measure their effects on the dependent variable. So that, the component has bigger factor load, has more effect on the dependent variable. The results of approximation show that model is suitable. According to Lizrel output, value is also equal to 0/000. When this is lower t value, fitness is good.

![Figure 6: Significant structural coefficient of research model](image)
Finally, diagram 6 shows significant numbers of research significant model. It is shown that all relations are significant. Therefore, research model can give suitable pattern and show the relationship between dimensions and variables.

Conclusions and Suggestions
In the present research, regression and spearman tests have been used to study the effect of organizational innovation and its dimensions on system thought that the obtained results are significant in confidence level 99 percent. It means that there is significant and positive correlation between the organizational innovation and system thought. The results of table 5 to 8 indicates positive correlation between variable of organizational innovation and its dimensions on system thought. Also, the analysis results of structural equation also indicate this.

In the present research, spearman and regression test used to study the effect of organizational innovation and its effect on the system thought that the obtained results of this test are significant in confidence level 99 percent. Ti means that was significant and positive correlation between organizational innovation and system thought. The more increase in organizational innovation, the more increase in employee innovation that creates the organizational innovation. Also, three dimensions of organizational innovation including production innovation, process innovation and administrative innovation by confidence 99 percent have significant and positive relationship with system thought. After determination of correlation by regression statistical tool, it was identified that among dimensions of the organizational innovation, production innovation and process innovation have the highest effect and determination coefficient for system thought. Also according to the finding of this research, the below suggestions are proposed to improve organizational innovation and system thought.

Officers of organization must motivate their employees to change old thoughts and behaviors, use update knowledge and strengthen curiosity sense.
Officers of organization must create common space of constructive criticisms and ideas.
Officers of organization must pay special attention to receiving update information and disseminating them between employees.
Educational planning are necessary for more familiarity with employees with organization generality and its pillars.

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