

## Impact of Flexible Work Arrangements on Workers' Productivity in Information and Communication Technology Sector An Empirical Study of the Gaza Strip ICT Firms

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**Abstract:** The paper aimed at highlighting the concept of flexibility at the work place, by investigating the impact of five types of flexible work arrangements (FWAs) on workers' productivity in the ICT sector in the Gaza Strip. The study used the analytical descriptive method and administered a questionnaire on a sample of 178 employees, working in ICT companies. The collected data was statistically processed using SPSS. The study found that flexible work arrangements had a positive impact of on workers' productivity since 65.68% of the employees rated this item positively. The study recommended that ICT companies should raise the awareness of the management and staff about the importance of FWAs programs and its significant effect on employees' productivity. The researchers recommended these companies to support friendly organizational culture and to adopt writing company policies and laws that lay down the applicability of various FWAs and direct the selection processes among various FWAs.

**Key words:** Flexible Work Arrangements (FWAs), Productivity, Information and Communication Technology (ICT) companies.

أثر ترتيبات العمل المرنة على إنتاجية العاملين في قطاع تكنولوجيا المعلومات

والاتصالات - دراسة ميدانية على شركات تكنولوجيا المعلومات والاتصالات بقطاع غزة

**ملخص:** هدفت هذه الدراسة إلى تسليط الضوء على مفهوم المرونة في العمل وذلك بدراسة أثر خمسة أنواع من ترتيبات العمل المرنة على إنتاجية العاملين في شركات تكنولوجيا المعلومات والاتصالات بقطاع غزة وقد اعتمدت هذه الدراسة على المنهج الوصفي التحليلي للوصول للنتائج من خلال استبانة وزعت على عينة مكونة من 178 من موظفي تكنولوجيا المعلومات والاتصالات وتم تحليل الاستبانة من خلال برنامج SPSS. حيث توصلت الدراسة إلى وجود تأثير إيجابي لترتيبات العمل المرنة على إنتاجية العاملين في قطاع تكنولوجيا المعلومات والاتصالات حيث وافق 65.68% من الموظفين على ذلك. وأوصت الدراسة بزيادة الوعي لدى الإدارة والموظفين في شركات تكنولوجيا المعلومات والاتصالات حول أهمية ترتيبات العمل المرنة وآثارها الكبيرة على إنتاجية الموظفين، كذلك أوصت الشركات أيضاً بضرورة الذهاب بإتجاه كتابة سياسات وقوانين تضبط ترتيبات العمل المرنة وتحكم عملية الاختيار بين مختلف الترتيبات.

**الكلمات المفتاحية:** ترتيبات العمل المرنة، الإنتاجية، وشركات تكنولوجيا المعلومات والاتصالات.

## **Introduction**

In the developed world, people are working longer and longer hours and the evidence is mounting that this is damaging their health and family life (Cooper, 2008). Greater flexibility would have some positive effects. Flexibility at work now takes various forms and includes job sharing, compressed workweek, variable working time and telecommuting alongside conventional part time schedules. These arrangements vary across different countries and reflect the amount of control over working time that employer or employee enjoys in relation to when the work is done and the number of hours worked during a specific period (Cole, 2006)

Flexible work arrangements (FWAs) are defined as employer provided benefits that permit employees some level of control over when and where they work outside of the standard workday (Hill et al., 2001).

This study presents the results of an investigation on the attitudes towards FWAs among information and communication technology workers and the effect of such arrangements on their productivity in the Gaza Strip in Palestine. The study examined the relation between the availability of five popular types of flexible work arrangements: flexitime, telecommuting, part time, job-sharing, and compressed workweek and the level of workers' productivity.

The success of FWAs seems to be controlled by the actual arrangements used, the type of industry they are used in and the relative flexibility of the work practice itself. These variables can be used in the implemented action of FWAs to achieve a more effective outcome (Stavrou & Kilaniotis, 2010).

Workplace flexibility is a way to define how, when and where work gets done, and how careers are organized (Galinsky, 2008). There is a lot of research already done on productivity. Studies report that flexitime can increase worker productivity through intermediate and indirect effects, such as increase in workers' job satisfaction and job autonomy (deCarufel & Schaan, 1990), and decrease in their absenteeism and work-related stress (Baltes et al., 1999). Studies also examined the effects of FWAs on organizational productivity, using various indicators of job performance as well as records of absenteeism and tardiness. Once again, the available evidence regarding the effects of FWAs on productivity is quite mixed (Gottlieb et al., 1998).

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Most of the prior researches on FWAs have taken an organizational perspective by focusing on the impact of these schedules on outcomes that primarily benefit organizations. The following points summarize these benefits:

- Increase employees job satisfaction (Baltes et al., 1999);
- Increase organizational commitment (Glass & Finley, 2002);
- Increased productivity (Pierce & Newstrom, 1980);
- Decreased absenteeism and turnover (Hyland, 2000);
- And increase applicant attraction to an organizations offering flexitime (Rau & Hyland, 2002).

One of the main reasons why flexible work schedule have been recommended is to help employee reduce work–family conflict by allowing them more control over their work schedule. The following points summarize the benefit of FWAs to employees as result from deferent researches in FWAs field:

- Employees feel less stressed when they have more control over their schedule (Almer & Kaplan, 2002);
- Increased energy and creativity (Schaefer, 2005);
- Employees perceive that flexible working makes them “happy” and that there are attitudinal/behavioral links between this happiness, discretionary behavior and a number of performance outcomes (Atkinson & Hall, 2011);
- Achieving work/life balance for many office-based employees and less workfamily conflict (Hayman, 2009).

About Information and Communication Technology (ICT) sector in Palestine; and as mentioned by Palestinian Information Technology Association (PITA), the deployment of ICT in Palestine started relatively late in comparison with developed countries and some countries in the Third World. For the Palestinian context, ICT touches every individual and every industry, and still there is a wide series of what business can provide to help Palestinian society to develop healthy, ethically, and legally economy, which aids interests of all stakeholder groups; not only investors but also employees, customers, and the Palestinian society in large.

At present, the IT sector is a playing a vital role in the Palestinian economy. It was characterized by its fast development and growth, where it witnessed growth rates ranged between 25 - 30 % until year 2000 (PITA, 2000). According to PITA ICT Professionals Survey (2008), 94.3% of PITA ICT professionals are full time professionals. 85.1% of PITA ICT professionals are males while 14.9% are females. 74.5% of PITA ICT

professionals aged 20-30, 20.6% aged 30-40, 4.4% aged 41-50 and 0.5% are older than 50. 80.7% of PITA ICT professionals have bachelor as the highest degree, 11.1% have diploma as the highest degree, 6.3% have master as the highest degree, 1.4% have high diploma as the highest degree and 0.5% have PHD as the highest degree. This study was concern just about PITA ICT employees.

The study examined the relation between the availability of five popular types of FWAs: flexitime, telecommuting, part time, job-sharing, and compressed workweek and the level of workers' productivity in ICT sector.

### **Research Question and Hypothesis**

The problem of the study stems from the existence of some constraints in the productive process. Like the long work hours and the conflict between time work and family responsibilities. These constraints affect the overall level of performance of the employees which is directly reflect the level of productivity achieved within companies operating in the ICT sector. The main research question is:

**"What is the impact of flexible work arrangements (FWA) on the productivity of workers in ICT firms in the Gaza Strip?"**

### **Hypothesis**

To evaluate the impact of FWAs on the level of workers' productivity in the ICT sector, the following hypotheses were constructed:

FIRST: There is a significance effect between independent variables and the level of workers' productivity in the ICT sector (at the level of significance  $\alpha = 0.05$ ).

The following sub-hypotheses stem from the first hypothesis:

- 1.Types of FWAs have significance effect on the level of workers' productivity in the ICT sector (at  $\alpha = 0.05$ ).
- 2.Supported regulations of the organization have significance effect on the level of workers' productivity in the ICT sector (at  $\alpha = 0.05$ ).
- 3.Employees' support have significance effect on the level of workers' productivity in the ICT sector (at  $\alpha = 0.05$ ).
- 4.Types of work have significance effect on the level of workers' productivity in the ICT sector (at  $\alpha = 0.05$ ).
- 5.Management support has significance effect on the level of workers' productivity in the ICT sector (at  $\alpha = 0.05$ ).
- 6.There are no significant statistical differences among respondents' answers regarding the impact of FWAs on the level of workers' productivity in the ICT sector, due to personal characteristics (Gender, Age, Education, Experience, Marital Status and Children) (at  $\alpha = 0.05$ ).

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### **Research Objectives**

This study achieves several objectives including:

1. To study the impact of FWAs on workers' productivity in ICT companies in the Gaza Strip.
2. To rank the factors that affect flexibility and then worker productivity in the ICT sector.
3. Finally, to provide recommendations and appropriate proposals to managers in the ICT sector to achieve a better level of performance and increase workers' productivity.

### **Research Importance**

This topic gains its importance from the globally increasingly attention paid to workplace conditions when workers are unable to adequately meet family responsibilities because of their long working hours. This makes workers often feel that meeting family needs could negatively impact their job standing. The study examines one of the most productive sectors of the Palestinian economy that has been rising over time and study the impact of flexible working arrangements on workers' productivity of the Palestinian ICT sector. According to the knowledge of the researchers, this study is considered the first to address FWAs in the Palestinian ICT sector. So, this research will make a contribution to literature pertaining to FWAs and will help to further theory.

### **Research Variables**

- **Dependent variable:** Level of workers' productivity at ICT companies.

- **Independent variables:** Flexible work arrangements.

Work flexibility is affected by six factors:

- 1- Types of flexible work arrangements.
- 2- Supported regulations of the organization.
- 3- Employees' support.
- 4- Management support.
- 5- Types of work.
- 6- Personal characteristics between employees (Age, Gender , Marital status, Level of education, Experience , and Children

### **Literature Review**

**(Eldridge and Nisar, 2011) "Employee and Organizational Impacts of Flexitime Work Arrangements"**

The paper investigates the impact of flexitime programs in Britain using a linked dataset of employers and employees. Organizations adopt this practice for a variety of reasons, ranging from the concern for widening the scope for employee choice to the need to comply with public regulations. The results from the British Workplace Employment Relations Survey data show a weak relationship between flexitime and measures of job control used and more importantly the relationship is negative between flexitime

and job security. There is also no evidence of the establishments with flexitime arrangements having less stressed employees. The results shown that, firstly, those employees within flexitime workplaces report a high degree of stress. Secondly, they are less likely to have felt secure in their establishments. Thirdly, they experience a high degree of job demand in their workplaces.

**(Fisher, 2010) "Flexible Work Arrangements in Context: How Identity, Place & Process Shape Approaches to Flexibility"**

This study examines how flexible work arrangements are designed and implemented, how work processes and job responsibilities are affected, and how workplace culture and structure shape these activities. The researcher uses a qualitative, grounded theory approach to conduct a case study of a large Midwestern U.S. workplace with a diverse hierarchy of jobs. Spatial analysis and semi-structured face-to-face interviews with both managers and non-managers in salary and hourly positions were used to gather data.

Findings provide that organizational approaches to flexibility must consider the overall approach to and system of organizing work. Again semantics are relevant here. Rather than talking about flexibility as something that can be "accommodated," organizations may have more success with flexibility and less evidence of internal tensions if flexibility is discussed and approached as something that is "incorporated" into the structure and culture of the workplace.

**(Abdel-Wahab, 2007) "Employees' Attitudes towards Telecommuting: An empirical Investigation in the Egyptian Governorate of Dakahlia"**

The main purpose of this paper is to explore the attitude of the Egyptian information workers towards the concept of telecommuting, and to examine the relationships between such an attitude and workers' expectation of their productivity and job satisfaction if participating in a telecommuting program. The researcher found that the attitude of respondents toward telecommuting: 50% agreeing that they are in favor of telecommuting, 25.9% are neutral, and 24.1% are not in favor of telecommuting. The results revealed that more respondents are in favor of telecommuting, and that the increase in the attitude score towards telecommuting tends to be paired with higher expectations about telecommuting productivity and satisfaction.

**(Wendt, 2010) "Reason for Requesting a Flexible Work Arrangement: The Perceptions of Managers' on Employee Commitment".**

The primary focus of the present study is to improve understanding of managerial perceptions of employees who request workplace flexibility such as flexitime and flexplace; specifically, perceptions related to career commitment. Commitment has been shown to affect a manager's treatment

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of the employee and could influence employee career outcomes. The results indicated that FWAs requests for a family-related reason are more likely to receive manager approval than requests made for non-family reasons, especially if the employee making the request is female.

### **(Yang and Zheng, 2010) "The Paradox of De-Coupling: A Study of Flexible Work Program and Workers' Productivity"**

This paper investigated the consequences of organizational de-coupling from an inward-looking within organizational perspective specifically; the paper study how the de-coupling of flexible work program affects workers' actualization of productivity. The total number of cases included in the data analyses is 415 cases. The researchers found that the highest level of productivity actualization is associated with workers who enjoy a factual flexible work schedule which is nevertheless not formally adopted by the employer.

#### **Methodology**

The researchers followed the descriptive analytical approach in conducting the research. This research is categorized under the applied research that depends mainly on data collection from primary sources through distributing a questionnaire that is designed especially for this research. The study was conducted from August 2011 to December 2011, but the questionnaire was distributed in a period of two weeks from (24 November to 8 December) 2011. The study was applied on the ICT companies - PITA members in the Gaza Strip.

#### **Study Population and Sample**

The research population covers all the employees in the Gaza Strip ICT companies, which count to around thirty seven companies according to PITA (2011). This study is considered a comprehensive study, with sample of all the employees in each of the thirty seven companies. Since the target population of this study is the employees at ICT companies and members in PITA in the Gaza Strip.

#### **Questionnaire Design and Content**

After reviewing the literature and interviewing experts, the study tool was developed; a questionnaire was designed in the Arabic language and then translated into English. The questionnaire was provided with a cover letter which explained the purpose of the study, the way of responding, the aim of the research and the privacy of the information in order to encourage high response. The questionnaire is composed of two parts, as follows:

1. The first part contained general information about the FWAs system in the companies and the employees' personal information.

2. The second part consists of five sections about the evaluation the impact of the applicable FWAs, company's policies and laws which support FWAs, employees' support for FWAs, management support for FWAs, and work type upon workers' productivity in the ICT companies in the Gaza Strip.

#### **Response Rate**

The questionnaire was distributed to all the thirty seven ICT companies the Gaza Strip according to PITA (2011). A total of 196 questionnaires were distributed while 182 filled and returned within two weeks which formed a response rate (92.8%). Only 178 questionnaires were considered valid.

#### **Statistical Analysis Tools**

The researchers would use data analysis both qualitative and quantitative data analysis methods with the significant level set to 0.05. The Data analysis will be made utilizing (SPSS 19). The researchers would utilize the following statistical tools:

Kolmogorov-Smirnov Test of Normality; Pearson Correlation Ccoefficient for Validity; Cronbach's Alpha and Split Half Method for Reliability Statistics; Frequency and Descriptive analysis; and Parametric Tests (One-sample T test, Independent Samples T-test, Analysis of Variance).

In order to be able to select the appropriate method of analysis, the level of measurement must be understood. For each type of measurement, there is/are an appropriate method/s that can be applied and not others. In this research, ordinal scales were used. Ordinal scale is a ranking or a rating data that normally uses integers in ascending or descending order. The numbers assigned to the important (1, 2, 3, 4, 5) do not indicate that the interval between scales are equal, nor do they indicate absolute quantities. They are merely numerical labels.

#### **Personal and Companies Characteristics**

Personal characteristics contain gender, age, marital status, qualifications, years of experience in the ICT sector, and children. Company characteristics including FWAs presence in the companies and the type of FWAs applied in the companies.

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**Table (1): Personal characteristics of the sample**

Personal Characteristics		Frequency	Percent
Gender	Male	138	77.5
	Female	40	22.50
	<b>Total</b>	<b>178</b>	<b>100.0</b>
Age	Less than 30 years	132	74.2
	30 – less than 40 years	36	20.2
	40 years and Older	10	5.6
	<b>Total</b>	<b>178</b>	<b>100.0</b>
Qualifications	Secondary or less	5	2.8
	Diploma	46	25.8
	Bachelor	119	66.9
	Master	8	4.5
	<b>Total</b>	<b>178</b>	<b>100.0</b>
Years of experience	Less than 3 year	64	36.0
	3 – Less than 7 year	74	41.6
	7 – Less than 10 year	18	10.1
	10 years and higher	22	12.4
	<b>Total</b>	<b>178</b>	<b>100.0</b>
Marital Status	Single	83	46.6
	Married	94	52.8
	Divorced	1	0.6
	<b>Total</b>	<b>178</b>	<b>100.0</b>
Child under the age of one in the house?	Yes	42	47.2
	No	47	52.8
	<b>Total</b>	<b>89</b>	<b>100.0</b>
<b>Company Characteristics</b>			
Company support to FWAs?	Yes	142	79.8
	No	36	20.2
	<b>Total</b>	<b>178</b>	<b>100.0</b>
Type of FWAs applied in the companies	Flextime	96	31.8
	Telecommuting	51	16.9
	Job-Sharing.	90	29.8
	Part-time.	40	13.2
	Compressed Workweek	25	8.3

The statistics show that the majority of responders are males with 77.5% of the sample and 22.5% of the sample are females. According to Palestinian central bureau of statistics PCBS 2010, indicators of the labor force in the Palestinian Territory shows that female participation rate in the Palestinian economy is 14.7% for females in 2010 compared with 15.5% in 2009 which is considered very low. While there is 66.8% for males in 2010 compared with 67.0% in 2009, and that might be justified that males seek jobs more than females. According to PCBS (2009), the number of male IT specialists per 100 employees is 4 and the number of female IT specialists per 100 employees is 2. This supports the research result about the male majority. As shown, around two third of the ICT employees in the Gaza were young (less than 30); this reflects to what extent this sector attracts highly skilled, professionals and may be newly graduate workers, regardless of the year of experience.

25.8% of the sample obtains a diploma degree, while 66.9% are with bachelor degree, and this high education level is due to the nature of the ICT sectors jobs and their requirements, from the researchers point of view. The majority of sample has experience between 3 and 7 years, these results agree with the majority of age statistics that had less than 30 years.

The statistics shows that 52.8% of the sample are married and 46.6% are single. These results indicate that the vast majority of the sample is males with age average less than 30 year. In addition, the difficult economic conditions of the Gaza Strip contribute in reducing the rates of marriage. The statistics shows that 47.2% from sample has infant baby under the age of one year. And 52.8 % of the sample hasn't. This is an expected result in the Palestinian society since the fertility rate in the Palestinian Territory is high compared to prevailing levels in other countries, this high levels of fertility can be justified by many reasons like early marriage (especially for females), and the desire to having children, as well as prevailing customs and traditions in the Palestinian society.

20.2 of sample companies' do not support FWAs whereas 79.8% of sample companies support FWAs. This result is a good and a positive point for the research, because it is easier and more accurate for employees to know the impact of FWAs on their productivity when the companies already support it. However, the research also deals with the employees work in non supported FWAs companies as what they think if they benefit from these programs. The low proportion of compressed workweek arrangement is justified by the researcher that may be because this arrangement requires a special type of work conditions that need to extend the hours of work on

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certain days and the elimination of one working day, which may be contrary to the opening and closing time of the company.

### **Hypotheses Testing**

#### **Analyzing the First Dimension: Types of FWAs Impact on Workers' Productivity**

"Types of FWAs have significance effect on the level of workers' productivity in the ICT sector (at the level of significance  $\alpha = 0.05$ )".

The mean of the filed "**Types of FWAs**" equals 4 (79.91%), Test-value = 28.65, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. **We conclude that the respondents agreed to field of types of FWAs.** The analysis result shows (79.91%) of the ICT companies' employees agreed with the presence of the positive impact of the types of FWAs applied on their productivity; this reveals that using different types of FWAs can be an effective tool to improve employees' productivity.

Moreover, the results agree with the study conducted by Russell and others (2009) which found the importance of distinguishing between FWAs types to discover their potential for reducing work pressure and work-life conflict and increase productivity. In addition, the study result also agrees with the Hayman (2009) study where different types of FWAs have different impact on the workers' productivity. Researchers found that (72.43%) of the employees view that work remotely (telecommuting) affect their productivity positively, which agree with the results of Abdel-Wahab (2007) study. However, this wasn't the case with Eldridge & Pabilonia, (2007), who found that there is no conclusive evidence that productivity increased due to work brought home from the workplace. The researcher justified this difference by the different in type of sample, were Eldridge and Pabilonia study conducted on nonfarm business employees.

#### **Analyzing the Second Dimension: Supported Regulations of the FWAs Impact on Workers' Productivity**

"Supported regulations of the organization have significance effect on the level of workers' productivity in the ICT sector (at the level of significance  $\alpha = 0.05$ )".

The mean of the filed "**Supported regulations of the organization**" equals 4.10 (81.95%), Test-value = 24.84, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. **We conclude that the respondents agreed to field**

of **“Supported Regulations of the Organization”**. The analysis result shows that 81.95% of the ICT companies' employees agreed with the presence of impact of supported regulations of the organization to FWAs programs on their productivity positively; this reveals the important of the existence of policies and laws that lay down the applicability of various FWAs in order to develop workplace policies that serve the interest of both employer and employee alike; which agree with Cole (2006) results about the organization's policies supported FWAs.

Moreover, 81.38% of respondents agrees with that company's policies of FWAs affect the rates of retention which reflects positively upon the level of productivity. This result is consistent with Mcnall and others study (2010). The analysis also shows that 81.04% of the employees agrees with the company's policies of FWAs impact to motivate and develop employees' skills which affect productivity positively. The findings are consistent with study of Kauffeld and others (2004) which concluded that supported policies for FWAs lead to positive effects on employee's personal development and learning opportunities.

#### **Analyzing the Third Dimension: Employees' Support of the FWAs Impact on Workers' Productivity**

"Employees' support have significance effect on the level of workers' productivity in the ICT sector (at the level of significance  $\alpha = 0.05$ )".

The mean of the field **“Employees' Support”** equals 2.33 (46.68%), Test-value = -14.35, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is negative, so the mean of this field is significantly less than the hypothesized value 3. **We conclude that the respondents disagreed to field of “Employees' Support ”.**

The analysis result shows that 46.68% of the respondents disagreed with the presence of employees' support to FWAs; therefore, it's a good idea to increase the employees' awareness about the various programs of FWAs in order to increase their support for these programs. Employees are often hesitant to utilize or request FWAs because of the negative impact it may have on their career. In Wendt (2010) study, 80% of the employees that did not have FWAs wanted more flexible options, but were concerned about whether it would create problems for them at work. The research result shows that 53.56% of workers enrolled in one of the FWAs programs do not believe that it affects their career path, which affects their productivity negatively; that result disagrees with study of Rogier and Padgett (2004) which concluded that working flexible schedule may have negative career consequences for the employees from their point of view. The non-contribution of employees in the scheduling of their work hours affects their

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productivity negatively as disagreed by 40.0% of research sample. This result was expected due to stress increase and conflict between the life-work conditions in the case of non-contribution of the employees in scheduling their work. The study of Henly and others (2006) agreed with the research results which concluded that the lack of worker's control over schedules is posited to lead to various work-family challenges.

In addition, 47.93% of the sample disagrees with that the presence of employees among their families while telecommuting during working time affects workflow and therefore affects the level of productivity negatively. We can say how the limited living space makes it difficult for the telecommuters to set up boundaries for family members; that lead to lack of existence of comfortable working environment at home and this leads those employees within flexitime workplaces to report a high degree of stress. This agrees with the study of employee and organizational impacts of flexitime work arrangements for Eldridge and Nisar (2011).

49.55% of respondents disagrees that workers feel that their colleagues or team members (who are not enrolled in those programs) are dissatisfied towards them which negatively affects their productivity. An explanation of this result is that some employers and coworkers may perceive that telecommuting days are really days off, and that employees who choose to telecommute are not committed to company's goals. This result agreed with Abdel-Wahab study (2007). The results show the respondents disagree of that workers not understanding or accepting various FWAs programs affect the level of flexibility and thus have a negative impact on the level of productivity by 46.86%; this misunderstanding or refusal for such programs, may be interpreted that in a country like Palestine which is a male-dominated culture 'a man working at home' may not be encouraged in such a culture. 47.54% of respondents disagrees that workers feel that the unfairness of FWAs programs due to the lack of availability to all employees equally negatively affects workers' productivity. This result was agreed with Wendt study (2010).

### **Analyzing the Fourth Dimension: Management Support of the FWAs Impact on Worker's Productivity**

"Management support have significance effect on the level of worker's productivity in the ICT sector (at the level of significance  $\alpha = 0.05$ )".

The mean of the field "**Management Support**" equals 2.54 (50.81%), Test-value = -7.96, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is negative, so the mean of this field is significantly less than the hypothesized value 3. **We conclude that the respondents disagreed to field of "Management Support"**. The result

of the analysis shows that 50.81% of the respondents disagreed with the presence management support to FWAs. This negative respondents of managers' support for FWAs may be because managers are more likely to procrastinate FWAs requests if they prefer a higher level of control over managing employees; and believe that the use of FWAs makes managing more difficult; they fear a loss of control. Also this finding is consistent with Fisher (2010). The analysis shows that 45.93% of sample disagrees with that managers believe that the adoption of FWAs is not suitable for senior positions with a high degree of responsibility in the company; which disagrees with study of Lambert and others (2008) that concluded that individuals with longer tenure in the organization, who had supervisory responsibilities or had personal lifestyle preferences, were more likely to use FWAs programs than those who did not have supervisory responsibilities. The researcher justified this lack of support to FWAs by managers in terms of senior positions that managers actually believe that adopting FWAs programs may reduce their presence and thus reduce their control over their subordinates. This is consistent with Eldridge and Nisar (2011) study of employee and organizational impacts of FWAs.

Research founded that 50.52% of the employees' sample disagreed with this paragraph: "managers believe that employees who are not inclined to support FWAs programs are more committed to their jobs than the beneficiaries of these programs". An explanation of that may be because managers seen asking for FWAs as a weakness and it means that employee can't fully meet the job requirements. This is not the case with study of Charron and Lowe (2004) which shows that adopting FWAs programs increases employees' commitment as an increase in adherence to company goals and lower degree of absenteeism.

Results show that female managers are more supportive of FWAs programs than male managers by 50.58%; which has been justified by researcher through suggesting that women continue to maintain greater responsibility for the majority of domestic tasks. In addition, this also agrees with the study of Shockley & Allen (2007) that target a sample of 230 employed women.

#### **Analyzing the Fifth Dimension: Impact of Types of work on Workers' Productivity**

"Types of work affect the level of workers' productivity in the ICT sector (at the level of significance  $\alpha = 0.05$ )".

The mean of the field "**Type of work**" equals 3.79 75.79%, Test-value = 19.01, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of this

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field is significantly greater than the hypothesized value 3. **We conclude that the respondents agreed to field of "Type of work "**. The result of analysis shows that 75.79% of the respondents agreed with the presence of impact for type of work on the applied type of FWAs and then on workers' productivity. This is a high ratio comparing to employees' support and management support; factors affecting the level of flexibility and then workers' productivity in the ICT sector. This result leads to the important of choosing the appropriate FWAs program to be fit with the nature of employee's type of work.

Researchers found that work which needs a long and continuous time to be realized increases the need for FWAs programs for workers by 81.04%. The explanation of this is that some FWAs programs like telecommuting and compressed hours can give workers enough time (long and continuous period) to accomplish their work. Our search respondents' records 74.30% agree with fact that the job in the senior level of management affects the chosen type of FWAs and thus the level of worker's productivity. This result is consistent with Salmieri study (2009). The research respondents' records 75.23% agree with that in case of the work that does not need to contact with the customers; it is easy to adopt FWAs program for workers. This result consistent with Fisher study (2010).

### **Analyzing the General Hypothesis**

The main hypothesis stated that there is a significant effect between FWAs and the level of workers' productivity in the ICT sector (at the level of significance  $\alpha = 0.05$ ). Table (2) shows the following result. The mean of all paragraphs of the questionnaire equals 3.28 (65.68%), Test-value =14.26, and P-value=0.000 which is smaller than the level of significance  $\alpha = 0.05$ . The sign of the test is positive, so the mean of all paragraphs of the questionnaire is significantly greater than the hypothesized value 3. **We conclude that the respondents agreed to all paragraphs of the questionnaire.**

The results show that (65.68%) of respondent agrees with the existent of positive impact for FWAs on workers' productivity. The finding is consistent with the study of Mcnall and others (2010) where the availability of FWAs such as flexitime and compressed workweek seems to help employees to experience greater enrichment from work to home which, in turn, is associated with higher productivity and job satisfaction. The finding is consistent also with the findings of Yang and Zheng (2010) since they found that the highest level of productivity actualization is associated with workers who enjoy flexible work schedule. Moreover, findings of Konrad

and Mangel (2000) suggested a significant interaction effects indicating that work-life programs had a strong positive impact on productivity.

**Table (2): Means and Test values for “the level of worker's productivity in the ICT sector”**

Item	Mean	Proportion al mean (%)	t-test	P-value (Sig.)
All paragraphs of the questionnaire	3.28	65.68	14.26	0.000*

\*The mean is significantly different from 3

**Analyzing the Sixth Dimension: Effects of Individual Characteristics**

The sixth hypothesis stated that there are no significant statistical differences among respondents' answers regarding the impact of FWAs on the level of workers' productivity in the ICT sector, due to personal characteristics (Gender, Age, Education, Experience, Marital Status and Children) (at the level of significance  $\alpha = 0.05$ ). This hypothesis was tested through its main six demographic characteristics as the following:

**1- There is no significant statistical difference (at the level of significance  $\alpha = 0.05$ ) in the level of worker's productivity in the ICT sector, due to the characteristics of the respondents (Gender)**

Table (3) shows that the p-value (Sig.) is smaller than the level of significance  $\alpha = 0.05$  for the field “Type of work”, then there is significant differences in respondents' answers toward these fields due to gender. We conclude that the characteristic of the gender has an effect on this field. Table (3) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for the other fields, then there is an insignificant difference in respondents' answers toward these fields due to gender. We conclude that the characteristic of the gender has no effect on these fields. The results indicate the absence of the effect of gender on the research’s hypotheses; which have been justified by the research sample with male majority with only (22.50%) females. On the other hand, this is not the case for many results of researches in this field like Salmieri study (2009) which concluded that gender is a key factor when it comes to dealing with time-flexibility and home–work boundaries.

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**Table (3): Independent Samples T-Test of the fields and their p-values for Gender**

No	Field	T-Test	P-value(Sig.)
1.	Types of FWAs.	-0.915	0.362
2.	Supported regulations of the organization	-0.644	0.520
3.	Employees' support.	-0.324	0.746
4.	Management support.	-1.487	0.139
5.	Type of work.	-2.264	0.025*
	<b>All fields together</b>	-1.529	0.128

\* The mean difference is significant a 0.05 level

Table (4) shows the mean for each field for gender.

**Table (4): Mean for each field of Gender**

No	Field	Means	
		male	female
1.	Types of FWAs.	3.9782	4.0542
2.	Supported regulations of the organization.	4.0822	4.1503
3.	Employees' support.	3.6581	3.6944
4.	Management support.	3.4131	3.6179
5.	Type of work.	3.7396	3.9620
6.	<b>All fields together</b>	3.7688	3.8860

For the field “Type of work”, the mean for respondents with gender of female is higher than male. Which means that females are more agree with the effect of type of work on flexibility than men. The researcher justification of that may be because lacks of women's experience in all ICT work types. Women may perceive that some ICT business do not suitable for all FWAs (for example, hardware work), while men may see flexitime suitable for such works.

**2- There are no significant statistical differences (at the level of significance  $\alpha = 0.05$ ) in the level of workers' productivity in the ICT sector, due to the characteristics of the respondents (Age)**

Table (5) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for each field, then there is an insignificant difference in respondents' answers toward each field due to age. We conclude that the age of respondents has no effect on each field.

**Table (5): ANOVA test of the fields and their p-values for Age**

No	Field	P-value(Sig.)
1.	Types of FWAs.	0.143
2.	Supported regulations of the organization.	0.353
3.	Employees' support.	0.063
4.	Management support.	0.087
5.	Type of work.	0.131
	<b>All fields together</b>	<b>0.108</b>

The results indicate the absence of the effect of age on the research's hypotheses; which has been justified by the researcher and found convergent in the ages of the study sample with 74.2% less than 30 year. On the other hand, this is not the case in the study of Cebulla and others (2007), which concluded that older workers rarely take up additional or alternative FWAs.

**3- There is no significant statistical difference (at the level of significance  $\alpha = 0.05$ ) in the level of worker's productivity in the ICT sector, due to the characteristics of the respondents (Education).**

Table (6) shows that the p-value (Sig.) is greater than the level of significance ( $\alpha = 0.05$ ) for each field, then there is insignificant difference in respondents' answers toward each field due to education. We conclude that the education characteristic of the respondents' has no effect on each field.

**Table (6): ANOVA test of the fields and their p-values for education**

No	Field	P-value(Sig.)
1.	Types of FWAs.	0.467
2.	Supported regulations of the organization.	0.295
3.	Employees' support.	0.895
4.	Management support.	0.279
5.	Type of work.	0.347
	<b>All fields together</b>	<b>0.398</b>

The results indicate the absence of the effect of level of education on the research's hypotheses; which has been justified by research and found convergent in the education level of respondents with 67.3% who have bachelor degree. It seems logical from the researcher's point of view that the level of education does not affect work flexibility and then the level of workers' productivity. Moreover, most of the researches in this field did not

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include that the level of education as a significant individual difference like the study of Lambert and others (2008).

### **4- There is no significant statistical difference (at the level of significance $\alpha = 0.05$ ) in the level of worker's productivity in the ICT sector, due to the characteristics of the respondents (Experience)**

Table (7) shows that the p-value (Sig.) is smaller than the level of significance  $\alpha = 0.05$  for the field "Types of FWAs", then there are significant differences in respondents' answers toward these fields due to experience. We conclude that the experience characteristic has an effect on this field. Table (7) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for the other fields, then there are insignificant differences in respondents' answers toward these fields due to experience. We conclude that the experience characteristic has no effect on these fields.

An explanation for this may be that employees with longer experience (in the same company) feel more comfortable within their environment and probably have more seniority and therefore, can ask for greater flexibility (different types of FWAs). On other hand, the results show that employees with long experience in the ICT field are representing a small ratio comparing with others with less than 7 years experience. So experience was not being a significant predictor in this study.

**Table (7): ANOVA test of the fields and their p-values for experience**

No	Field	P-value(Sig.)
1.	Types of FWAs.	0.036*
2.	Supported regulations of the organization.	0.264
3.	Employees' support.	0.310
4.	Management support.	0.392
5.	Type of work.	0.696
	<b>All fields together</b>	0.500

\* The mean difference is significant a 0.05 level

Table (8) shows the mean for each field for experience. For the field of "Types of FWAs", the mean for respondents with experience between 7 and 10 year is higher than other experience groups.

**Table (8): Mean for each field of experience**

No	Field	Means			
		Less than 3	3-7 year	7-10 year	10 and higher
1.	Types of FWAs.	3.952	4.065	4.123	3.774
2.	Supported regulations of the organization.	4.008	4.178	4.198	4.001
3.	Employees' support.	3.740	3.581	3.817	3.608
4.	Management support.	3.588	3.381	3.451	3.348
5.	Type of work.	3.784	3.824	3.819	3.664
	<b>All fields together</b>	3.809	3.797	3.879	3.676

**5- There is no significant statistical difference (at the level of significance  $\alpha = 0.05$ ) in the level of worker's productivity in the ICT sector, due to the characteristics of the respondents (Marital Status)**

Table (9) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for each field, then there are insignificant differences in respondents' answers toward each field due to marital status. We conclude that the characteristics of the respondents' marital status have no effect on each field.

**Table (9): Independent samples T-Test of the fields and their p-values for marital status**

No	Field	T-Test	P-value(Sig.)
1.	Types of FWAs.	-0.183	0.855
2.	Supported regulations of the organization.	-0.624	0.534
3.	Employees' support.	1.382	0.169
4.	Management support.	1.481	0.141
5.	Type of work.	0.514	0.608
	<b>All fields together</b>	0.904	0.367

Most studies indicate that there are significant differences in the responding to the flexibility level due to the marital status of the respondents; especially for married worker with family responsibilities. On the contrary of the results of this study; an explanation of this may be because men having family-responsibilities they do not want to disclose family reasons for requesting FWAs to avoid the perception of being uncommitted to their careers by their boss and peers.

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**6- There is no significant statistical difference (at the level of significance  $\alpha = 0.05$ ) in the level of worker's productivity in the ICT sector, due to the characteristics of the respondents (Children)**

Table (10) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for each field, then there are insignificant differences in respondents' answers toward each field due to children. We conclude that the characteristic of the respondents' children has no effect on each field.

**Table (10): Independent Samples T-Test of the fields and their p-values for children**

No	Field	T-Test	P-value(Sig.)
1.	Types of FWAs.	0.206	0.837
2.	Supported regulations of the organization.	1.426	0.157
3.	Employees' support.	-0.809	0.421
4.	Management support.	-1.331	0.187
5.	Type of work.	0.289	0.773
	<b>All fields together</b>	-0.231	0.818

The answers of the respondents about the impact of FWAs on workers' productivity are not affected by the employees' children; this is not the case in most of previous studies as was shown in chapter three that most researchers had found significant differences among respondents' answers regarding the impact of FWAs on the level of worker's productivity. This result may be because the number of married women with small children 5.05% that were very small comparing by total number of research sample; and women often tend to spend more time with children and family or create work- family balance than men.

**7- There is no significant statistical difference (at the level of significance  $\alpha = 0.05$ ) in the level of worker's productivity in the ICT sector, due to the characteristics of the company (Dose the company support FWAs)**

Table (11) shows that the p-value (Sig.) is smaller than the level of significance  $\alpha = 0.05$  for the field "Types of FWAs and Management support", then there is significant differences in respondents' answers toward these fields due to support FWAs. We conclude that the company characteristic of the support to FWAs has an effect on these fields. Table (11) shows that the p-value (Sig.) is greater than the level of significance  $\alpha = 0.05$  for the other fields, then there is an insignificant difference in respondents' answers toward these fields due to support FWAs. We

conclude that the characteristic of the support FWAs has no effect on these fields.

**Table (11): Independent Samples T-Test of the fields and their p-values for the company support to FWAs**

No	Field	T-Test	P-value(Sig.)
1.	Types of FWAs.	-2.389	0.018*
2.	Supported regulations of the organization.	-0.137	0.891
3.	Employees' support.	0.329	0.743
4.	Management support.	2.337	0.021*
5.	Type of work.	-1.443	0.151
	<b>All fields together</b>	0.294	0.769

\* The mean difference is significant a 0.05 level

The answers of the respondents about the impact of FWAs on workers' productivity are not affected by the companies support to FWAs; except the two fields: types of FWAs and management support. Table (12) shows the mean for each field for the company support to FWAs. For the field of "Types of FWAs", the mean for respondents in companies does not support FWAs is higher than the mean for respondents in companies support FWAs. The researcher justified that because the non beneficiaries' employees from such programs may be are in dire need to experience such flexibility more than the beneficiaries of these programs. For the field of "Management support", the mean for respondents in companies support FWAs is higher than the mean for respondents in companies does not support FWAs. The researcher justified that because the employees who worked in companies support FWAs programs were more informed and experience to the management support of those programs than employees worked in company did not support FWAs programs.

**Table (12): Mean for each field of support FWAs**

No	Field	Means	
		Yes	No
1.	Types of FWAs.	3.95	4.16
2.	Supported regulations of the organization.	4.09	4.11
3.	Employees' support.	2.34	2.30
4.	Management support.	2.61	2.28
5.	Type of work.	3.76	3.91
	<b>All fields together</b>	3.29	3.27

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### **Study Limitations**

As with all researches there were limitations to this study. The first was the population used. The participants were from single industry (ICT sector), it is plausible that the jobs nature in ICT sector affect their perception to FWAs use. This makes the generalization of results difficult. Another limitation was due to time constraints, there are some variables such as job title has not been added within the demographic variables. It was more feasible to differentiate between the responses of the respondents according to their jobs title whether they are managers or employees.

### **Conclusion**

In light of the findings that were presented before, the most notable conclusions are:

1. 65.68% of ICT companies' respondents agreed that, there is a positive statistical significant effect of FWAs on workers' productivity. This finding shows the importance of adopting FWAs programs in order to increase workers' productivity. This finding reveals that both employers and employees can benefit from effective and flexible workplaces. Employees benefit from having higher quality jobs and more supportive workplaces that are less likely to negatively affect their personal and family lives, while employers benefit from having more engaged employees and higher retention.
2. 79.91% of ICT companies' employees agreed with the presence of impact of the types of FWAs applied on their productivity; this reveals that using different types of FWAs can be an effective tool to improve employees' productivity; and companies should take into account the type of FWAs that matches with each worker needs and also job requirements.
3. The results revealed that most respondents are in favor of telecommuting 72.43% of the employees viewed that work remotely (telecommuting) affect their productivity positively. Those who have a positive attitude towards telecommuting may be encouraged by the pluses of telecommuting like saving their commute cost and time.
4. 31.8% of ICT companies adopted flextime for their employees, 29.8% job-sharing, 16.9% telecommuting, 13.2% part-time, and 8.3% compressed workweek. The low adopting of compressed workweek may be because companies use it in cases of emergency, for a limited period and for specific projects which have a close deadline compared with a large number of tasks need to be accomplished.
5. 81.95% of the ICT companies' employees agreed with the positive impact of supported regulations of the organization to FWAs programs

on their productivity. This represents the highest ratio among the other four dimensions that affect the level of flexibility. Which can be considered as an indication of workers' need to the existence of policies and laws supported these arrangements.

6. 50.81% of the respondents disagreed with the presence of management support to FWAs which affects their productivity negatively. The researcher can consider that supervisory support was related to individual perceptions of FWAs success in balancing work and family. Managers and supervisors need to be active supporters of the company's FWAs. They need to be aware of the business imperative for flexibility, including the role of FWAs as an attraction and retention tool for valuable employees.
7. 46.68% of the respondents disagreed with the presence of employees' support to different FWAs programs. In addition to supervisory support, support may also come from coworkers. Employees who had strong supportive ties with coworkers may had higher positive affect and job satisfaction Therefore, employees who perceive their coworkers as supportive of the use of FWAs will be more likely to use them than employees who do not perceive their coworkers as supportive.
8. 75.79% of the respondents agreed with that type of work affect the applied type of FWAs and then on worker's productivity. For example, the different types of work such as software, hardware, work that need contact with customers or the work that needs a team to accomplish it and others lead to choose a specific type of FWAs. For example, an employee with hardware work cannot chose or use telecommuting.
9. The study ranks the factors that affect flexibility and then worker productivity in the ICT sector from the most effect to the less as the following: first, supported regulations of the organization. Second, Type of FWA. Third, type of work. Fourth, management support. Fifth, employees' support.

### **Recommendations**

The recommendations are basically directed to ICT sector managers and employees. In order to enhance the concepts of FWAs in companies of information and communication technology in Palestine and in the light of the aforementioned results, the following recommendations are formulated:

1. To evaluate its long-term business goals. If it is determined that FWAs programs can serve as a tool in meeting those goals, and there are attitudinal/behavioral links between those programs and a number of performance outcomes then FWAs programs should be implemented.

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2. To support family-friendly organizational culture; the researcher suggests to increase the attention of family-supportive work environments programs, in order to minimize the conflict between work and family roles, especially for working women who have young children. There can be a significant link between employee's performance and the state of an employee's work life balance. Employees who are not able to balance work and lifestyle commitments may be suffering stress, and work performance may decrease.
3. To enhance an organizational environment with friendly culture through reducing congestion and transportation for the commute; in case of telecommuting and compressed workweek arrangements. This also reduces company's overhead costs.
4. To care more about designing and writing policies and laws that lay down the applicability of various FWAs that governs the selection processes among this various FWAs which have positive effect on workers' productivity especially when a company follows the principles of sound science in developing these policies.
5. To increase the awareness of management and staff in the ICT companies about FWAs programs and its importance and its great effects on employees' productivity. And to consider FWAs as one strategy that can assist in attracting and retaining staff.
6. To contribute in reducing the technological gap between Palestine and the developed countries, by working remotely with companies outside the Gaza Strip and this contributes to the acquisition of new experiences especially in case of shortages in highly skilled worker. When a company would like to hire a person with high skills and lives far away; then telecommuting makes it possible to hire that person.
7. To increase the company's competitive advantages by adopting FWAs programs; which attract and retain high-quality employees who seek for more flexibility in their work schedules. The availability of FWAs is considered as signal or indicator that the company cares about the well-being of its employees.
8. To consider FWAs as a work-life need and not something that a company could offer it to some and deny it to other employees. For more, FWA employees need to receive the professional and technical support they need to succeed from their employers.
9. To allow workers choose among the different types of FWAs, which is appropriate to their job requirements and family circumstances; in order to achieve the highest level of job satisfactions which reflects directly on

their productivity. Occupation type can also determine the availability of FWA

10. To enhance company's property with providing their employees (in case of telecommuting), with the needed equipments depending on the type of job, like phone, paper, computer modem, data line, printer and fax machines.
11. To trialing FWAs for those companies that does not support such programs. This is a good way to see if it suits both employees and companies. A short term trial could be agreed with a fixed end date, and a review undertaken at the end of the trial to determine its effectiveness.

#### **Suggested Further Studies**

FWAs and its interaction with technology sectors are not highly researched areas, and the door is still open for more academic research. The researcher felt that limited research efforts has been done on this topic in the Arab world in general and Palestine in particular and hence suggested that the following topics may provide good research ideas:

1. Conduct a study to measure productivity level for the employees in companies that adopting FWAs programs.
2. Conduct a study measuring the impact of FWAs program on various organizational outcomes, like employees' satisfaction, turnover, and happiness.
3. Conduct a comparative study on FWAs practice between different Palestinian private sectors and the governmental ones to clearly image how to achieve the greatest benefit from these programs.

#### **References**

1. Abdel-Wahab, A. G. (2007): Employees' attitudes towards Telecommuting: An empirical investigation in the Egyptian Governorate of Dakahlia'. *Behaviour & Information Technology*, Vol. 26, No. 5.
2. Atkinson, C. & Hall, L. (2011): Flexible Working and Happiness in the National Health Service. *Employee Relations*, Vol. 33, No. 2 available at [www.emeraldinsight.com/0142-5455.htm](http://www.emeraldinsight.com/0142-5455.htm).
3. Cole, G. A. (2006): Flexibility and the Workplace: The Battle to Control Working Time. *Managerial Law*, Vol. 48 No. 6, 536-540.
4. DeCarufel, A., Schaan, J.L. (1990): The impact of compressed workweeks on police job involvement. *Canadian Police College Journal* 14, 81-97.
5. Eldridge, D. & Nisar, T. (2011): Employee and Organizational Impacts of Flexitime Work Arrangements. *Department des relations industrielles*, 66, 213-234.

## **Impact of Flexible Work Arrangements on Workers**

6. Eldridge, L. & Pabilonia, S. (2007): Are Those Who Bring Work Home Really Working Longer Hours?. BLS working papers 406.
7. Fisher, L. M. (2010): FWAs in Context: How Identity, Place & Process Shape Approaches to Flexibility. thesis of doctor of philosophy in industrial/organizational psychology.
8. Galinsky, E., Bond, J., & Sakai, K. (2008): National Study of Employers , Retrieved at: 2011/8/20, from <http://familiesandwork.org/site/research/reports/2008nse.pdf>.
9. Gottlieb, B., H., Kelloway, E.K., & Barham, E. (1998): Flexible Work Arrangements: Managing the Work- Family Boundary. West Susse PO19 1UD, England: John Wiley & Sons Ltd.
10. Hayman, J., R. (2009): Flexible Work Arrangements: Exploring the Linkages between Perceived Usability of Flexible Work Schedules and Work/Life Balance. *Community, Work & Family*, Vol. 12, No. 3, 327-338.
11. Henly, J., Shaefer, H., & Waxman, E. (2006): Nonstandard Work Schedules: Employer- and Employee-Driven Flexibility in Retail Jobs , *Social Service Review*, Vol. 80, No. 4, pp. 609-634.
12. Kauffeld, S., Jonas, E., & Frey, D. (2004): Effects of a Flexible Work-Time Design on Employee- and Company-Related Aims. *European journal of work and organizational psychology*, 13 (1), 79–100.
13. Konrad, A., & Mangel, R. (2000): The Impact of Work-Life Programs on Firm Productivity. *Strategic Management Journal*, Vol. 21, No. 12, pp. 1225-1237.
14. Lambert, A., Marler, J., & Gueutal, H. (2008): Individual Differences: Factors Affecting Employee Utilization of Flexible Work Arrangements. *Journal of Vocational Behavior*, 73, 107–117.
15. Mcnall, L. & Masuda, A. & Nicklin, J. (2010): Flexible Work Arrangements, Job Satisfaction, and Turnover Intentions: The Mediating Role of Work-to-Family Enrichment. *The Journal of Psychology*, 144(1), 61–81.
16. Palestinian Central Bureau of Statistics (PCBS), (2010): Press Release on Labour Force Survey 2010 , available at : [http://www.pcbs.gov.ps/Portals/\\_pcbs/PressRelease/Labour force E2010.pdf](http://www.pcbs.gov.ps/Portals/_pcbs/PressRelease/Labour force E2010.pdf) . Revisited at 14/12/2011 11:01 pm.
17. Palestinian Central Bureau of Statistics (PCBS), (2009): Main Indicators in ICT for Business by Year. available at : [http://www.pcbs.gov.ps/Portals/\\_pcbs/ICT/ict1.htm](http://www.pcbs.gov.ps/Portals/_pcbs/ICT/ict1.htm) Revisited at 15/12/2011 10:30pm.
18. PITA (2008): Assessment of the Palestinian ICT Workforce. available at [http://www.pita.ps/newweb/pdfs/local\\_2008.pdf](http://www.pita.ps/newweb/pdfs/local_2008.pdf) last visit at 18/9/2011 11:40 am.

19. PITA (2000): Connect: PITA and PICTI Newsletter, 4th edition, available at: [www.pita.ps/newweb/pdfs/connect3.pdf](http://www.pita.ps/newweb/pdfs/connect3.pdf).
20. PITA (2007): Liberalization of Palestinian Telecom Market: Economic Impact and Investment Opportunities. PIBF conference, Available at <http://www.pita.ps/newweb/pdfs/Pita%20Brochure.pdf>, revisited in: 20/9/2011 10:15 pm.
21. Rogier, S., & Padgett, M. (2004): The Impact of Utilizing a Flexible Work Schedule on the Perceived Career Advancement Potential of Women. *Human Resource Development Quarterly*, Vol. 15, no. 1.
22. Russell, H., Connell, ph., & McGinnity, F. (2009): The Impact of Flexible Working Arrangements on Work–life Conflict and Work Pressure in Ireland. *Gender, Work and Organization*, Vol. 16 No. 1.
23. Salmieri, L. (2009): Job Insecurity, Flexibility and Home–Work Balance for Italian Couples in Non-standard Work: The Effect of Social Class , *European Review*, Vol. 17, No. 1, 93–120
24. Shockley, K., & Allen, T. (2007): When Flexibility Helps: Another Look at the Availability of Flexible Work Arrangements and Work–Family Conflict. *Journal of Vocational Behavior*, 71, 479–493
25. Stavrou, E. & Kilaniotis, C. (2010): Flexible Work and Turnover: an Empirical investigation across culture. *British Journal of Management*, Vol. 21, Issue 2, pp. 541-554.
26. Wend, E., R. (2010): Reason for Requesting a Flexible Work Arrangement: The Perceptions of Managers' on Employee Commitment. thesis of doctor of philosophy in industrial/organizational psychology.
27. Yang, S. & Zheng, L. (2010): The Paradox of De-Coupling: A Study of Flexible Work Program and Workers' Productivity. *Social Science Research* 40, 299–311.