

A Study of Factors Relating to Perceived Teleworking Productivity of Telework Employees in Co-Working Space at Pathumwan Area and Watthana Area in Bangkok, Thailand

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Abstract

The purpose of this research is objectives of the research were to study the relationship between the satisfaction with long-distance employees' perceptions in the collaborative work areas in Pathumwan and Wattana districts in Bangkok. 1) cumulative demography 2) job satisfaction 3) satisfaction Damage in work 4) Attitude towards long distance work and 5) job satisfaction Collecting and discharging to enable the company to successfully gather SPSS research, analysis and analysis data. Surveying and sampling conducted using techniques that are not likely to be sampled used as telework staff and working at Co-working spaces in Pathumwan and Wattana districts totaling 400 people. Data were compiled by distribution.

According to the investigation of the relationship between attitude toward teleworking and perceived got a very weak positive relationship, it can be explained that, having a good attitude could create good productivity, as can easily say by those relevance factors will go in the same direction. It is mean a good attitude could create good productivity. The last relationship analysis is the relationship between organizational commitment and perceived teleworking productive. The outcome is very weak positive, which means if an employee who has a high organizational commitment or company loyalty, they will have high perceived teleworking productivity. From the result could be seen that, the effective employees would tend to have high bargaining power to negotiate with organization.

Keywords: Telework, Teleworking, Telecommuting, Working Remotely, Working from Home, Co-Working Space

Introduction

The world is changing from various factors that are affected such as economics, society, technology and environment. The changes that affect most organizations around the world and they need to adapt to survive in volatile situations. New stages of technology development have an influence on society, well-being and communication, including family relationships. In addition, one of the results of the development of technology is called the Use "Internet". Each Use "Internet" access is easier and easier each day. It helps people to access anytime and anywhere easily, affecting everyday life and participating in societies outside of online communities. Based on research in the United States and European countries, a flexible system was allowed to be used for work, better known as working from home concepts or Telework (Greenfield, 2017). Jack Nilles was the first to create teleworking in 1973 at the same time. Nilles told the people he did. "Telecommunications" by working remotely in NASA's complex communications systems and the term "long distance communication" came after it. In 1979, Frank Schiff wrote a good Washington Post article. "Working from home can save gasoline" and also creates a term called "flexplace". In general, this article is popular for writing credit on the concept of long-distance work and leading to the first meeting topic "History of Telecommunications "in 1980 (Allied Telecom, 2018). At that time, private companies realized that telecommunications tends to be able to help solve labor problems. Car hire companies to major attractions such as Control Data Corporation and IBM has selected and hired a computer programmer by means of working at home as a means of recruitment to the company and attract a new generation to work on concepts and new functions. Unfortunately it's a high demand. But a small amount at that time (Avery & Zabel, 2001). The growth and development of telephone communications were similar to the evolution of technology and economic change (Kizza, 2013). Bailey and Kurland (2002) were Telecommunications are defined as "working outside the main workplace and communicating with the team using telecommunications systems or computer technology." This is a system that allows employees to work in other locations. By working outside the office through the use of information technology. Therefore, this type of work is widely used and the trend is still in line with global trends. Telecommunications has been used for decades and the lack of generally accepted definitions and conceptualization has significantly hindered our understanding of this mode of operation because results are often not comparable. In all studies, Allen, Golden and Shockley (2015) proposed the definition of telecommunications as long-distance jobs, long-distance jobs, distributed jobs, virtual jobs, flexible jobs, flexplace jobs and to look at the distance by viewing the terminology and definitions used in existing literature Employee opinion ratings show that long-distance work can reduce stress when compared to those who work for full time employees at the office (Mann & Holdsworth, 2003). Telework can also reduce work pressure and increase work life balance. With employees (Sparrow, 2000)

The line graph below is representing the comparison of United States workers, who are working from home and taking public transportation from 2006 to 2017. The usage of public transport in America, it was gradually stable to 5 percent from 2006 to 2012. In 2012, the numbers of users were increased slightly above 5 percent of the users. However, the usage of public transportation was dropped gradually back to 5 percent again, from 2015 to 2017. In contrast, working at home concept became well known in America since the rate of

popularity was slightly increased from 4 percent to 4.5 percent between 2006 and 2015. In 2016, the graph increased suddenly to 5 percent equal to the using number of public transportation and reached the peak point at 5.2 percent, the number of people who work from home was over the public transportation using rate in 2017.

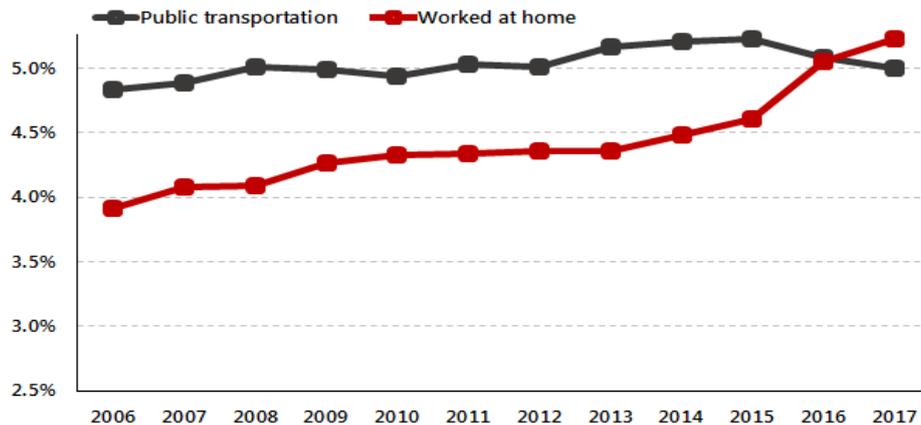


Figure 1.1: United States workers were usually working from home vs. Taking public transportation

After start working on this research, the researcher found out that in reality, telework is not well known as many people believed and also has not been applicable in Thailand yet. Therefore, the researcher would like to show the definitions of telework. Baruch (2000) showed that teleworkers experience less stress since they are better able to manage urgent family issues. Wick (2002) claimed that Telework provided employees with the advantage to spend more time with family members or pursuing leisure activities by eliminating daily commutes. Offstein et al. (2010) stated that Telework is enabled organizations to get the outcome without the limitations of geographics, working hours or physical presence. From those definitions, it can be seen that the telework concept can improve employee's satisfaction by reducing stress, reducing pressure, increasing work-Life-Balance, etc. (Mann & Holdsworth, 2003; Sparrow, 2000; Igbaria & Guimaraes, 1999).

Moreover, the teleworking concept makes mostly of employees are more productivity (AT&T, 2002; Hill, Miller, Weiner & Colihan, 1998; Lupton & Haynes, 2000). The concept had proven in terms of quantity and quality of the production (Butler, Aasheim, and Williams, 2007; Wheatley, 2012; Noonan & Glass, 2012). Pratt (1999) found that telework could decrease the unemployment rate. From the investigations of the research presented that the employees who work as teleworkers have more job satisfaction than the officers (Igbaria & Guimaraes, 1999). Teleworking can help employees to save cost (AT&T, 2002; Kurland & Bailey, 1999). Lupton and Haynes (2000) found out that organizations using telework concept had higher occupational retention rates than unused organizations. Igbaria and Guimaraes (1999) found that the percentage of employee commitment to the organization was increased in their study. In the term of environment, telework can reduce the pollution problem by reducing traffic congestion (Clean Air Council, 2003; US Department of Transportation, 2000).

Research objective

1. To study a significant means difference between male and female on perceived teleworking productivity.
2. To consider a significant mean difference in perceived teleworking productivity with different age levels.
3. To study a significant means difference between single and married on perceived teleworking productivity.
4. To investigate a significant mean difference between bachelor degree and master degree on perceived teleworking productivity.
5. To explore a significant relationship between Job Satisfaction and Perceived teleworking productivity.
6. To investigate a significant relationship between Work flexible and Perceived teleworking productivity.
7. To examine a significant relationship between Attitude toward teleworking and Perceived teleworking productivity.
8. To consider a significant relationship between Organizational commitment and Perceived teleworking productivity.

Scope of research

In this study, the researcher had tried to find, identify and analyze the relationship between various factors, which are based on the conceptual framework to find influence factors of perceived teleworking productivity from telework employees. The researcher studied this issue by standing on the earlier understandings of natural research problems. A descriptive method has been chosen for this research to collect related data and information. For the primary data collection in the amount of 400 questionnaires, they were distinguished Thai populations by genders between male and female, who are working as teleworkers at Pathumwan area and Watthana area in Bangkok, Thailand.

Limitation of the research

In this study, the researcher focuses and analyzes the factors that manipulated by perceiving the teleworking productivity of teleworkers in Bangkok, Thailand. However, the understanding of the meaning of the teleworking in Thailand was ambiguity. When the researcher asked his/her teleworking, they do not understand clearly. Sometimes, they do the teleworking by project-based and only some period. By this point, all of the respondents may not fully represent the person who is a teleworker that working as telework. Besides, this research was collected data only on the weekends and holidays then may be some of the teleworkers were not involved in this research.

Literature review

Lim and Teo (2000) notice that job satisfaction has been identified as an important factor in teleworking-related behavior. When teleworker has insufficient working conditions, problems with colleagues and insufficient equipment, they may not be satisfied (Belanger, 1999), which will adversely affect performance and productivity. Also, when teleworkers benefit from teleworking, such as scheduling between work and family, reducing travel time and expenses and recreational activities, their satisfaction level and their performance will be higher (Abdul Azeez & Supian, 1996).

Neufeld and Fang (2005) emphasizing the role of beliefs and attitudes that influence the increasing performance of teleworker in Canada Clear and Dickson (2005) found an attitude toward teleworking play a more important role than providing technology to facilitate the successful implementation of Teleworking. Peters and Heusinkveld (2010) indicate that career pressures affect directors' attitude toward teleworking, aware of improve work and perceived cost/social benefits. Agarwal (2000) notices that the attitude of the people towards information affects the satisfaction and productivity of the users. Organizational commitment and Perceived teleworking productivity relationship (Meyer & Allen, 1997; Lim & Teo, 2000). Employees who have highly effective and productive are employees who have highly committed to the company (Carver & Candela, 2008; Meer & Ringdal, 2009), in addition, Meer and Ringdal (2009) and Carver and Candela (2008) perceived that a high level of organizational commitment has positive effects on productivity. Westover, J., Westover, A. and Westover, L. (2010) states that organizational commitment was a key element that increases long-term worker productivity and performance. Therefore, there is likely to be an optimistic relationship between e-worker, organizational commitment, and productivity.

Significance of the study

This study significantly focused on its ability to describe the factors that might impact on perceived teleworking productivity of employees. The findings of this research might be able to help teleworkers to have more knowledge, better understandings and the data is also contributed to estimate the identify impacts, which are possible to affect the perceived teleworking productivity. Although, the previous researches mostly showed that employees who are working as teleworkers are having high job satisfaction (Sardeshmukh, Sharma & Golden, 2012). The implications of this work also have positive results in various factors, an instant of demographic factors, job satisfaction, work flexibility, attitude toward telework, organizational commitment, and perceived teleworking productivity. The results of this study could be a useful reference for policymakers and HR managers; it can use as a part of the considerations for creating flexible plans by matching suitable strategies. Besides, it can obviously see that the benefits would occur for both; employers and employees. This situation can be called the Win-Win situation, which is worthwhile. Furthermore, this situation is also made work-life balance happens.

Theoretical framework

The development of conceptual frameworks, the researcher applied three major research models to modify the new conceptual frameworks. The first research model developed by Nakrosiene et al. (2019). "Working from home: Characteristics and outcomes of telework". The secondary research model was developed by Martin and MacDonnell (2012) who studied on "Is telework effective for organizations?: A meta-analysis of empirical research on perceptions of telework and organizational outcomes". The last research model was developed by Aboelmaged and Subbaugh (2012) who studied about "Factors influencing perceived productivity of Egyptian teleworkers: an empirical study".

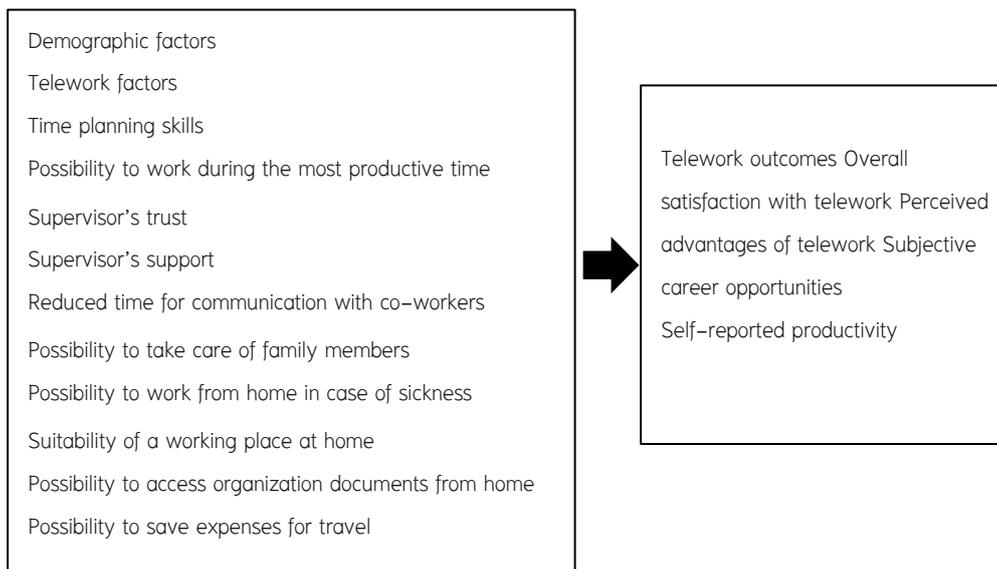


Figure 1: The research model of " Working from home: Characteristics and outcomes of telework"

Research Methodology

The researcher used a descriptive research method to answer research questions since it is appropriate to test the hypothesis and understand the relationship between variables. In the research, descriptive research is used to find and analyze the influence of demographic factors, job satisfaction, work flexible, attitude toward teleworking, and organizational commitment to perceived teleworking productivity. Zikmund (2003) and Cooper and Schindler (2006) stated that the use of questionnaires is an ideal way to gather primary and raw data in descriptive research.

Moreover, Malhotra (2004) state that concept questionnaire is a set of questions designed to gather raw and primary data. In consequence, the authors of this study produced a five-point Likert scale questionnaire and distributed it to participants to collect data on participants' values and opinions and respondents' attitudes. The purpose of this questionnaire is to test and analyze the demographics and all invented hypotheses to find out

which factors have a significant influence on the perceived teleworking productivity of telework at Pathumwan area and Watthana area in Bangkok, Thailand.

Descriptive Analysis

The descriptive instrument usually was used to summarize and categorize raw data according to the attributes of those raw data. Berenson and Levine (1996) stated that descriptive analysis is the summarizing and presenting method to exhibit a set of data according to various features of data, and usually presenting data through calculating or counting the mean, the mode, the median, the frequency distribution, and percentage distribution. Zikmund (2003) gave the descriptive analysis a definition is that a method of transforming raw data into information which is understandable and interpretable by describing the basic characteristics such as, central tendency, distribution, and variability.

In this study, the researchers applied two sections of descriptive analysis. Firstly, a descriptive analysis of demographic factors such as Gender, Age, Marital Status, and Education. The following section is about descriptive analysis of dependent and independent variables such as Job Satisfaction, Work Flexible, Attitude toward Teleworking, Organization Commitment, and Perceived Teleworking Productivity by measuring mean and standard deviation.

Result

In this study, the objective is to find the relationship among all variables which are including demographic factors, job satisfaction, work flexible, attitude towards telework, organizational commitment, and perceived teleworking productivity.

The researcher analyzed by using primary data from questionnaire, which is collected from 398 respondents of the workers through SPSS program and apply with descriptive analysis and inferential analysis for clear understanding. The summary of findings is as follows:

Summary of Demographic Factors

To collect information on the attributes of all 398 respondents who are telework employees, the researcher had applied demographic factors into the questions which are including gender, age, marital status, and education, to look through the characteristics of respondents. The summary is shown in as follows:

Table 1: The summary of the highest percentage of each demographic factor

Demographic Factors	Characteristic	Frequency (f)	Percentage (%)
Gender	Female	206	51.8
Age	31 – 35	256	64.3
Marital Status	Single	281	70.6
Education	Bachelor's Degree	281	70.6

Based on Table 1, most of the respondents' gender was female due to the highest percentage at 51.8% (206) of all respondents. Therefore, all respondents are aged between 31 and 35 due to the highest percentage, which is 64.3% (256). Among all respondents, the majority of them were single, due to the highest percentage at 70.6% (281). Most of the respondents' educations were bachelor's degree with 70.6% (281).

Descriptive analysis of variables

In this part, the researcher applied the Mean and Standard Deviation method to measure each variable included in the Conceptual Framework. Zikmund (2013) identified that Mean is a measure of central tendency and it is the arithmetic average; Standard Deviation is a quantitative index of a distribution's spread or Variability and Standard Deviation is equal to the square root of the variance for the distribution. The analysis results of each variable proposed in the conceptual framework are demonstrated in the following order:

Table 2 The Descriptive analysis of Job satisfaction applying mean and Standard Deviation.

Descriptive Statistics

Job Satisfaction	N	Mean	Std. Deviation
I am satisfied with my work	398	4.82	.385
My co-workers support me in my work	398	4.32	.611
My supervisor supports me in my work	398	4.23	.697
I feel like I belong to the office team in my work	398	4.37	.624
Valid N (listwise)	398		

Based on the result from Table 5.6, the researchers found that "I am satisfied with my work" has the highest mean at 4.82, and the "My supervisor supports me in my work" has the lowest mean at 4.23. The result from Table 5.6 also showed that the lowest standard deviation is "I am satisfied with my work", which is equal to 0.385 and the highest standard deviation is "My supervisor supports me in my work" which is equal to 0.697.

Reliability Analysis

Zikmund (2003) defined that researchers would correct the questionnaire because the questionnaire may have some problems. And pretests the questionnaire will help researchers know the problems. Furthermore, according to Santos (1999), researchers must assay reliability for each variable, which may include many questions by using Cronbach's Alpha. The writer stated that if all questions of each hypothesis were reliable, the result from the calculation of alpha test would be above 0.6 or equal to 0.6. It means that all questions are consistent and reliable to apply as the research instrument. Moreover, Sakaran (1992) stated that the questionnaire would be reliable, if the result of the reliability value is above 0.6 or equal. Then, after distributing 398 questionnaires. The results showed as follows Table 5.11

Table 3: Highest and Lowest Values of standard deviations

Variables	Highest standard deviations	Lowest standard deviations
Job Satisfaction	Equals .697 for “My supervisor supports me in my work”	Equals .385 for “I am satisfied with my work”
Work Flexible	Equals .444 for “My firm allow me to have full control over my work”	Equals .399 for “I can work off site during the working day”
Attitude toward Teleworking	Equals .742 for “Using teleworking as an alternative work arrangement is a good idea, It would be a wise idea to telework”	Equals .489 for “It is desirable to use teleworking as an alternative work arrangement”
Organizational Commitment	Equals .687 for “I feel “emotionally attached” to this firm”	Equals .465 for “I respect my firm’s vision”
Perceived Teleworking Productivity	Equals .396 for “I can finish a large number of tasks daily while teleworking”	Equals .291 for “Teleworking allows me to be more productive”

Base on Table 6.3, the highest standard deviations in terms of job satisfaction is .697 that belongs to “My supervisor supports me in my work”; and the lowest standard deviation is .385 that belongs to “I am satisfied with my work”. Moreover, in terms of work flexible, the highest standard deviations belong to “My firm allow me to have full control over my work” that is .444; and the lowest one is .399 that belongs to “I can work offsite during the working day”. Accordingly, the highest mean and the lowest standard deviations in terms of attitude toward teleworking are .742 and .489 that belong to “Using teleworking as an alternative work arrangement is a good idea, It would be a wise idea to telework” and “Using teleworking as an alternative work arrangement is a good idea, It would be a wise idea to telework” respectively. Likewise, the highest standard deviations in terms of organization commitment is .687, which belongs to “emotionally attached” to this firm”; and the lowest standard deviations for the same variable is .465 that belong to “I respect my firm’s vision”. And finally, “I can finish a large number of tasks daily while teleworking” has the highest standard deviations in terms of perceived teleworking productivity, which is .396; and “Teleworking allows me to be more productive” has the lowest standard deviations, which is .291.

Summary of findings

In this study, the objective is to find the relationship among all variables which are including demographic factors, job satisfaction, work flexible, and attitude towards telework, organizational commitment, and perceived teleworking productivity. The researcher analyzed by using primary data from questionnaire, which is collected

from 398 respondents of the workers through SPSS program and apply with descriptive analysis and inferential analysis for clear understanding. The summary of findings is as follows:

Summary of Hypotheses Testing

All hypotheses in this study were rejected by using inferential analyses, except hypothesis 6 that has a different result. The summaries of findings are in the following:

Hypothesis one (H1): Gender has a significant mean difference on perceived teleworking productivity.

Hypothesis two (H2): Age levels have a significant mean difference on perceived teleworking productivity.

Hypothesis three (H3): Marital status has a significant mean difference on perceived teleworking productivity.

Hypothesis four (H4): Education has a significant mean difference on perceived teleworking productivity.

Hypothesis five (H5): There is a very weak negative significant relationship between job satisfaction and perceived teleworking productivity.

Hypothesis six (H6): Work flexible has no significant relationship on perceived teleworking productivity.

Hypothesis seven (H7): There is very weak positive significant relationship between attitude toward teleworking and perceived teleworking productivity.

Hypothesis eighth (H8): There is very weak positive significant relationship between organizational commitment and perceived teleworking productivity.

For the demographic factors, the researcher investigated about age and gender and got the result as women have a higher performance to create effective outcome than other groups. Moreover, marital status is affected to productivity, they have more things to concern and need to have a secure life, consequence, could produce work better than other workers who are single. Lastly, for the demographic factor is education, from the survey regarding the education level the most productivity of workers is Bachelor's Degree. In overall of demographic factors, relationship can be expressed that young families have a preference to be teleworkers; it could allow them to manage and organize their lives, times and activities by themselves.

For the job satisfaction, this is one of the relevant key factors which have a huge effect with employees. The result of finding research shows that the relationship between job satisfaction and perceived teleworking productivity is very weak negative, which means if the variable x increase, the variable y will decrease. For those reasons, from the data collected for this factor, the researchers found that there are various factors would affect the job satisfaction, such as relationship, such as, working environment, productivity, and performance. For the relationship between work flexible and perceived teleworking, the result from the investigation shows that, they are no relationship between each other.

According to the investigation of the relationship between attitude toward teleworking and perceived got a very weak positive relationship, it can be explained that, having a good attitude could create good productivity,

as can easily say by those relevance factors will go in the same direction. It is mean a good attitude could create good productivity.

The last relationship analysis is the relationship between organizational commitment and perceived teleworking productive. The outcome is very weak positive, which means if an employee who has a high organizational commitment or company loyalty, they will have high perceived teleworking productivity. From the result could be seen that, the effective employees would tend to have high bargaining power to negotiate with organization.

Conclusion

In this study, the researcher found that there are the various influencing factors of perceived teleworking productivity; demographic factors, job satisfaction, work flexible, attitude toward teleworking, and organizational commitment. The discussion can see that all factors except work flexible are related to each other and affected to perceived teleworking productivity. In the following will present how those factors are related to perceived teleworking productivity;

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According to the investigation of the relationship between attitude toward teleworking and perceived got a very weak positive relationship, it can be explained that, having a good attitude could create good productivity, as can easily say by those relevance factors will go in the same direction. It is mean a good attitude could create good productivity.

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result could be seen that, the effective employees would tend to have high bargaining power to negotiate with organization.

Discussion

Relationship between demographic factors and perceived teleworking productivity

According to the result of testing hypothesis one to hypothesis four in this study hypothesis. All hypotheses were found to have significant differences between the dependent and independent variables, except Hypothesis 6 (H6) which shows work flexibility has no significant difference on perceived teleworking productivity.

All hypotheses in this study were rejected by using inferential analyses, except hypothesis 6 that has a different result. The summaries of findings are in the following: Hypothesis one (H1): Gender has a significant mean difference on perceived teleworking productivity. Hypothesis two (H2): Age levels have a significant mean difference on perceived teleworking productivity. Hypothesis three (H3): Marital status has a significant mean difference on perceived teleworking productivity. Hypothesis four (H4): Education has a significant mean difference on perceived teleworking productivity. Hypothesis five (H5): There is a very weak negative significant relationship between job satisfaction and perceived teleworking productivity. Hypothesis six (H6): Work flexible has no significant relationship on perceived teleworking productivity. Hypothesis seven (H7): There is very weak positive significant relationship between attitude toward teleworking and perceived teleworking productivity. Hypothesis eighth (H8): There is very weak positive significant relationship between organizational commitment and perceived teleworking productivity.

From the previous study can be seen that young families have high expectations on working as teleworkers because it allows them to have more flexibility to manage their times for taking care of the family and do other necessary things (Teo and Lim, 2000). Relationship between job satisfaction and perceived teleworking productivity Based on the finding of testing hypothesis 5 in this research there very weak negative relationship between job satisfaction and perceived teleworking productivity. The relationship between those factors is the key factors which affect the working environment, productivity, and working performance (Belanger, 1999). Relationship between work flexible and perceived teleworking productivity

From the questionnaire of testing hypothesis in this research, the result shows that there is no relationship between work flexible and perceived teleworking productivity.

Relationship between attitude toward teleworking and perceived teleworking productivity

State on the finding of testing hypothesis 7, there is a very weak positive relationship between attitude toward and perceived teleworking productivity as it can be said that good attitude created good productivity (Heusinkveld, 2010).

From the previous study of testing hypothesis 8, there is a very weak positive relationship between organizational commitment and perceived teleworking, employees who work effectively would have high bargaining power on organizational commitment (Carver & Candela, 2008).

Suggestion

From this study, the researcher would like to suggest some comments for further research, which would be helpful information in further studies.

1. The sampling size of telework who uses service of co-working space in Pathumwan area and Wattana area on Saturday and Sunday did not represent to answer all amounts of teleworkers in Bangkok.
2. The sampling size of telework has to select as quota sampling for sex and age ranges to reduce non-dispersed sample.
3. The definition of telework has unclear meaning and unrecognized for the respondents to answer the questionnaires in Thailand recently that caused misunderstanding to research participants, from those issues, had created mislead to expected results occurred.

Benefits from research

The results of this study could be a useful reference for policymakers and HR managers; it can use as a part of the considerations for creating flexible plans by matching suitable strategies. Besides, it can obviously see that the benefits would occur for both; employers and employees. This situation can be called the Win-Win situation, which is worthwhile. Furthermore, this situation is also made work-life balance happens.

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