SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

THE IMPACT OF KNOWLEDGE TRANSFER ON ADVANCING THE IT SECTOR FROM INDUSTRY 4.0 TO INDUSTRY 5.0

Dhanabhakyam[1], Ajitha.A[2]
[1]*Professor, Bharathiar University, Coimbatore, Tamil Nadu*
[2]*PhD Research scholar, Bharathiar University, Coimbatore, Tamil Nadu*

Article DOI: https://doi.org/10.36713/epra21117
DOI No: 10.36713/epra21117

ABSTRACT
The rapid evolution of technology has ushered in a new era in IT sector marked by distinct phases known as industry 4.0 and Industry 5.0. The integration of cyber physical systems, IoT, AI, enabling enhanced automation and efficiency. This paper explores the curial role of knowledge transfer in facilitating this transition from Industry 4.0 to Industry 5.0. it not only the adoption of new technologies but also the transfer of knowledge, skill and culture across generations of workers and industries. It also discusses the challenges and opportunities of knowledge transfer. The data has been collected by the questionnaire among the employees and some of the journal etc., the researcher analyses the relationship between with correlation, impact with regression. The major finding of the study is organizations need to continually update their skills and processes to keep pace with rapidly advancing technology and it also indicates that effective knowledge transfer between humans and AI driven systems was essential for optimizing productivity and decision making
KEY WORDS: *Knowledge Transfer, Transition, Artificial Intelligence Techniques, Technologies*

1. INTRODUCTION

The industrial landscape has been reshaped throughout history by waves of innovation and technological progress. In recent decades, Industry 4.0 emerged as a transformative force, ushering in an era of automation, data-driven decision-making, and interconnected systems. As this fourth industrial revolution unfolded, it revolutionized the way businesses operated, propelling industries into a new era of efficiency and productivity. Now, on the horizon, we find we ourselves automatically dawn of Industry 5.0; it builds upon the foundation laid by its predecessor but takes a quantum leap forward by redefining the relationship between humans and machines. It represents a harmonious convergence of technology and humanity, emphasizing the role of human creativity, ethics, and sustainability alongside cutting-edge automation and digitalization.

The transition from Industry 4.0 to Industry 5.0 is not just about adopting new technologies; it's about orchestrating a profound shift in organizational culture and operations. This shift necessitates the transfer of knowledge, skills, and experiences from the pioneers of Industry 4.0 to the leaders and innovators who will drive Industry 5.0 forward. The importance of knowledge transfer serves as the bridge between two industrial eras, ensuring a smooth transition and the continuity of institutional wisdom.

It explores the critical role of knowledge transfer in bridging the gap between Industry 4.0 and Industry 5.0. We will delve into strategies, best practices, and innovative approaches to facilitate this transfer of knowledge across generations of professionals and across the evolving industrial landscape and also examine how organizations can harness the power of continuous learning, embrace digital tools like digital twins and simulations, establish knowledge-sharing platforms, create collaborative work environments that harmonize human and machine capabilities, in still ethical and sustainable practices, foster cross-generational teams, engage with industry associations and networks, and garner the support of visionary leadership.

2. STATEMENT OF THE PROBLEM

Efficiently transferring knowledge and adapting skills and technologies from the context of Industry 4.0 to Industry 5.0 presents a critical challenge, requiring a comprehensive understanding of the evolving industrial landscape, workforce capabilities, and the development of effective strategies to ensure a seamless transition while maximizing productivity and innovation.

3. OBJECTIVE

- To analyses the interactions between knowledge transfer strategies and transition on employees in the IT sector.
- To assess the effect of knowledge transfer strategies on transition of employees in IT sector.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

4. RESEARCH METHODOLOGY

This study is designed to be descriptive and analytical in nature. For the analysis, the researcher employed both primary and secondary data. The research concentrated on knowledge transfer mechanisms for transitional skill development in employees. The primary data was collected through a questionnaire, while the secondary data was collected through journals and websites. The study was conducted in Coimbatore district with a 145 sample size. Correlation and Multiple regression are the tools used for data analysis.

5. RESULTS AND DISCUSSIONS

Correlation Analysis

H01: there is no significant interaction between knowledge transfer strategies and transition on employees in the IT sector.

Table – 5.1showing interaction between knowledge transfer strategies and transition on employees in the IT sector.

Independent variable	Dependent variable	Pearson correlation	Sig
Transition	Knowledge transfer strategies	.576	.000
	Organizational readiness	.778	.000
	Innovation adoption	.675	.001

Source: primary data

The table 5.1 says the correlation between the knowledge transfer strategies and transition of industry 4.0 to industry 5.0. It shows the correlation higher significant relation value p value.

Multiple Regression

Table 5.2: showing significant the effect of knowledge transfer strategies on transition of employees in IT sector

H02: There is no significant effect of knowledge transfer strategies on transition of employees in IT sector

Model	R square	Adjusted R square
effect of knowledge transfer strategies on transition	0.708	0.73
Predictors: technologies advancement, organizational adoption, regulatory framework **Dependent variables:** innovation and productivity		

Source: Primary Data

Table 5.2 reveals the results of multiple regression analysis. Innovation and productivity is considered as dependent variable and a knowledge transfer strategy is considered as predictors. The results showed that any change in the chosen predictors will yield 70% changes in the dependent variable that is innovation and productivity of IT employees.

6. FINDINGS OF THE STUDY

- Majority of the respondents are satisfied with the existing knowledge management strategies in IT sector
- Knowledge transfer strategies are closely related to the innovation and productivity of transition.
- There is a significant relationship between knowledge transfer strategies and innovation and productivity of transition.
- Knowledge transfer strategies made a significant effect on innovation and productivity of transition.
- The training and education program needed to the demand of identified as effective methods for upcoming skills of workforce.

7. CONCLUSION

The transition from Industry 4.0 to Industry 5.0 marks a profound shift in the way we conceive and operate within industrial ecosystems. This journey is not just about the adoption of advanced technologies but encompasses a comprehensive transformation that touches every facet of our society. At its core lies the critical importance of knowledge transfer, serving as the bridge between these two industrial epochs. As we've explored the predictors, independent variables, and dependent variables that shape this transition, it becomes evident that success hinges on a delicate interplay of factors. From technological advancements to ethical considerations, from global collaboration to workforce transformation, each element contributes to the broader narrative of Industry 5.0. Our study underscores the imperative of nurturing a well-prepared workforce, fostering ethical AI and automation practices, fostering global partnerships, and ensuring data security and privacy. The implications are vast, affecting not only businesses but society as a whole. As we journey toward Industry 5.0, we must remain vigilant, adaptable, and ethically conscious, harnessing knowledge as our guiding light to build a future that is innovative, inclusive, and sustainable.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 4 | April 2025 - Peer Reviewed Journal

REFERENCE

1. *Starks, A. (2013). The forthcoming generational workforce transition and rethinking organizational knowledge transfer. Journal of Intergenerational Relationships, 11(3), 223-237.*
2. *Formica, P., Mets, T., & Varblane, U. (2008). Knowledge transfer mechanisms in the European transition economies.*
3. *AJITHA, A. (2023). INFLUENCE OF E-LEARNING PORTALS ON KNOWLEDGE MANAGEMENT AMONG STUDENTS.*
4. *Harrington, D., & Kearney, A. (2011). The business school in transition: New opportunities in management development, knowledge transfer and knowledge creation. Journal of European Industrial Training, 35(2), 116-134.*
5. *Filatotchev, I., Liu, X., Buck, T., & Wright, M. (2009). The export orientation and export performance of high-technology SMEs in emerging markets: The effects of knowledge transfer by returnee entrepreneurs. Journal of international business studies, 40, 1005-1021.*
6. *Dhanabhakyam, M., & Ajitha, A. (2023). Role of Women in Top Management Position and the Impact on Knowledge Management in IT Sector. Capacity Building and Youth Empowerment, 76, 1050.*
7. *Koschatzky, K. (2002). Networking and knowledge transfer between research and industry in transition countries: Empirical evidence from the Slovenian innovation system. The Journal of Technology Transfer, 27(1), 27-38.*
8. *Bahl, M., Kriauciunas, A., & Brush, T. H. (2020). How do ownership type and knowledge transfer influence success of change? A study of transition economy firms. Global Strategy Journal, 10(4), 861-884.*
9. *Tóth, T., & Lovászová, G. (2021). Mediation of knowledge transfer in the transition from visual to textual programming. Informatics in Education, 20(3), 489-511.*
10. *Si, S. X., & Bruton, G. D. (1999). Knowledge transfer in international joint ventures in transitional economies: The China experience. Academy of Management Perspectives, 13(1), 83-90.*