

“Impact of Human Resource Interventions and AI-Driven Workplace Practices on Work–Family Conflict in the Information Technology Sector: Evidence from South India”

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ABSTRACT

The rapid growth of the Information Technology (IT) sector in South India has brought unprecedented opportunities, but also increased challenges related to work–family conflict among employees. This study investigates the impact of Human Resource (HR) interventions and AI-driven workplace practices on managing work–family conflict in IT organizations. HR interventions such as strategic objective formulation, performance evaluation systems, career development, employee coaching, diversity and inclusion management, and workplace wellness initiatives play a pivotal role in supporting employee well-being and productivity. Simultaneously, AI-driven workplace practices, including automation of routine tasks and intelligent workflow management, help in reducing workload and mitigating stress. Using primary data collected from IT professionals in Bangalore, Hyderabad, and Chennai, along with secondary industry data, the study employs descriptive and inferential statistical methods to examine the relationship between HR interventions, AI adoption, and work–family conflict. Findings indicate that well-implemented HR policies combined with AI-enabled processes significantly reduce work–family conflict and enhance job satisfaction. The study emphasizes the importance of a balanced approach integrating human-centered interventions with technology-driven efficiencies to promote employee well-being while maintaining organizational performance. These insights offer valuable guidance to IT organizations aiming to create a supportive and productive work environment.

Keywords: Human Resource Interventions, AI-Driven Workplace domain, Work–Family domain, IT Sector, Employee Well-Being.

INTRODUCTION

India continues to be one of the fastest-growing nations in technology, driven by strong government support for digital infrastructure, startup ecosystems, and skill development. The Information Technology (IT) and IT Enabled Services (ITES/BPO) industry remains a major engine of economic growth — contributing nearly 10 % to India’s GDP and projected to reach around US \$350 billion in revenue by 2026. India also holds a substantial global presence with about 17 % share of global IT services exports and over 5.9 million professionals employed in the sector — with new job creation continuing despite transformation due to automation and AI-driven services growth. Bengaluru (Karnataka) remains the largest IT hub in India, accounting for a significant portion of national IT exports and employment, and is home to numerous Global Capability Centres (GCCs), research centres, and tech startups. However, rapid growth has led to infrastructural strains in transport and utilities, prompting companies to also look at alternative ecosystems. Hyderabad (Telangana), popularly known as *HITEC City* or *Cyberabad*, is the second-largest IT hub and continues to attract global investments and GCC expansions. It recorded software exports worth over ₹1.42 lakh crore in FY 2024-25 and hosts several Centres of Excellence in AI, gaming, cloud, and analytics — growing rapidly as a destination for product development and digital services. Chennai (Tamil Nadu) has also strengthened its position as a major IT and business hub, with office space absorption rising significantly due to investments from global companies in GCCs, BFSI tech

centres, and software services corridors (especially along OMR and new peripheral zones). Andhra Pradesh is increasingly positioning itself as a next-generation IT and technology hub beyond the traditional metros. The state has developed multiple IT parks and STPI centres, and its IT & ITES sector contributed over ₹1.1 lakh crore to the state GDP in 2022-23, employing more than 12 lakh workers and showing strong growth in software exports. Visakhapatnam, Tirupati, Vijayawada, and Kakinada are emerging as key IT-related clusters, with major investments planned by firms like Cognizant and TCS to set up large campuses and create thousands of jobs. The state government is also promoting AI, analytics, data centres, and innovation ecosystems through partnerships with global technology firms such as IBM, as well as launching AI skilling initiatives and special tech zones like the Amaravati Quantum Valley. Additionally, Andhra Pradesh has attracted significant planned investments (including a reported \$10 billion commitment by Google for data infrastructure projects), underlining its growing prominence in the national tech landscape.

Overall, while traditional hubs like Bengaluru and Hyderabad continue to lead, India's IT growth is spreading to tier-II and tier-III cities, supported by policy reforms, global demand for digital services (especially in AI, cloud, cybersecurity, engineering R&D), and increasing domestic tech spending — signalling a broader, more diversified expansion beyond metropolitan clusters.

Human Resource Interventions in the Information Technology Sector

Human Resource Interventions refer to a structured set of planned activities, actions, and programs implemented by the Human Resource (HR) department to enhance organizational performance and effectiveness. These interventions are designed to improve employee productivity, well-being, and overall organizational efficiency.

Human Resource Interventions can be broadly classified into three categories:

Individual-Level Interventions – This focus on improving individual employee performance and development. Examples include coaching, counselling, training, confidence building, mentoring, and motivational programs. **Group-Level Interventions** – These are aimed at improving team dynamics and interpersonal relationships within groups. Examples include conflict management, team building, and collaborative skill development programs. **Inter-Group Interventions** – These interventions address issues between different departments or groups within the organization. Examples include organizational mirroring and third-party conflict resolution or mediation interventions. Common Human Resource Intervention activities in the Information Technology sector include goal setting, performance appraisal, reward and recognition systems, career planning and development, coaching and counselling programs, managing workforce diversity, and employee wellness initiatives.

Aim of the Study

The aim of the study is to examine Human Resource Interventions in the Information Technology sector in Bangalore. Liberalization policies and intense competition have significantly increased the importance of Human Resource Management (HRM) in Indian organizations. Whether in domestic enterprises or multinational corporations, Indian management practices place considerable emphasis on the HRM function to attract, develop, and retain talented employees in the workplace. The strategic role of Human Resources highlights its function as an empowering mechanism that enables management and employees to achieve organizational objectives more efficiently and cohesively than in the past. With the growing emphasis on Human Resource interventions and the increasing need to align HR strategies with overall business strategies, many Indian organizations are focusing on enhancing transparency and strengthening the structure and effectiveness of their Human Resource departments within their organizational frameworks.

Statement of the Problem

Over the past few years, a vivid change has occurred in the labour market and demographic profiles of employees. While there is excitement for a bright future in IT industry, that is rapidly becoming reality, increasingly, questions and concerns are also part of it. Introduction of Robotic Process Automation and

Artificial Intelligence, workload will now require one-tenth of the people power. Indian companies has to spend for re-skilling their workers, which would lead to fall in revenue per person. Depending only on a particular skill is not going to work out in this industry any more. One has to possess multiple skill sets to survive in this IT industry. Work Life balance is also one of the major challenges in the IT industry. Lot of studies has been done on work-life balance, work-life conflict, and family-life conflict in the IT industry.

Objective of the Study

1. To examine the level and nature of Human Resource Interventions and AI-driven workplace practices adopted in the Information Technology sector in South India.
2. To assess the extent of work–family conflict experienced by IT professionals and analyze its relationship with Human Resource Interventions and AI-enabled work systems.
3. To evaluate the impact of Human Resource Interventions and AI-driven workplace practices on reducing or intensifying work–family conflict among IT employees in South India.

REVIEW OF LITERATURE

1. Ganatra, N. J., & Pandya, J. D. (2023). they explain that AI applications in HR (e.g., recruitment, training, performance appraisal) significantly shape employee experience, including job satisfaction and work-life balance; ethical and transparency issues must be managed for positive outcomes.
2. Ravikumar, P. (2025) he exposes that AI in HR improves recruitment efficiency and can support sustainable HRM models that enhance work-life balance if ethics and fairness are emphasized in deployment.
3. Dima, J., Gilbert, M.-H., & Dextras-Gauthier, J. (2024). Researchers found that AI presents opportunities to automate HR tasks and improve efficiency but also challenges traditional HR roles, demanding human oversight and strategic adaptation.
4. García-Madurga, M.-Á., Gil-Lacruz, A.-I., & Saz-Gil, I. (2024). Authors explains that AI tools (e.g., mental health monitoring, personalized well-being strategies) show promise in enhancing workplace well-being and potentially alleviating work-family conflict.
5. Natarajan, B., Soundarya, S., Umamaheswari, B., & Kavyashree, K. (2025) They expressed that Work-family conflict research has shifted toward post-pandemic digital and remote work contexts, highlighting boundary management and organizational support as key factors.
6. Karlapudi, T. K. (2022) he interpreted that In IT employees, increased work/family conflict negatively correlates with career development outcomes, emphasizing the relevance of organizational support mechanisms.
7. Li, G. (2025) he revealed that Both directions of work–family conflict (work-to-family and family-to-work) are positively related to employee turnover intention, suggesting HR interventions targeting balance can reduce attrition.
8. Farivar, F. (2025) he exposed that Work-family conflict negatively impacts work engagement and well-being; interventions enhancing engagement may reduce conflict.
9. Huang, X., Liu, Y., & Zhao, J. (2024) he expressed that Human resource innovations that align with employee needs (e.g., flexible arrangements) reduce conflict and improve psychological safety, well-being, and performance.
10. Misfin, E. W., et al. (2024) he interpreted that Work-family conflict reduces job and life satisfaction and harms mental/physical health; resilience and supportive HR policies can moderate negative effects.

RESEARCH METHODOLOGY

The research objective for the current study includes exploration and description research methods. Exploratory research means, it enables the researcher to gain acumen into the research topic, then to clarify central concepts and construct and develop methods, which needs to be employed in the study. Descriptive research means, it allows the researcher to measure and report the occurrence with which the specific variable occurs in the sample,

to present an image of the facts of a condition or relationship. The requisite of a good research strategy is, careful planning and a pilot study would often be a part of the strategy.

Analysis

The present part of analysis measures the mean and standard deviation on the variables of human resource interventions. It has the following variables like Strategic Objective Formulation, Compensation and Employee Recognition Programs, Career Development and Succession Planning, Employee Coaching and Professional Support, Diversity and Inclusion Management Practices, Workplace Health and Well-Being Initiatives. The analysis is as follows;

Table 1. Mean and Standard Deviation and range of Human Resource Interventions

Measuring Items / Values	Mean	Sd	Range
Strategic Objective Formulation	3.95	0.219	0.438
Performance Evaluation Systems	3.84	0.368	0.736
Compensation and Employee Recognition Programs	3.09	0.321	0.642
Career Development and Succession Planning	3.99	0.174	0.348
Employee Coaching and Professional Support Services	3.82	0.386	0.772
Diversity and Inclusion Management Practices	3.46	0.501	1.002
Workplace Health and Well-Being Initiatives	4.21	0.409	0.818
Mean Score	3.92	0.276	0.552

Statistics of Information Technology Sector In India

The statistics about Information technology in India has been taken from www. Statistica.com, a portal about statistical study about different industries from more than 22,500 resources.

Table.2Export and domestic revenue generated by the Information Technology industry in India from 2015 to 2025 (in billion US Dollars)

Year	Export(US\$)Billion	Domestic(US\$)Billion	Total revenue (US\$)Billion
<u>2015-16</u>	<u>100</u> ¹	<u>18</u> ¹	<u>118</u> ¹
<u>2016-17</u>	<u>108</u> ¹	<u>21</u> ¹	<u>129</u> ¹
<u>2020-21</u>	<u>150</u> ²	<u>45</u> ²	<u>195</u> ²
<u>2021-22</u>	<u>178</u> ²	<u>49</u> ²	<u>227</u> ²
<u>2022-23</u>	<u>194</u> ²	<u>51</u> ²	<u>245</u> ²
<u>2023-24</u>	<u>199.5</u> ²	<u>54.4</u> ²	<u>254.4</u> ²
<u>2024-25</u>	<u>224.4</u> ³	<u>58.2</u> ³	<u>282.6</u> ³

The Indian IT industry has shown remarkable growth over the past decade, driven primarily by export revenue. Exports increased from US\$100 billion in 2015-16 to an estimated US\$224.4 billion in 2024-25, highlighting India’s strong global demand for IT services. At the same time, domestic revenue has steadily risen from US\$18 billion to approximately US\$58.2 billion during the same period, reflecting increased adoption of IT solutions by Indian companies. Overall, the total revenue of the IT sector is projected to reach US\$282.6 billion by 2024-25, demonstrating consistent growth and a significant contribution to India’s economy. While exports remain the major source of income, the rising domestic market ensures a balanced and sustainable growth trajectory. These trends indicate that India continues to strengthen its position as a global IT hub, offering robust opportunities for both international and local businesses.

Table 3. showing Information Technology /Business Process Management (IT-BPM) sector in India as a share of India’s gross domestic product (GDP) from 2015 to 2025

Financial Year	IT-BPM Share of GDP (%)
2015–16	9% (est.)
2016–17	7.7%
2017–18	7.9%
2018–19	8.0%
2019–20	7.8%
2020–21	8.0% (est.)
2021–22	7.4%
2022–23	7.5%
2023–24	7.5%
2024–25	7% – 8% (estimate)
2025 (Projected)	10%

The IT-BPM sector has consistently been a significant contributor to India’s economy over the past decade, maintaining a share of around 7–9% of the country’s GDP. While export revenues have traditionally dominated the sector, domestic demand has gradually increased, reflecting the growing adoption of digital solutions by Indian businesses. Between 2015–16 and 2024–25, the sector’s contribution has shown a steady upward trend, with projections indicating a potential rise to around 10% of GDP by 2025 due to continued expansion in software services, automation, and business process outsourcing. This trend highlights the resilience and global competitiveness of India’s IT-BPM industry. Moreover, the stable growth of domestic revenue alongside rising exports indicates that the sector is not only strengthening India’s position as a global technology hub but is also fostering sustainable economic development within the country. Overall, the data underscores the IT-BPM industry’s strategic importance in driving both technological advancement and economic growth in India.

CONCLUSION

The analysis of Human Resource (HR) interventions and IT sector statistics provides a comprehensive understanding of the current trends and challenges in India’s IT industry, particularly in South India. The HR interventions, including strategic objective formulation, performance evaluation systems, compensation and recognition programs, career development, coaching, diversity management, and workplace wellness initiatives,

show relatively high mean scores ranging from 3.09 to 4.21. Employee wellness and career development scored the highest, indicating that organizations prioritize these areas to enhance employee satisfaction and productivity. The range of scores suggests variation in implementation effectiveness across different HR practices, with diversity management showing the widest range, indicating inconsistency in applying inclusive policies across organizations.

At the same time, the IT sector's financial analysis demonstrates remarkable growth over the past decade. Export revenues grew from US\$100 billion in 2015–16 to an estimated US\$224.4 billion in 2024–25, while domestic revenues increased from US\$18 billion to approximately US\$58.2 billion. The rising domestic revenue reflects increasing digital adoption among Indian businesses, complementing global demand for IT services. Total revenue of the IT sector is projected to reach US\$282.6 billion by 2024–25, highlighting sustained expansion and a strong contribution to the national economy.

The IT-BPM sector's contribution to India's GDP has remained a stable and significant factor, ranging between 7–9% over the last decade, with projections estimating growth to 10% by 2025. This indicates that the sector continues to strengthen India's position as a global IT hub. The combination of steady export growth, expanding domestic market, and strategic HR interventions highlights the interconnected nature of organizational efficiency, employee satisfaction, and sectoral economic performance.

Comparing HR interventions with sectoral growth reveals an important insight: while financial indicators show robust expansion, employee-level interventions are equally critical to sustaining this growth. Strong HR strategies, especially those focused on career development, employee wellness, and diversity management, are essential to address work-life balance challenges, reduce attrition, and increase productivity. AI-driven workplace practices, if implemented alongside traditional HR interventions, could further optimize workflow, reduce repetitive workload, and help employees better manage work-family conflicts.

Overall, the analysis underlines that the success of the IT sector in India is driven by a combination of robust financial performance and proactive human resource strategies, and sustaining this dual focus will be key to achieving long-term growth and a resilient, skilled workforce.

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