Factors Causing Failure in Teleworking: the Case of Government Agencies in Iran

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Abstract
Teleworking is one of the new methods applied in most developed countries to increase organizational flexibility, reduce costs and improve performance. However, the implementation of teleworking is not so successful in Iran. Therefore, the objective of the present study is to identify the factors causing failure in implementation of teleworking. The study is carried out in the governmental agencies in Iran. The study is qualitative. The data was collected through interview and was then analyzed using Coding Method. The findings indicated that 15 concepts in 5 categories prevent the successful implementation of teleworking in government agencies in Iran. Finally, based on the findings, suggestions and recommendations were made for the managers responsible for teleworking.

Keywords: Teleworking, Failure, Factors, Qualitative Approach, Open Coding
Introduction:
Unpredictable changes in the environment of organizations make managers find new ways for organizational flexibility and better performance. Teleworking is one of such ways used in many developed countries. Teleworking is the method of organizing and performing tasks from a remote location using information technologies (Astratya and Jiaotzi, 2000 and Europe Commission, 2009). Considering social and economic benefits of teleworking, such as traffic reduction, energy-saving and environmental protection, governments are interested in the execution of teleworking (Di Martino, 2001). With the emergence of this type of working, US organizations were obliged to reduce about twenty percent of their employees in eleven states to overcome problems of air pollution and traffic. Teleworking was also considered by government agencies in Iran. In 2010, Iranian teleworking regulation for government teleworking employees was ratified and sent to Iranian state organizations. As a result the government organizations were to perform teleworking for works that are appropriate for this kind of working. The goal of such regulation was to increase productivity, work flexibility, and reduce commuting. However, the surveys showed the failure in teleworking because teleworkers did not perform their tasks remotely but in the offices. (based on Act management and planning organization, 2013). In this regard, according to 2008 report of the United Nations, Iran has earned 108 ranking for the realization of e-government. The eleventh government has researched the pathology regulations of teleworking, and the research results show failure to achieve the predetermined goals in the executive regulations of teleworking. Obviously, teleworking does not have the expected success in Iran’s government agencies. The central bank issued a new report about the financial situation of the government in autumn 2015, which reflected figures on the cost and public revenues in the country. According to the report, the government’s operational deficit in the balance in the first half of 2015 was about 34 billion, which compared to the same period of last year, showed an increase of 10.1 percent. Tax revenues had a growth of 6.4 percent since the beginning of 2015 until the end of September, and the government faced with 9.5 percent increase in running costs in the same period. As it is obvious, in recent years the government faces operation deficit. At the same time, in the reports provided by organizations that carried out teleworking around the world a positive relationship has been observed between teleworking and productivity. By the use of information and communication technologies, many developed countries have employed teleworking as a means to reduce corporate costs. According to the above discussion and the importance of teleworking in the country the practical research is necessary. There have been many quantitative researches regarding the reasons for failure in Teleworking in the country so far. However, this research approach is qualitative, and it attempts to find factors causing failure in implementation of the teleworking in the governmental organizations in Iran.

Research Literature and Background
Despite impressive growth and increasing popularity of teleworking in the world, a formal definition of teleworking does not exist yet (Baruch, 2001). There is no general agreement on the term, for example, Americans call it Telecommuting, while Europeans mostly
use Teleworking. Terms like Telecommuting and Teleworking have similar meanings and sometimes replace each other. Teleworking focuses on two main aspects: place and information technologies. Both aspects are important. Some researchers like Hindi and Muktarian (1996), Ellis and Webster (1999), Chaparo (1996), and Fierman (1999) define teleworking as a process of displacing work from the office environment to another place without emphasizing information technologies. While Thompson and Sack (1998), Escobar (1998) and Thompson (1996) define teleworking as a process of organizing work by means of information technologies. Thus, definition of teleworking focuses on two factors: location and information technology. Definitions of teleworking are discussed in the following table.

Table 1. Definitions of teleworking

<table>
<thead>
<tr>
<th>Definitions</th>
<th>Year</th>
<th>Experts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-related activities outside the official place of work using computer-based technologies</td>
<td>1994</td>
<td>Niels</td>
</tr>
<tr>
<td>Teleworking is a way to organize flexible work time and place, by using the capabilities of information technology</td>
<td>2003</td>
<td>Sohrabi</td>
</tr>
<tr>
<td>Teleworking, which is supported by information and communication technology</td>
<td>1993</td>
<td>Gary</td>
</tr>
<tr>
<td>A form of doing work, which is done away from the office and new technologies lead to this separation by facilitating communication.</td>
<td>80s</td>
<td>International labor organization</td>
</tr>
<tr>
<td>Employees, who work with the computer full time at home.</td>
<td>1995</td>
<td>Hindi and Mokhtarian</td>
</tr>
<tr>
<td>When employees do a part or all of their activities physically separate from the employer using communication technology.</td>
<td>2001</td>
<td>Baruch</td>
</tr>
<tr>
<td>Teleworking is a process based on the following variables: (1) Location (2) the use of communications technologies (3) the amount of knowledge needed to do the job (4) the teleworking communications</td>
<td>2001</td>
<td>Daniels et al.</td>
</tr>
<tr>
<td>A way to work with the use of communications technology</td>
<td>2003</td>
<td>Vega</td>
</tr>
<tr>
<td>They consider teleworking formation based on the following six variables: (1) The frequency of teleworking (2) Location (3) Flexibility in teleworking (4) The recognition of teleworking (5) The amount and types of supervision</td>
<td>2003</td>
<td>Allen et al.</td>
</tr>
<tr>
<td>Teleworking is carried out from home, satellite centers and any place other than the traditional workplace using technology.</td>
<td>2008</td>
<td>Rasmussen and Corbett</td>
</tr>
<tr>
<td>Teleworking is a new working arrangement through information technology and communications based on an agreement between the employee and the employer. It is an effective measure to reduce costs.</td>
<td>2008</td>
<td>Telivleh and Java</td>
</tr>
</tbody>
</table>
According to the above mentioned definitions of the teleworking, it can be defined as a way of doing work in a location other than the traditional workplace, such as homes, satellite and mobile offices, through the use of communication technologies. The success of teleworking depends on such factors as location, communication, technology, time, type of the job, and individual characteristics of an employer and employee.

Numerous empirical studies have been conducted on teleworking in the country and abroad. According to Ghadipasha et al. (2015) individual factors have an indirect impact on teleworking, organizational factors have no impact on teleworking, while user's perception, attitudes of managers have influence on teleworking. Brown et al. (2016) states that previous experience of directors, role of managers, staff accountability, transparency, confidence are important factors for managers to accept teleworking. Mehrabi and Tarlani (2014) used Andabisi and Kahrman model to identify factors affecting teleworking in the executive agencies. As a result they identified 10 factors: (1) IT infrastructure, (2) quality of individual and organizational life, (3) Organizational strategies and employees’ commitment, (4) Individual factors, (5) Organizational environment, (6) Employment factors, (7) Employees’ motivation, (8) Attitudes of managers, (9) Employees’ attitude, (10) Cultural factors. Mobaraki et al.(2011) analyzed teleworking in the Ministry of Health, Treatment and Medical Education. The results showed that type of work, motivation and technical aspects play important role in the success of teleworking. Fathian and Jahani (2011) conducted research in Iranian Government Organizations to identify the barriers of teleworking. Data were analyzed using the binomial test. They found out that the barriers of teleworking are lack of skills, lack of experience, resistance against organizational cultural change, lack of supportive policies and regulations, and ultimately, lack of attention to IT infrastructure. Ahmad Abdullah Wahab (2008) conducted a survey among 240 information system directors in public sector in Egypt. He revealed that in the Third World countries, factors such as pressure on management in the adoption of teleworking, perception of usefulness and internet facilities are important factors in the adoption of teleworking by managers. In another study by Peters and Dalak (2003) 2 cultural dimensions, power distance and uncertainty avoidance, were considered. The results showed that in the countries, where the power distance and uncertainty avoidance are high, teleworking is less common, then in the countries, where power distance and uncertainty avoidance is low. Another research has been done in northern and southern Europe. The results confirm the role of the national culture in the acceptance of teleworking, and mediating role of the management attitude. Le Monde et al.(2003) also emphasized the role of cultural factors in teleworking. Such factors include rules and regulations of the government, national values, and geography of the country. Due to the review and analysis of 80 articles related to the field of teleworking, it became apparent that management understanding of teleworking usefulness and the willingness of managers to use teleworking is effective in its application.
Table 2. Summary of the research findings

<table>
<thead>
<tr>
<th>Name of the researcher</th>
<th>Factors affecting teleworking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fathian and Jahani (2011)</td>
<td>Supportive policies and regulations</td>
</tr>
<tr>
<td>Mobaraki (2011)</td>
<td>Aspects of job</td>
</tr>
</tbody>
</table>

**Research Methodology**

This study is a practical research. The statistical population of the study consists of those employees of the Ministry of Welfare, who have been involved in the teleworking scheme of the government. The data were collected through interview. The coding method is used for data analysis. The factors were identified and ranked using AHP. Then, the priority of the were determined by means of pairwise comparison using expert choice software.

For this study, the respondents were asked to specify the factors causing failure in teleworking at the individual, organizational and social levels in government agencies.

After a comparison of responses from 89 interviews, the same concepts were extracted which then were grouped according to the following categories:

A. The concepts of information technology infrastructure, internet communications, equipment costs, and information security belong to the category of information and communications technology infrastructure and secure network.

B. The concepts of culture and lack of mutual trust between employees and managers in the organization belong to the category of organizational culture.

C. The concepts of management attitude to teleworking, and management style are categorized under senior management insufficient support.

D. The concepts of job nature, lack of supervision on the work performance, lack of job security, perceived organizational unfairness, communications, and loss of sense of responsibility are categorized under the underlying factors associated with job and employee characteristics.

E. The concepts of weakness in administrative processes, rules and regulations are categorized under administrative processes and procedures.

The summary of the concept extraction is presented in Table 3.
<table>
<thead>
<tr>
<th>Row</th>
<th>Proposition (frequency)</th>
<th>Concept</th>
</tr>
</thead>
</table>
| 1   | The lack of correct logic and necessary infrastructure  
      IT infrastructure (3)  
      Absence of communication system of teleworking and registration system for telework reports  
      Lack of background facilities in technology  
      Lack of modern IT infrastructure                                                                                                                      | IT infrastructure             |
| 2   | Lack of proper internet connection  
      The lack of efficient use of Internet and virtual networks  
      Lack of basic Technology infrastructure such as high speed Internet (3)  
      Lack of Internet infrastructure readiness                                                                                                           | Internet communications       |
| 3   | The high cost of equipment installation  
      The high cost of hardware and software installation  
      Hardware equipment and secure network                                                                                                               | The cost of equipment          |
| 4   | The need to change culture  
      Changing culture was necessary for managers before implementation  
      Lack of proper culture for teleworking schemes (3)  
      Lack of culture  
      Managers resistance because of culture  
      Lack of meritocracy in organizations  
      A mismatch among organization performing this type of work in Iran  
      Bureaucracy and paperwork habits in government agencies in Iran                                                                                     | Culture                       |
| 5   | Lack of managers’ attention to teleworking plan and unfamiliarity with it  
      Concern of managers about unavailability of staff (3)  
      Concern of managers about controlling employees (2)  
      Wrong views of managers of teleworkers                                                                                                                | Management attitude to telework |
### Findings

The findings show that information and communication technology infrastructure, secure network, organizational culture, underlying factors associated with job and employee characteristics, lack of excellent management support in the organization, weakness in the work process are the reasons for the failure in teleworking.

#### Table 4: Weight and rank of the Factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>Weight</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>information and communication technology infrastructure, and secure network</td>
<td>0/494</td>
<td>1</td>
</tr>
<tr>
<td>organizational culture</td>
<td>0/154</td>
<td>3</td>
</tr>
<tr>
<td>underlying factors associated with job and employee characteristics</td>
<td>0/082</td>
<td>4</td>
</tr>
<tr>
<td>Lack of excellent management support in the organization</td>
<td>0/270</td>
<td>2</td>
</tr>
<tr>
<td>weakness in the work processes and working procedures</td>
<td>0/071</td>
<td>5</td>
</tr>
</tbody>
</table>
Based on the obtained results information and communication technology infrastructure and secure network is the most important among the factors causing failure in teleworking in the government agencies in Iran.

**Discussion and Conclusion**

The present study identified the factors that were effective in the failure in teleworking in the Iranian governmental agencies. The results of the study indicated that 15 concepts in 5 categories prevent the successful implementation of teleworking in government agencies in Iran. Information and communication technology infrastructure and secure network, organizational culture, underlying factors associated with job and employee characteristics, lack of excellent management support in the organization and weakness of working processes and working procedures are the reasons for the failure in teleworking in the Iranian governmental agencies. The findings of this study, regarding information and communication technology infrastructure and secure network, are consistent with the findings of Mehrabi and Tarlani (2014), Fathian and Jahani (2011). While the findings, regarding the organizational culture, are consistent with the results of Fathian and Jahani (2011), Peters and Dalak (2003) and Le Monde (2003). The category of weaknesses in support of teleworking by senior managers is consistent with the results of Fathian and Jahani (2011) with the difference that in this study the politics of senior management support in teleworking are more accurate.

Considering the results of the study, it is suggested for managers to engage employees, managers and stakeholders in the process of communication. In this way, the sense of job insecurity and discomfort related to the fact that employees are away from the organization reduces. Then, the managers and planners of the organization have to resolve infrastructure problems in the field of IT to reduce the technical problems, during execution of the work. Further, managers should not dispatch all organizational jobs to teleworking but consider the type of the job that is appropriate for teleworking. It is also recommended for the organizations to provide training courses to the managers before the implementation of the teleworking. Training will increase managers’ awareness of and attitude to teleworking. This will eliminate the problem related to the adequate support by top managers in teleworking. Considering that this study is focused only on governmental agencies, it is recommended for the researchers to conduct similar studies in other sectors in Iran. Such studies can provide better insights into the topic and contribute to its success.

The research limitation is related to the fact that teleworking is relatively new in Iran and there are few experts in this area. Either managers do not have enough knowledge about it or they are not willing to discuss it. To fix the problem, in this study, we tried to use different techniques such as face-to-face contact and detailed explanation of the purpose of the study.
References
13. Mobarak, H and et al. 2011. Implementation of teleworking in Ministry of Health, Treatment and Medical Education and provide an appropriate model. Yazd University of Medical Sciences Shahid Sedughi, Volume 20, Number 6