

THE FEASIBILITY OF TELE WORKERS IMPLEMENTING IN ISFAHAN MUNICIPALITY

Arash Adhami, Majid Nili, Ahmadreza ShakarchiZadeh

Department of Management, Najafabad Branch, Islamic Azad University, Najafabad, Iran

Abstract

Information and communications technology has an influence on various areas of life, including the ways of doing things. One of these influences is doing some works without geographical limitations and being far away from workplace (telecommuting). In this method, a telecommuter does his/her job, with the help of network facilities and the use of computer in a place apart from his/her real workplace and the reports would be transmitted electronically to his/her workplace (by him/her). This method has many advantages and disadvantages that can affect its implementation and sustainability in organizations and offices. After reviewing the telecommuting literature and also a global evaluating of the advantages and disadvantages of this method, the present study has reviewed Isfahan municipal employees' view about the advantages and disadvantages of telecommuting. The results showed that the telecommuting has many advantages for municipal telecommuters and despite the drawbacks and difficulties that this method had had on this group, about 70% of respondents believed that there is a possibility of working, using telecommuting and 40% believed that it is possible to manage telecommuting completely in municipality and 64% said that telecommuting is applicable in some parts of municipality. The mean advantage and disadvantage of telecommuting is above average. But the mean score of telecommuting advantages was higher than the disadvantages.

Keywords: *telecommuting, telecommuting in municipality, telecommuters, advantages and disadvantages, feasibility*

INTRODUCTION

Telecommuting is any form of using information technology such as telecommunications, like using computers instead of work-related traveling and moving towards the staff instead of staff's movement towards their offices. Telecommuting is not a job, but it is a way of organizing which is built around the data processing. People or a group of people do their works (the works that involve the use of various types of electronic equipment) away from employer, the client or contractor. In fact, telecommuting is a method that allows employee to do his/her duties and tasks with more flexibility away from traditional bureaucracies and without any need to attend the office and information technology is one of the principles of its development. In Isfahan municipality, as well as the jobs which are not inherently capable of telecommuting, there are some jobs that have telecommuting nature due to the nature of not having face to face communication. Therefore, the purpose of this research is the case study and quantitative study of telecommuting in Isfahan Municipality, using feasibility methodology. The purpose of this feasibility is to examine purposefully the strengths and weaknesses of a business, participation, environment's opportunities and threats and the

resources needed to do the jobs and finally the prospects of success. The fact is that it is very difficult to maintain good productivity in telecommuting. Telecommuting project implementation is not only to provide technological mechanisms but also the most important factor for the success of telecommuting is to provide software and culture mechanisms. Some of the success factors are as follows; 1- people recognize themselves as part of the system 2- there should be a powerful telecommuting system to monitor the employees 3- there should be a strong evaluation system to assess the quality of works 4- implementing the business as a private work, project work or percentage work.

It is clear that all works do not fit telecommuting. The first step to determine appropriate ones for telecommuting is analyzing and evaluating all aspects of it. The works that do not need external feedback for rewarding and are more reliant on headwork can be suitable for telecommuting. Measuring the outputs, needing less to communicate face to face and the minimum physical requirements are their common characteristics. Hence, there must be a range of various measures to provide telecommuters perspective of objectives and leave them with their works with minimum supervision. The jobs that require long periods, concentration and quiet environment and also the jobs that require frequent trips are suitable for telecommuting.

Telecommuting is a method that allows an employee to do his/her duties and tasks with more flexibility away from traditional bureaucracies and without any need to attend the office; besides, information technology is one of the principles of its development.

Telecommuting which is known as "Telework" in the United Kingdom and "Telecommute" in the United States, is a method of working independently from geographical location of that office or company. Using informatics tools, telecommunications equipment and flexible methods which are provided by the organization, make it possible to facilitate telecommuting. Telecommuting is a concept that is strongly tied to the evolution of information technology and the development of Internet and Intranet networks.

Although it is possible to work by making use of telecommuting method without employing advanced technology and applying only a phone or a fax, simply, this probability is just subject to the institutional environment in which employees perform their telecommuting duties under a supervision. So that, there may be some companies that consider using the advanced technologies as an optional item.

Telecommuting is a technique for working outside an office. This method allows employees to work freely in different environments, at home or when they are moving and thus, it lets employee select the place and method of working.

Therefore, telecommuting is not a job, but a way of working. Therefore, a telecommuter can be a translator, journalist, programmer...and just except of staying in an office, he/she does his/her works by telecommuting.

In fact, anyone who takes the advantages of telecommuting is expected not to neglect doing tasks and duties just because of staying away from the supervision of the manager. In this case, telecommuter's workplace can be a virtual environment in a local network of his/her company or through sending files and messages by emails.

Feasibility studies are necessary when the problems are complex or valuable opportunities are harbinger. Furthermore, in order to accurately define the current and desired situation, before making human and financial investment, a preliminary study is necessary.

In feasibility studies, a list of success and failure factors, identification and rate of presence and influence of each of these factors will be discussed. The researcher is attempting to do a research in the field of the feasibility of telecommuting method in municipality by considering many researches which have been done in the field of feasibility as a model.

METHODOLOGY

In social studies, "method" is a way of obtaining evidences and manipulating them or as a more conventional expression; "method" is a technique for collecting and analyzing the data (Blake, 2005). The research method, in this plan, is a kind of cross-sectional and practical survey; the tool used in this survey is questionnaire as well. In fact, one of the research analysis' functions is a description of analytical unit sets. But survey method researchers are also trying to explain the phenomenon. Survey method Analyzer attempts to identify the phenomena through comparison of cases or analytical units and by taking the specific characteristics of each case (which someone will do) into account (Dovas, 2003).

Statistical population of this plan included all municipal employees who were 2000 people. Selection method in this study was based on the method of stratified random sampling and sample size was calculated according to Cochran's formula (Sarmad, 2004; 125). According to the demographic studies, Isfahan municipal employees are 2000 people. Therefore, $p=0.5$ and $q=0.5$ parameters were considered with 95% accuracy and 1.96 confidence level; as a result, the sample size was calculated about 384 people according to the following formula.

RESULTS

According to the received results, (64.1%) of respondents were at the age range of 29 and 39 years old, (24.7%) of them were 40 to 49 and (11.2%) were 50 to 60 years old. As indicated, the most responsive people were 246 people at the age range of 29 to 39 years and based on the obtained data, 37.8% (145 people) were women and 62.2% (239 people) were men.

Also, data analysis results for the feasibility of telecommuting revealed 77.3 % of respondents stated that there is a possibility of working through telecommuting and 22.7 % declared that there is no possibility of working through telecommuting. As we can see, most respondents (297 people) agreed to work through telecommuting and also 31.5 % (121 people) declared that it is possible to work through telecommuting in municipality although 68.5 % (263 people) said that it is impossible to telecommute in municipality.

Hypothesis 1- mean advantages and disadvantages of telecommuting are above average.

To evaluate mean advantages and disadvantages of telecommuting, one-sample T – test was used. Therefore, sample mean was compared with hypothetical mean 3. Based on the obtained results and sig, a table is less than 0.05. So, the mean advantages and disadvantages of telecommuting are above average.

Table 1: T-test results for hypothesis 1

One-Sample Statistics				
	Frequency	Mean	Standard deviation	Deviation from mean
Telecommuting disadvantages	356	2.0594	.29555	.01566
Telecommuting advantages	361	2.2715	.22492	.01184

	t	Degrees of Freedom	Significance Level (interactivity)	Mean Difference	Confidence Interval	
					Lower Boundary	Upper boundary
Telecommuting disadvantages	3.791	355	.000	.05939	.0286	.0902

Telecommuting Advantages	-61.542	360	.000	-.72853	-.7518	-.7053
--------------------------	---------	-----	------	---------	--------	--------

Hypothesis 2- mean disadvantages of telecommuting vary according to gender.

The Independent t-test was used to study the telecommuting disadvantages mean according to the gender. Table results and sig 0.123 showed that there is no significant correlation between gender and disadvantages and advantages of telecommuting.

Table 2: One-sample T – test results for Hypothesis 2

		Gender	Frequency	Mean	Standard Deviation	Mean Difference
Telecommuting Disadvantages	woman		145	3.2271	.27247	.02263
	man		211	2.9441	.25297	.01742
Telecommuting Advantages	woman		122	2.3150	.20426	.01849
	man		239	2.2493	.23204	.01501

		F	Significance Level	t	df	Significance Level (interactivity)	Mean Difference	Error of Criteria Difference	Confidence Interval	
									Upper boundary	Lower Boundary
Telecommuting Disadvantages	Equal Variance	2.385	.123	1.00	354	.000	.28295	.02816	.22756	.33834
	Unequal Variances			9.91	2943	.000	.28295	.02855	.22676	.33914
Telecommuting advantages	Equal Variance	.000	.987	2.64	359	.008	.06574	.02482	.01692	.11455
	Unequal Variances			2.76	2728	.006	.06574	.02382	.01885	.11263

Hypothesis 3- Telecommuting disadvantages mean are different according to age group.

F-test was used to study telecommuting disadvantages mean according to age group. The results in table indicated that there is a correlation between telecommuting disadvantages and advantage according to the group age and sig is smaller than 0.05

Table 3: F-test results

ANOVA					
Telecommuting Disadvantages	Sums	Degrees of Freedom	Mean	F	Significance Level
Between Group	4.154	2	2.077	27.300	.000
Within Group	26.856	353	.076		
Sums	31.010	355			
Telecommuting Advantages					
Between Group	.468	2	.234	4.725	.009
Within Group	17.744	358	.050		

Sums	18.212	360			
------	--------	-----	--	--	--

DISCUSSION AND CONCLUSION

Telecommuting is a choice in the method of doing things which allows employees to do part or all of their works outside the workplace. It means that individuals can carry out their tasks at their homes, a telecommunication center near home or other workplaces.

Telecommuting proponents argue that this is a win-win situation. In other words, telecommuting brings network benefits for both employers and employees. Some admitted that telecommuting is useful to society, so this is a win-win design. In this article, the disadvantages and advantages of telecommuting in Isfahan Municipality are reviewed. According to the results, mean disadvantages and advantages of telecommuting is above average.

Sohrabi(2003)stated the disadvantages and barriers of telecommuting as follows:

- The employees' monitoring limitations, like how he/she is working;
- The fear of employees' social isolation;
- The need for exact planning;
- The necessity to caring technology, legal issues, education, the election of managers and telecommuters;
- The fact that the company is not ready for cultural changes;
- The additional financial costs to provide telecommuting equipment (such as computer, Internet connection, etc.);
- The distrust on employees.

Talebzadeh(2004) states the advantages of telecommuting as follows:

- Increase efficiency (reduction of distraction and interruption);
- Balance achievement between family and work life;
- Increase flexibility in physical workplace and work hours, restore the hours that have been wasted;
- More attendance at home; environmental benefits (fewer cars that means less pollution and fewer accidents);
- Better performance assessment;
- Unwanted problems elimination;
- Overall reduction in stress and anxiety;
- Increase encouragement, motivation and job satisfaction;
- No need to displacement, creation of many job opportunities for disabled persons; save costs for company;
- Increase the employee productivity;
- Reduction of absent or absenteeism;
- No job interruptions due to natural happenstance (rain, snow, etc.).
- Employment of the best persons and freedom of choice;
- The avoidance of employees efficiency reduction and their performance loss due to lack of job satisfaction and encouragement;
- Reducing tax costs;
- Reducing displacement costs;
- Prevention of an outbreak of communicable diseases.

From Asgari Nezhad(2004)point of view, the advantages of telecommuting are as follows:

- Reduction of employees' traffic;
- Reduction of the problems associated with monitoring employees' attendance;
- Paying more attention to the output, but not work hours;

- Improvement of work conditions;
- Increase of job satisfaction and productivity;
- increase of job autonomy among employees;
- Saving time and financial costs;
- Reduction of work-related stress and routine social interactions;
- Reducing the need for office space;
- Increasing the employees' free time, family communications and Improving family conditions;
- Helping to achieve environmental standards;
- Reducing traffic jam and energy consumption;
- Use of telecommuting centers near your place where you live.

Isar Batman Ilich states the advantages of telecommuting as follows: increasing of job opportunities for skilled workers; because of low wages in Iran, foreign companies are willing to take advantage of Iranian's experts. This makes it easier to telecommute without having to worry about the problems of labor migration. Employment opportunities for women: in many families, working outside the home is not possible for women due to various reasons. Telecommuting provides an opportunity for working women.

On the other hand, Isar Batman Ilich states the disadvantages of telecommuting for Iranian companies as follows: managers are not familiar with advantages and applications of telecommuting and ICT, in general. Communication lines are unstable and unreliable, the cost of hardware installation is relatively high, and communication costs are high. Inefficiency and limited knowledge of employees in IT department, the lack of foreign language knowledge among most employees, the lack of rules and regulations for telecommuting are other disadvantages of telecommuting for Iranian companies.

From Asgari Nezhad. Point of view, the disadvantages of telecommuting are as follows: investment is required to create a workplace at home, the ability to use the computer is necessary, job and social interactions will be reduced, appropriate legal aid is needed. The need for information security and network threats, the need for computer networks, hardware and software supports are other obstacles of using telework. In some tests, mean advantages and disadvantages of telecommuting were evaluated according to gender and the results showed that there is no relation between the advantages and disadvantages of telecommuting and gender. The mean advantages and disadvantages of telecommuting are, however, different according to age group. In general, all statistics indicate the growing interest of employees and employers to telecommuting: in 1995, a research has asked common people's idea in Ireland about telecommuting and it showed 39% of people believed that if they do all or part of their works through computers at home, it is much better (East Journal, No. 167). 56% of people believed that the employers should let their employees to do all or part of their tasks through telecommuting. In another research, 34% of employees preferred to telecommute. In the same year, the result of another study in Finland also showed that more than half employees were interested to work through telecommuting as a form of secondary contract or mobility and more than 70% were interested in telecommuting.

The result of a study in Canada showed that 41% of Canadian employees believed that telecommuting is awesome.

Another research in the USA showed that 39% of employees who are not currently telecommuting are interested to telecommute.

The total number of telecommuters in Britain between 1998 and 2000 has increased about 39 percent.

References

1. Balke, Monica (2002): "Telecommuting for Librarian and Informationist", the Center of Information and Documentation Publication of Iran science.
2. Chalabi, Masoud (2005): "Sociology of Order; Theoretical Explanation and Analysis of the Social Order; Ney Publications.
3. Isar Batmach Qilich (2010): "New Concepts in Organizations", Management Approach.
4. Mamdouhi, Amir Reza et al. (2007): Modeling and Estimating the demand for Telecommuting, Telecommuting Impact Assessment Project as a Strategy to Reduce Travel demand in Tehran, Phase II Final Report, Education and Research Management and Planning Institution
5. Nilles J (1990), the State of California Telecommuting Pilot Project Final Report, JALA Associates, Inc., 971 Stonehill Lane, Los Angeles, CA, 90049-1412. Nilles J, Carlson F, Gray P & Hanneman G (1976), The Telecommunications Transportation Trade-off, New York, John Wiley
6. Sarmad, Zohre and Bazargan, Abbas and Hejazi, Elahe (2004): Research Methodology in Behavioral Sciences, Agah Publications, Tehran.
7. Sohrabi, Bahman (2003): Telecommuting (advantage and disadvantages); the Center of Information and Documentation of Iran Science.