

AN EMPIRICAL STUDY ON EMPLOYEE PRODUCTIVITY AND EFFICIENCY WITH A SPECIAL REFERENCE TO IT SECTOR IN CHENNAI

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Abstract

This study aimed to investigate the factors influencing employee productivity and efficiency in the IT sector in Chennai, with a focus on motivation, resource availability, communication, learning and development, and work-life balance. The research employed a descriptive research design and collected data through a structured questionnaire from 396 IT employees in Chennai's Special Economic Zones using simple random sampling. The findings revealed a higher proportion of male respondents (69.9%) compared to female respondents (30.1%). However, gender did not have a significant effect on the factors influencing productivity and efficiency. Regarding age distribution, the majority of respondents (47.5%) were under 25, followed by the age group of 25-35 (44.7%). Age significantly influenced the perception of whether the organization provides sufficient resources and support and the importance of work-life balance in enhancing productivity. The study highlighted the importance of resource availability, work-life balance, motivation, communication, and continuous learning programs in influencing employee productivity. The findings contribute to understanding the factors influencing employee productivity in the IT sector.

Keywords: *Employee productivity, Efficiency, IT sector*

Introduction

Productivity and efficiency on the part of employees are essential components that contribute to the success of organisations, particularly in the fast-paced and competitive information technology sector (Fernández-Muñiz, B., Montes-Peón, J. M., & Vázquez-Ordás, C. J., 2019). Understanding the factors that influence employee productivity is of the utmost importance in Chennai, India, which is a major hub for the information technology industry in India (Kumar, A., & Goyal, N., 2013).

The atmosphere of the workplace is a significant factor in workers' overall productivity. It is possible to have a significant impact on productivity by cultivating a pleasant environment at work that promotes teamwork, open communication, and the general well-being of workers (Bhattacharyya, D., & Roy, A., 2017). In the field of information technology, businesses in Chennai should make it a top priority to provide ergonomic workstations, encourage a healthy work-life balance, and cultivate a culture that values teamwork and mutual assistance. Companies have the ability to increase employee satisfaction and motivation, which in turn

leads to increased productivity, if they invest in the creation of a conducive work environment (Kehoe, R. R., & Wright, P. M., 2013).

Another important factor that has a direct bearing on productivity and efficiency is the degree to which employees are engaged in their work. Employees who are engaged in their work tend to have higher levels of motivation and commitment, as well as a greater willingness to go the extra mile (Abeysekera, I., 2014). IT companies in Chennai ought to centre their attention on programmes that boost employee engagement, such as providing meaningful work assignments, chances for career advancement, and recognition schemes. Organisations are able to foster a culture of engagement among their workers, which in turn drives productivity, by including workers in decision-making processes, fostering a sense of ownership in the company, and making sure their voices are heard (Deery, S. J., & Jago, L. K., 2015).

In order to maximise employee productivity, training and continuing education are essential components, particularly in the dynamic field of information technology (IT). Continuous learning programmes that improve employees' technical competencies, soft skills, and industry-specific knowledge should be prioritised for investment by businesses in Chennai (Gopinath, C., & Becker, T. E., 2016). Companies can ensure that their workforce is able to continue to be productive and capable of delivering high-quality results by providing workers with the tools and resources necessary to continue their education and keep up with the latest trends in their industry (Koochang, A., Paliszkiwicz, J., & Goluchowski, J., 2015).

Review of Literature

Productivity and efficiency among employees are directly correlated to the quality of leadership that is provided. Strong leaders establish a culture of trust and empowerment within their organisations, provide their teams with support, and provide clear direction. In the information technology industry in Chennai, businesses should make it a top priority to train their managers and supervisors in effective leadership techniques. Goals should be attainable, leaders should provide feedback frequently, and leaders should address performance-related issues as soon as they arise (Chong, A. Y., & Lim, K. H., 2012). The ability of an organisation to motivate its workers and bring out their full potential lies in its ability to cultivate a leadership style that is upbeat and supportive (Oshagbemi, T., 2013).

Within the information technology industry, the technological infrastructure plays a critical part in the improvement of worker productivity. Organisations based in Chennai ought to make certain that they have a strong technological infrastructure, which should include dependable hardware and software systems (Kappagoda, M., & Ranganathan, S., 2015). This makes it possible for workers to work efficiently, reduces the amount of downtime that occurs, and makes seamless collaboration and communication possible. Businesses are able to boost employee productivity and simplify workflow procedures by making investments in cutting-edge technologies and ensuring those technologies are used to their full potential (Lee, J., 2017). When it comes to the level of productivity achieved by its workforce, the information technology (IT) sector in Chennai, like every other industry, faces its own unique set of challenges. Given the demanding nature of most jobs in the IT industry, a work-life imbalance

is a common cause for concern (Hameed, A., & Waheed, A, 2011). Work-life balance should be promoted within organisations through the implementation of policies and practises such as flexible work arrangements, policies regarding time off, and employee wellness programmes. Companies have the ability to support their employees' well-being and prevent burnout by addressing issues related to work-life balance. This ultimately results in improved productivity and efficiency (Glaser, R. L., 2018).

Another difficulty that the information technology industry in Chennai must contend with is retaining its talented workforce. Because of the intense competition for skilled professionals, organisations need to place a strong emphasis on providing appealing opportunities for career growth, competitive compensation packages, and a positive culture in the workplace (Wang, L., Law, K. S., Hackett, R. D., Wang, D., & Chen, Z. X., 2005). Companies are able to keep their most talented employees as well as cultivate a productive workforce if they establish an atmosphere that recognises and cultivates talent (Dhar, R. L., 2015).

Objectives

- To assess the factors influencing employee productivity and efficiency in the IT sector in Chennai, including motivation, resource availability, communication, learning and development, and work-life balance.
- To examine the frequency of performance feedback from supervisors and employee productivity and efficiency in the IT sector in Chennai.

Methodology

For the purpose of study, descriptive research design was adopted. The data was collected using the structured questionnaire from 396 IT employees working in Special economic zones in Chennai region. For the study the research had adopted simple rand sampling technique.

Analysis and Interpretation

Herein the table presents the demographic profile of the respondents participating in the study. It provides information on the distribution of respondents based on their gender and age.

Table No. 1: Percentage Analysis - Demographic Profile

		Frequency	Percent
Gender	Male	277	69.9
	Female	119	30.1
	Total	396	100.0
Age	Less than 25	188	47.5
	25 - 35	177	44.7
	36 - 45	15	3.8
	Above 45	16	4.0
	Total	396	100.0

Source: (Primary data)

Gender:



- The table shows that out of the total 396 respondents, 277 (69.9%) identified as male, while 119 (30.1%) identified as female.
- This indicates that the sample has a higher representation of male respondents compared to female respondents.

Age:

- The table presents the distribution of respondents based on different age groups.
- The majority of respondents, 188 (47.5%), were under the age of 25.
- The next significant age group was 25-35, with 177 (44.7%) respondents falling within this range.
- A smaller proportion of respondents, 15 (3.8%), were between the ages of 36 and 45.
- Similarly, 16 (4.0%) respondents were above the age of 45.
- This indicates that the sample primarily consists of younger individuals, with a significant proportion falling within the age range of 25-35.

The table provided presents the results of multivariate tests and tests of between-subjects effects.

Table No. 2: Multivariate Test - Factors influencing employee productivity and efficiency in the IT sector

Multivariate Tests ^a						
Effect		Value	F	Hypothesis df	Error df	Sig.
D1	Pillai's Trace	.009	.671 ^b	5.000	387.000	.646
	Wilks' Lambda	.991	.671 ^b	5.000	387.000	.646
	Hotelling's Trace	.009	.671 ^b	5.000	387.000	.646
	Roy's Largest Root	.009	.671 ^b	5.000	387.000	.646
D2	Pillai's Trace	.065	1.713	15.000	1167.000	.043
	Wilks' Lambda	.936	1.733	15.000	1068.738	.040
	Hotelling's Trace	.068	1.752	15.000	1157.000	.037
	Roy's Largest Root	.061	4.726 ^c	5.000	389.000	.000
Tests of Between-Subjects Effects						
Source		Type III Sum of Squares	df	Mean Square	F	Sig.
D1	Motivation and enthusiasm are experienced in the IT sector work.	.097	1	.097	.136	.712
	The organization provides sufficient resources and support to enhance productivity.	.013	1	.013	.016	.901
	Clear communication channels and effective feedback	.059	1	.059	.071	.789

	mechanisms exist in the workplace, contributing to efficiency.					
	Continuous learning and skill development programs have a positive impact on productivity in the IT sector.	.920	1	.920	1.213	.271
	A good work-life balance helps maintain high levels of productivity.	.528	1	.528	.715	.398
D2	Motivation and enthusiasm are experienced in the IT sector work.	2.169	3	.723	1.012	.387
	The organization provides sufficient resources and support to enhance productivity.	7.788	3	2.596	3.224	.023
	Clear communication channels and effective feedback mechanisms exist in the workplace, contributing to efficiency.	2.241	3	.747	.905	.439
	Continuous learning and skill development programs have a positive impact on productivity in the IT sector.	5.153	3	1.718	2.266	.080
	A good work-life balance helps maintain high levels of productivity.	6.592	3	2.197	2.979	.031

Source: (Primary data)

- For D1-Gender, the analysis of between-subjects effects shows no significant effects for any of the variables. All p-values are greater than .05, indicating that there is no significant difference among the groups.
- For D2-Age, the analysis of between-subjects effects reveals significant effects for two variables: "The organization provides sufficient resources and support to enhance productivity" and "A good work-life balance helps maintain high levels of productivity." The p-values for these variables are less than .05, suggesting that these factors have a significant impact on employee productivity and efficiency.

Overall, the results indicate that in the variables considered in gender, there is no significant effect, while in age, the variables "The organization provides sufficient resources and support to enhance productivity" and "A good work-life balance helps maintain high levels of productivity" have a significant effect. These findings suggest that resource availability and work-life balance play a crucial role in influencing employee productivity and efficiency in the

IT sector.

Table presents descriptive statistics for five factors that influence employee productivity and efficiency in the IT sector.

Table No. 3: Descriptive Statistics - Factors influencing employee productivity and efficiency in the IT sector

Descriptive Statistics		
	N	Mean
Motivation and enthusiasm are experienced in the IT sector work.	396	4.2778
The organization provides sufficient resources and support to enhance productivity.	396	4.2323
Clear communication channels and effective feedback mechanisms exist in the workplace, contributing to efficiency.	396	4.2449
Continuous learning and skill development programs have a positive impact on productivity in the IT sector.	396	4.2854
A good work-life balance helps maintain high levels of productivity.	396	4.2273

Source: (Primary data)

- "Motivation and enthusiasm are experienced in the IT sector work": The mean score for this factor is 4.2778. This indicates that, on average, employees perceive a high level of motivation and enthusiasm in their work within the IT sector. This suggests that employees are generally engaged and motivated in their roles, which can contribute to higher productivity and efficiency.
- "The organization provides sufficient resources and support to enhance productivity": The mean score for this factor is 4.2323. This suggests that, on average, employees perceive that their organization provides adequate resources and support to enhance their productivity. This indicates that employees feel they have the necessary tools and resources to perform their job effectively, which can positively impact their productivity.
- "Clear communication channels and effective feedback mechanisms exist in the workplace, contributing to efficiency": The mean score for this factor is 4.2449. This implies that, on average, employees believe that their workplace has clear communication channels and effective feedback mechanisms in place. This indicates that employees feel they can easily communicate with their colleagues and superiors and receive valuable feedback, which can contribute to improved efficiency.
- "Continuous learning and skill development programs have a positive impact on productivity in the IT sector": The mean score for this factor is 4.2854. This suggests that, on average, employees recognize the positive impact of continuous learning and skill development programs on their productivity within the IT sector. This indicates that employees value opportunities for growth and development, which can enhance their skills and effectiveness in their roles.
- "A good work-life balance helps maintain high levels of productivity": The mean score for this factor is 4.2273. This suggests that, on average, employees believe that

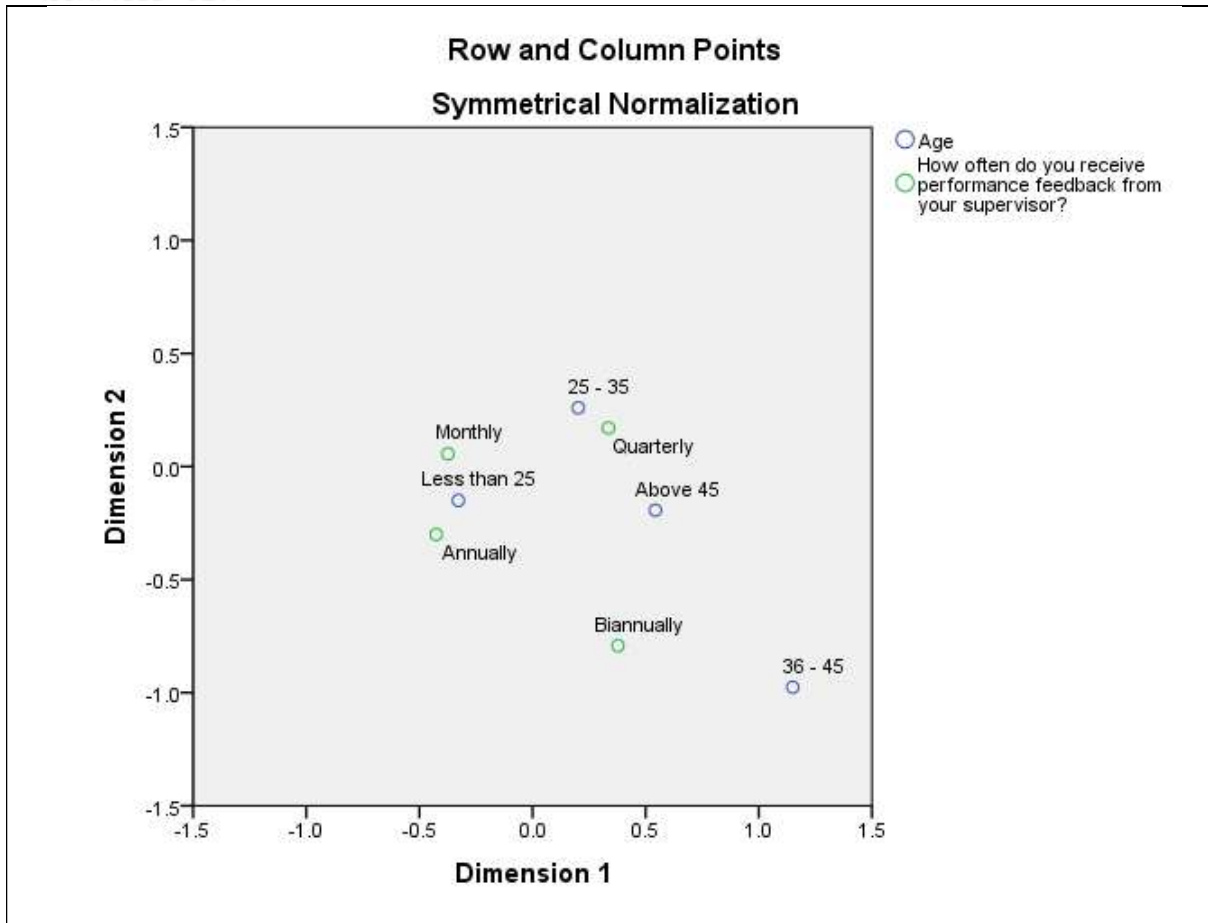
maintaining a good work-life balance is important for maintaining high levels of productivity. This indicates that employees recognize the significance of achieving a balance between work and personal life, which can positively influence their overall productivity.

Overall, the descriptive statistics indicate that employees, on average, perceive a positive level of motivation, resource availability, communication channels, continuous learning, and work-life balance in the IT sector. These findings suggest that these factors play an important role in influencing employee productivity and efficiency within the IT sector in Chennai.

The correspondence table presents the frequency distribution of performance feedback received from supervisors based on age groups. The table also provides summary statistics related to the dimensions of the correspondence analysis.

Table No. 4: Correspondence Analysis – Age with Frequency of Performance Feedback

Correspondence Table				
Age	How often do you receive performance feedback from your supervisor?			
	Monthly	Quarterly	Biannually	Annually
Less than 25	82	71	17	18
25 - 35	65	86	14	12
36 - 45	3	8	3	1
Above 45	5	8	2	1
Active Margin	155	173	36	32



Summary

Dimension	Singular Value	Inertia	Chi Square	Sig.
1	.131	.017		
2	.078	.006		
3	.004	.000		
Total		.023	9.266	.413 ^a

Source: (Primary Data)

- **Frequency distribution:** The numbers in the cells of the table represent the frequencies of respondents within each age group and their corresponding response option for performance feedback frequency. In the "Less than 25" age group, 82 respondents receive monthly feedback, 71 receive quarterly feedback, 17 receive feedback biannually, and 18 receive feedback annually.
- **Active Margin:** The last row of the table provides the total frequencies across the response options for each age group. For example, in the "Less than 25" age group, a total of 155 respondents receive feedback monthly, 173 receive quarterly feedback, 36 receive feedback biannually, and 32 receive feedback annually.



- Summary: The summary statistics in the table provide information about the dimensions of the correspondence analysis. The "Singular Value" represents the contribution of each dimension to the total variability in the data. The "Inertia" represents the total variability explained by each dimension. The "Chi Square" and "Sig." values provide statistical significance tests for the correspondence analysis.

Findings and Conclusion

The analysis of gender in the study revealed that out of the total 396 respondents, a higher representation of 277 (69.9%) identified as male, while 119 (30.1%) identified as female. This indicates that the sample had a greater proportion of male respondents compared to female respondents. However, when examining the variables considered in relation to gender, no significant effects were found. The p-values for all variables were greater than .05, suggesting that there was no significant difference among the gender groups regarding the factors influencing employee productivity and efficiency in the IT sector.

In terms of age distribution, the majority of respondents, 188 (47.5%), were under the age of 25. The next significant age group was 25-35, with 177 (44.7%) respondents falling within this range. A smaller proportion of respondents, 15 (3.8%), belonged to the age group of 36-45, and 16 (4.0%) respondents were above the age of 45. These findings indicate that the sample primarily consisted of younger individuals, with a significant proportion falling within the age range of 25-35.

The analysis of between-subjects effects based on age (D2) revealed significant effects for two variables: "The organization provides sufficient resources and support to enhance productivity" and "A good work-life balance helps maintain high levels of productivity." The p-values for these variables were less than .05, indicating that age had a significant impact on these factors related to employee productivity and efficiency. This suggests that resource availability and work-life balance play crucial roles in influencing employee productivity and efficiency, particularly among different age groups in the IT sector.

These mean scores indicate that, on average, employees perceived a high level of motivation and enthusiasm in their work, believed their organization provided sufficient resources and support, recognized the presence of clear communication channels and effective feedback mechanisms in the workplace, acknowledged the positive impact of continuous learning and skill development programs, and valued the importance of maintaining a good work-life balance for productivity. These findings suggest that these factors are generally perceived positively by employees and play significant roles in influencing their productivity and efficiency within the IT sector.

The correspondence table provided a frequency distribution of respondents based on different age groups and their corresponding responses for performance feedback frequency. The numbers in the cells of the table represent the frequencies of respondents within each age group and their feedback frequency options (monthly, quarterly, biannually, annually). Additionally, the "Active Margin" row provides the total frequencies across the response options for each age group, indicating the overall distribution of feedback frequencies.

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