# Impact of Flexible Work Arrangements on Employee Productivity in Information Technology Sector

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**Abstract**

In today's competitive world both men and women are working in order to fulfill their needs. This has resulted into chaos at their home as well as workplace. The result is that either of them are late to workplace which puts red mark in their attendance. A red mark denotes absent or late coming at workplace which is bad for any employee from employment point of view. Flexible working hours promote healthy work life balance and also lowers stress. This improves the wellness of employee and productivity increases. Many thinkers have increasingly focused on flexible working hours as a strategy to improve organizational and employee performance. In this research, various aspects are considered which affects the overall productivity of an employee. Flexible working hours also increases retention of employee who are talented and also upholds diversified workforce.

**Key words:**1. Flexible, 2.Work life balance 3. Working hours 4. Productivity

## Introduction

In the twenty-first century, flexible working arrangements (FWA) are crucial and relevant for workplaces. Companies are challenged with figuring out how to maintain a healthy work life balance for their employees while ensuring that they operate effectively and efficiently. Due to the advantages of flexibility for both employers and employees, many firms provide flexible working arrangements to their personnel. One of the most frequent effects is significantly better organizational and personnel performance. It also promotes a healthy work-life balance, which lowers stress and improves wellness for employees while also lowering absenteeism and employee turnover for the company.

People are working an increasing number of hours in the industrialized world, and there is growing evidence that this is bad for their health and family life. Having more freedom would offer some advantages. People would have more control, options, and perhaps a better match between the hours they work and their preferences.

Today's workplace flexibility comes in many different forms, including traditional part-time schedules as well as job sharing, flexible working hours, and telecommuting. These agreements represent how much influence an employer or employee has over when work is done and how many hours are put in within a certain period of time and vary across various nations.

## Literature Review

According to study of Dunham, R.B., Pierce, J.L. & Castaneda, M.B. (1987). On the Alternative work schedules: Two field quasi-experiments, *Personnel psychology*, 40, 215-242 reaching impact. The majority of available research on flexible work arrangements has concentrated on four types of outcomes: effects on organisational productivity, effects on employees' ability to balance work and family responsibilities, effects on employees' stress, and effects on employees' job attitudes and morale.

According to study of Eldridge, D. &Nisar, T. (2011). on the Employee and Organizational Impacts of Flexitime Work Arrangements. *Department des relations industrielles*, 66, 213-234. Using a linked dataset of businesses and employees, the study explores the impact of flexitime programmes in the United Kingdom.

According to study of Gottlieb, B., H., Kelloway, E.K., &Barham, E. (1998). On the Flexible Work Arrangements: Managing the Work- Family Boundary. West Susse PO19 1UD, England: John Wiley & Sons Ltd. Because it works well with their habits and obligations outside of work, the great majority of flextime users build their own daily or weekly routine and faithfully follow it. They consider deadlines, employees' schedules, and other working constraints while creating their own schedules.

According to study of Ridgley, C., Scott, J., Hunt, A., Harp, C. (2005). On the Flexitime A guide to good practice, Staffordshire University. Employees may require training and reminders to complete timesheets on a regular basis. Staff may plan ahead with an open electronic database that uses spreadsheets. Remind employees that they must take a 30-minute rest break every day if they work more than 6 hours. Employees who have never used flextime before may want more clarification on what they can and cannot do.

**Research Objective**

- To study the impact of Flexible working arrangements on employees' productivity under in Information Technology sector.
- To rank the factors that affect flexibility and then worker productivity in the Information Technology sector.
- To enrich the Information Technology Sector Employee & Companies for studies of such research linking between Flexible Working Arrangements and employees' productivity.

Data collection – The data were collected from both Primary and secondary sources.

Primary source - A questionnaire method was used for gathering employee feedback in the approach towards survey because it is feasible in terms of our subject and survey purpose.

**Hypothesis:**

**Age:**

HO - Age of the person is not having any impact on FWA.

H1 - Age of person impacting positively or age of the person impacting negatively on the FWA.

**Gender:**
HO - Gender is non-considerable factor for FWA on Employee Productivity.
H1 – Gender of the Employee is essential factor in FWA.
**Work Experience:**

H0 – Work experience of employee affecting on employee productivity in FWA.
H1 - Work experience of employee not affecting employee productivity in FWA.

**Data Analysis Tool:**

- **Advanced Excel**
- **Anova**

**Data Analysis & Interpretation**

This study was designed to respond to the objectives, and to test hypotheses stated in chapter three. This chapter presents the data analysis and interpretation information regarding FWAs, the discussion and interpretation and at the end the hypothesis testing. The findings that respond to these objectives were be discussed and compared to the findings in the previous studies.

**1. Gender:**

| Gender | Frequency | Percent |
|---|---|---|
| Female | 46 | 42.99% |
| Male | 61 | 57.01% |
| Total | 107 | 100% |

**Table (4.1): Illustrates sample distribution according to gender**

According to this study there are 46 female employees and 61 male employees in a sample of 107 employees, the sample proportion of females was 46/107, and for male was 61/107. The statistics show that the majority of responders are males with 42.99% of the sample and 57.01% of the sample are females. This supports the research result about the male majority.

**2. Age**

| Age | Frequency | Percent |
|---|---|---|
| 20 -24 Years | 49 | 45.80% |
| 25 -29 Years | 41 | 38.30% |
| 30 - 34 Years | 13 | 12.14% |
| Above 35 Years | 4 | 3.73% |
| Total | 107 | 100% |

**Table (4.2): Illustrates sample distribution according to age**

The statistics show that 45.80% of the sample are 20 - 24 years old, 38.30% of the sample are between 25 - 29 years and 12.14% of the sample are between 30 - 34 years and 3.73% of the sample are above 35 years. As shown, around two fourth of the IT employees were young (less than 30) this reflects to what extent this sector attracts highly skilled, professionals and may be newly graduate employees, regardless of the year of experience.

**3. Years of Experience**

| Work Experience | Frequency | Percent |
|---|---|---|
| 0 to 2 Years | 62 | 57.94% |
| 2 to 5 Years | 33 | 30.84% |
| 5 to 8 Years | 9 | 8.41% |
| Above 8 Years | 3 | 2.81% |
| Total | 107 | 100% |

**Table (4.3): Illustrates sample distribution according to years of work experience**

The statistics shows that 57.94% from the sample was experience between 0 to 2 years, 30.84% of the sample was experience between 2 to 5 years, 8.41% of the sample was experience between 5 to 8 years and 2.81% of the sample was experience of 8 years and higher. The majority of sample has experience between 0 to 2 years, these results agree with the majority of age statistics that had less than 30 years.

**4. Types of Work Arrangement**

| Types of Work Arrangement. | Frequency | Percent |
|---|---|---|
| Flex time | 53 | 49.53% |
| Compress workweek | 12 | 11.21% |
| Remote work | 8 | 7.47% |
| Part time | 7 | 6.54% |
| Other | 8 | 7.47% |
| Total | 107 | 100% |

**Table (4.4): Illustrates sample distribution according to Types of Work Arrangement**.

The statistics show that 49.53% of the sample employee are worked under the Flex Time type of work arrangement, 11.21% of the sample employee are worked under the Compress workweek type of work arrangement and 7.47% of the sample employee worked under the Remote work type of work arrangement and 6.54% of the sample employee are worked under the Part Time type of work arrangement and 7.47% of the sample employee are worked under the other type of work arrangement. As shown, around one fifth of the IT employees were worked under the Flex Time Type of work arrangement this reflects that majority of the employees are worked under the Flex Time work arrangement.

**5. Challenges face while working remotely or partially remotely.**

| Challenges face while working remotely or partially remotely. | Frequency | Percent |
|---|---|---|
| Agree | 52 | 48.60% |
| Disagree | 5 | 4.70% |
| Neutral | 30 | 28.03% |
| Strongly Agree | 19 | 17.80% |
| Strongly Disagree | 1 | 0.93% |
| Total | 107 | 100% |

**Table (4.5): Illustrates sample distribution according to challenges face while working remotely or partially remotely.**

The statistics show that 48.60% of the sample employee was Agree, 4.70% of the sample employee was Disagree, 28.03% of the sample employee was Neutral, 17.80% of the sample employee was Strongly Agree, and 0.93% of the sample employee was Strongly Disagree. As shown, around one fifth of the IT employees were Agree that they face challenges while working remotely and partially remotely.

**6. Better work-life balance with a flexible working arrangement**

| Better work-life balance with a flexible working arrangement | Frequency | Percent |
|---|---|---|
| Yes | 86 | 80.37% |
| No | 9 | 8.41% |
| May be | 12 | 11.21% |
| Total | 107 | 100% |

**Table (4.6): Illustrates sample distribution according to better work-life balance with a flexible working arrangement.**

The statistics show that 80.37% of the sample, employee was answered Yes, 8.41% of the sample, employee was answered No, 11.21% of the sample, employee was answered May be. As shown, around one third of the IT employees were answered yes that they had better work-life balance with a flexible working arrangement.

**7. Uses of technology in the workplace to help manage timeand tasks.**

| Uses of technology in the workplace to help manage time and tasks. | Frequency | Percent |
|---|---|---|
| Yes | 88 | 82.24% |
| No | 11 | 10.28% |
| May be | 8 | 7.47% |
| Total | 107 | 100% |

**Table (4.7): Illustrates sample distribution according to Uses of technology in the workplace to help manage timeand tasks.**
The statistics show that 82.24% of the sample, employee was answered Yes, 10.28% of the sample, employee was answered No, 7.47% of the sample, employee was answered May be. As shown, around one third of the IT employees were answered Yes that means uses of technology in the workplace to help manage time and tasks.

**8. Easier and harder to focus on work when working remotely**

| Easier and harder to focus on work when working remotely. | Frequency | Percent |
|---|---|---|
| Agree | 44 | 41.12% |
| Disagree | 7 | 6.60% |
| Neutral | 36 | 33.64% |
| Strongly Agree | 19 | 17.75% |
| Strongly Disagree | 1 | 0.93% |
| Total | 107 | 100% |

**Table (4.8): Illustrates sample distribution according to easier and harder to focus on work when working remotely.**

The statistics show that 41.12% of the sample, employee was Agree, 6.60% of the sample employee was Disagree, 33.64% of the sample employee was Neutral, 17.75% of the sample employee was Strongly Agree, and 0.93% of the sample employee was Strongly Disagree. As shown, around one fifth of the IT employees were Agree that they find easier and harder to focus on work when working remotely.

**9. Employer providing resources like technology support, training, communication tools for remote work.**

| Employer providing resources like technology support, training, communication tools for remote work. | Frequency | Percent |
|---|---|---|
| Yes | 89 | 83.17% |
| No | 10 | 9.34% |
| May be | 8 | 7.47% |
| Total | 107 | 100% |

**Table (4.9): Illustrates sample distribution according to employerproviding resources like technology support, training, communication tools for remote work.**

The statistics show that 83.17% of the sample, employee was answered Yes, 9.34% of the sample, employee was answered No, 7.47% of the sample, employee was answered May be. As shown, around one third of the IT employees were answered yes, that means their Employer providing resources like technology support, training, communication tools for remote work.

**10. FWA's have a positive impact on employee retention and job satisfaction**

| FWA's have a positive impact on employee retention and job satisfaction | Frequency | Percent |
|---|---|---|
| Agree | 37 | 34.57% |
| Disagree | 7 | 6.54% |
| Neutral | 31 | 28.97% |
| Strongly Agree | 15 | 14.01% |
| Strongly Disagree | 17 | 15.88% |
| Total | 107 | 100% |

**Table (4.10): Illustrates sample distribution according to FWA's have a positive impact on employee retention and job satisfaction.**

The statistics show that 34.57% of the sample, employee was Agree, 6.54% of the sample, employee was Disagree, 28.97% of the sample employee was Neutral, 14.01% of the sample, employee was Strongly Agree, 15.88% of the sample, and employee was Strongly Disagree. As shown, around one fifth of the IT employees were Agree that their FWA's have a positive impact on employee retention and job satisfaction.

**11. Satisfaction towards current work arrangement.**

| Satisfaction towards current work arrangement | Frequency | Percent |
|---|---|---|
| Yes | 87 | 81.30% |
| No | 12 | 11.21% |
| May be | 8 | 7.47% |
| Total | 107 | 100% |

**Table (4.11): Illustrates sample distribution according to Satisfaction towards current work arrangement.**

The statistics show that 81.30% of the sample, employee was answered Yes, 11.21% of the sample, employee was answered No, 7.47% of the sample, employee was answered May be. As shown, around one third of the IT employees were answered Yes, that means they are Satisfied towards current work arrangement.

**Analysing the Hypothesis by using Anova**

Anova: Single Factor

SUMMARY

| *Groups* | *Count* | *Sum* | *Average* | Variance |
|---|---|---|---|---|
| 2 | 106 | 151 | 1.42 | 0.25 |
| 1 | 106 | 184 | 1.74 | 0.67 |
| 1 | 106 | 166 | 1.57 | 0.59 |
| 2 | 106 | 303 | 2.86 | 2.03 |
| 1 | 106 | 232 | 2.19 | 1.55 |
| 1 | 106 | 139 | 1.31 | 0.45 |
| 1 | 106 | 133 | 1.25 | 0.34 |
| 1 | 106 | 246 | 2.32 | 1.46 |
| 1 | 106 | 132 | 1.25 | 0.34 |
| 1 | 106 | 288 | 2.72 | 2.15 |
| 1 | 106 | 134 | 1.26 | 0.35 |

ANOVA

| *Source of Variation* | *SS* | *df* | *MS* | *F* | *P-value* | *F crit* |
|---|---|---|---|---|---|---|
| Between Groups | 393.64 | 10 | 39.36 | 42.59 | 4.61E-72 | 1.83 |
| Within Groups | 1067.32 | 1155 | 0.92 | | | |
| Total | 1460.96 | 1165 | | | | |

**Table (4.12) Anova analysis**

- Average = Mean
- Variance = Variation
- SS = Sum of square
- DF = Degree of freedom
- MS = Mean sum of square
- F = F test
- P-value = Point value
- F crit = F statistical critical value

Three-hypothesis stated that there are no significant statistical differences among respondents' answers regarding the impact of FWAs on the level of employee's productivity in the IT sector, due to personal characteristics (Gender, Age, Experience) (at the level of significance α = 0.05). Thishypothesis was tested through its main three demographic characteristics as the following:

| No. | Item | Mean | Test value | P-value (Sig.) | Variance |
|---|---|---|---|---|---|
| 1 | Gender | 1.42 | 42.60 | 4.61 | 0.25 |
| 2 | Age | 1.74 | 42.60 | 4.61 | 0.67 |
| 3 | Work Experience | 1.57 | 42.60 | 4.61 | 0.59 |

**Table (4.13) Demographic hypothesis**

The main hypothesis stated that there is a significant effect between flexible work arrangements and the level of employees' productivity in the IT sector (at the level of significance α = 0.05). Above Table shows the following result. The mean of all of the demographic questionnaire are respectively i.e. Gender – 1.42, Age – 1.74, Work Experience – 1.57, Test-value of all questioner are equal i.e. 42.60, and P value of all questioner are equal i.e. 4.61 which is greater than the level of significance α 0.05. The sign of the test is negative, so the mean of all paragraphs of the demographic questionnaire is significantly smaller than the hypothesized value.

- There is no significant statistical difference (at the level of significance α = 0.05)in the level of worker's productivity in the ICT sector, due to the characteristics ofthe respondents (Gender).

  Result shows that the p-value (Sig.) is smaller than the level of significance α = 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 effec*t on this field.

- There are no significant statistical differences (at the level of significance α = 0.05) in the level of employees' productivity in the IT sector, due to the characteristics of the respondents (Age)

  Result shows that the p-value (Sig.) is greater than the level of significance α = 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.

- There is no significant statistical difference (at the level of significance α = 0.05) in the level of worker's productivity in the ICT sector, due to the characteristics of the respondents (Work Experience)

  Result shows that the p-value (Sig.) is smaller than the level of significance α = 0.05 for the field "Types of flexible work arrangements", then there are significant differences in respondents' answers toward these fields due to work experience. We conclude that the experience characteristic has an effect on this field.

**Analysing the Dimension of the Questionnaire**

| No. | Item | Mean | Test value | P-value (Sig.) | Variance |
|---|---|---|---|---|---|
| 4 | Which types of work arrangement in your company? | 2.86 | 42.59 | 4.61 | 2.03 |
| 5 | Are there any challenges that you face while working remotely or partially remotely? | 2.19 | 42.59 | 4.61 | 1.55 |
| 6 | Do you feel that you have a better work-life balance with a flexible working arrangement? | 1.31 | 42.59 | 4.61 | 0.45 |
| 7 | Do you think the wider use of tech2logy in the workplace to help manage time and tasks would be beneficial to you? | 1.25 | 42.59 | 4.61 | 0.34 |
| 8 | Do you find it easier or harder to focus on work when working remotely? | 2.32 | 42.59 | 4.61 | 1.46 |
| 9 | Is your employer providing necessary resources like technology support, training, communication tools for remote work? | 1.25 | 42.59 | 4.61 | 0.34 |
| 10 | Do you believe that flexible working arrangement have a positive impact on employee retention and job satisfaction? | 2.72 | 42.59 | 4.61 | 2.15 |
| 11 | Are you satisfied with your current work arrangement? | 1.26 | 42.59 | 4.61 | 0.35 |

**Table (4.14) Analysing the Dimension of the Questionnaire**

**Conclusion:**

This research investigates the impact of FWAs on employee's productivity through a n study of the employees at IT sector companies. By factors (Types of FWAs, Supported Regulations of the Organization, Employees' Support, Management Support, and Types of Work) effect the level of flexibility applied in the companies under consideration. As the results show IT sector companies are in support of FWAs programs which reflect the high level of companies' awareness about such programs.

Concerning sample characteristics, the statistics show that the majority of responders are males with 57.01%; and 45.79% of IT sector employees are less than 24 years old, and 57.94% of the sample have an experience of 2 year or less, in light of the findings that were presented in the previous chapter, the most notable conclusions are:

- IT companies' respondents agreed that, there is a positive statistically significant effect of FWAs on employees' productivity. This finding shows the importance of adopting FWAs programs in order to increase employees' 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.

- 49.53% of IT companies adopted flextime for their employees, 7.47% remote work, 6.54% part-time, and 11.21% compressed workweek, and 7.47% are other. The low adopting of part-time 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.

- The results revealed that most respondents are in favour of Flextime 49.53% of the employees viewed that work Flextime affect their productivity positively. Those who have a positive attitude towards Flextime may be encouraged by the pluses of telecommuting like saving their commute cost and time.

- There were no significant statistical differences at significant level ($\alpha$=0.05) among the respondents' answers regarding the impact of FWAs on employees' productivity due to the individual characteristics (gender, age, years of experience). That result excluded the effect of the screening on the respondents' answers on the field (type of work). Also, the result excluded the effect of the years of experience on the respondents' answers on the field (types of flexible work arrangements).

**Future Research**

Flexible Work Arrangements and their interactions with technology industries are not well explored subjects, and more academic study is needed. The researcher believed that there had been insufficient study attempts on this problem in the globe in general, and hence indicated that the following areas would give appropriate research ideas:

- More study should need for the research to determine the degree of productivity for employees in organizations that have implemented FWAs programs.

- More research should need to conduct as gender-based comparison research to determine the influence of FWAs on worker productivity.

- This research having more scope to conduct a research to assess the impact of the FWAs programs on organizational outcomes such as employee satisfaction, turnover, and happiness.

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