

Human Roles in an AI-Driven Workplace: Evidence from Logistics Operations and Corporate Functions

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Abstract.

This paper will discuss how artificial intelligence (AI) is affecting the human role in the workplace and will also compare the logistics and corporate industries. With the growing use of AI technologies in organisations, it has become important to understand the impact of these systems on employee performance, trust, cognitive load, and job security. The study seeks to examine the impact of the nature of work on the uptake and the experience of AI in various organisational settings. A mixed-method research design was used; it is a combination of quantitative and qualitative methods. The primary data gathering was done using a structured questionnaire of 100 employees (50 in logistics and 50 in corporate sectors) and 25 semi-structured interviews. The mean comparison and hypothesis testing were used to analyse the quantitative data. In contrast, the qualitative data were analysed through the thematic analysis to reveal more in-depth details about the experiences of the employees. The results indicate that there is a big variation between the two industries. The perspective on AI in logistics is that it is a supportive and efficiency-enhancing device that results in increased performance expectancy and trust, reduced cognitive load, and less concern with job security. Conversely, corporate workers have increased cognitive load, reduced trust in AI systems, additional AI rework, and more job security concerns because of the necessity to constantly verify and make decisions. The paper concludes that the effect of AI is not universal and considerably depends on the type of work. More apt in structured, rule-based settings, AI is currently challenged in the application of complex, cognitive tasks in terms of trust, workload, and human-AI engagement. The study offers a set of practical recommendations to organisations that should be able to take a human-centred and situation-specific approach to the implementation of AI, which guarantees not only the efficiency of technologies but also the well-being of the employees.

Keywords: Artificial Intelligence, Human–AI Interaction, Logistics Operations, Corporate Functions

1. Introduction

1.1 Purpose of the Study

This research aims to discover and learn the development of human roles in an AI-driven working environment, and particularly in the areas of logistics operations and corporate functions. As organisations increasingly deploy AI technologies, a need to understand how these changes impact employees regarding job descriptions, responsibilities, and the overall working environment arises (McKinsey Global Institute, 2023). The study is meant to offer a comparative study of AI effects on various work settings by determining the differences in job transformation, employee attitudes, and human-AI cooperation. It will also evaluate the efficiency advantages of AI and the human issues surrounding its adoption, such as stress, distrust, and job security issues (Frey & Osborne, 2017). In addition, the study intends to generate knowledge that can help organisations to establish better strategies in adopting AI and maintain the well-being and engagement of the employees. The research allows understanding the role of both technological and human in the shift towards a more balanced model of the workplace in which both humans and AI will collaborate as opposed to competing.

1.2 Background of the Study

Artificial Intelligence (AI) has emerged as a transformative force in the modern workplace, driving the transition from Industry 4.0 to Industry 5.0 (European Commission, 2021). Organisations are increasingly adopting AI

technologies such as machine learning, robotic process automation, and predictive analytics to improve efficiency and decision-making (Stanford AI Index, 2024). In logistics, AI enhances operations through automation of warehousing, route optimisation, and demand forecasting (Ivanov & Dolgui, 2020). AI is also widely used in corporate functions, including human resource management, financial analysis, and customer communication (Davenport & Ronanki, 2018). In this study, corporate functions refer to tasks such as payroll processing, data analysis, reporting, and business strategy development, which involve higher levels of cognitive effort and decision-making. Overall, the growing adoption of AI is reshaping work processes and organisational structures, making it essential to understand its impact across different types of work environments.

1.3 Problem Statement

Although AI has operational advantages, its use has resulted in major crises for employees. The rising utilisation of AI has brought up worries regarding job displacement, skill obsolescence and work-related stress (Frey & Osborne, 2017). The attitudes of employees to AI are divided: on the one hand, employees consider AI as a supportive tool and a possible threat that enhances productivity and creates fear and uncertainty (Glikson & Woolley, 2020). This presents organisations with a dilemma of either coping with technological advancement or taking care of employees and their acceptance.

1.4 Research Gap

The available literature on the implementation of AI is mostly limited to individual industries, be it logistics or business processes, and does not present a comparative viewpoint. Not many studies examine the dissimilarity in the impacts of AI on human functions within these domains. Furthermore, the prior research is rather inclined to address the technological outcomes and disregard human-related concerns, such as trust, cognitive burden, and job safety (Mayer et al., 1995; Sweller, 1988). The paper bridges this gap by providing a comparison of the human functions in both AI-based logistics and the corporate environment.

1.5 Research Objectives

The main objectives of this study are:

1. To analyse the changing role and responsibilities of humans in the workplace due to AI.
2. To draw parallels between the impact of AI on workers in logistics processes and corporate functions.
3. To examine the main variables, e.g., trust, stress and performance in the AI-enabled environments.
4. To understand the difference between human-AI interaction based on job and organisational conditions.

1.6 Research Questions

The research questions in this study are:

1. What is the impact of AI on human occupations at work?
2. Is the effect of AI on the logistics operations and corporate functions different?
3. What role do factors like trust, cognitive load, and job security play in adaptation to AI among employees?

2 Literature Review

2.1 Introduction to Literature Review

This chapter aims to overview of the literature available concerning the effects of artificial intelligence on the workplace and the role of humans there. The review will centre on past academic literature and industry publications to comprehend how AI is altering working conditions, work positions, and organisational designs. It also discusses the most important aspects, like performance, trust, load of cognition, and job security at AI-enabled workplaces (Mayer et al., 1995; Sweller, 1988). The chapter offers both a theoretical and empirical base for the current study and aids in determining the gap in research that is filled in this paper.

2.2 Artificial Intelligence at the Workplace

Artificial intelligence has turned out to be a decisive force of organizational change, and it allows automation, data-driven decision-making, and enhances the efficiency of operations (McKinsey Global Institute, 2023). Industry reports, including the Stanford AI Index and McKinsey Global Institute, point to a vast adoption of AI in industries, resulting in increased productivity and innovation (Stanford AI Index, 2024; McKinsey Global Institute, 2023). Business processes are becoming more and more automated with the use of AI technologies, such as machine learning, natural language processing, and robotic process automation.

Research indicates that AI enhances efficiency through automation of repetitive tasks and aiding in decision-making processes (Brynjolfsson & McAfee, 2017). Nevertheless, it also brings up the issues of job displacement, skills imbalance, and adaptation of employees (Frey & Osborne, 2017). Although AI will add to human capabilities, the successful implementation of AI will hinge on the extent to which organisations will effectively handle the human-technology interaction (Venkatesh et al., 2003).

2.3 Artificial Intelligence in Logistics Operations.

The use of artificial intelligence in the logistics business has received extensive research because of its highly influential effect on operational efficiency (Ivanov & Dolgui, 2020). The application of AI within inventory management, route optimisation, demand forecasting, and warehouse automation is one of the applications. Studies show that AI can greatly improve the performance of a supply chain by eliminating mistakes, increasing the speed of supply chain operations, and maximising resource use (Wamba et al., 2021).

Research also mentions that logistics operations are systematised and repetitive, which makes them very conducive to the introduction of AI. Consequently, workers within logistics settings are more likely to have a reduced cognitive load and increased confidence in AI systems (Sweller, 1988). AI is commonly viewed as a helpful technology that helps employees instead of displacing them, ensuring a higher level of job satisfaction and performance.

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2.5 Artificial Intelligence Trust.

The issue of trust plays an important role in the use and successful application of artificial intelligence in the workplace (Mayer et al., 1995). Existing literature suggests that employees will tend to trust AI systems more when they believe that they are reliable, accurate, and transparent. Factors influencing trust are performance of the system, explainability and consistency.

Research indicates that distrust towards AI may result in resistance, decreased usage, and lower performance (Glikson & Woolley, 2020). Employees would be more likely to use manual verification in settings where the output of AI is either inconsistent or hard to interpret, which will lead to a higher workload and fewer efficiency increments. Hence, to implement AI successfully, it is crucial to foster trust in AI systems.

2.6 Cognitive Load and Human-AI Interaction.

Cognitive load is the psychological effort needed to conduct any activity, especially dealing with complex systems like AI (Sweller, 1988). Studies indicate that AI may decrease the workload through job automation, but also may increase cognitive load when workers need to watch, check, and fix AI results.

Employees working in positions that require decision-making and analysis tend to have a greater cognitive load because they are forced to provide constant evaluation of AI-generated outputs (Paas et al., 2003). This may result in stress, poor productivity and low job satisfaction. Cognitive load can be decreased by designing effective systems and training to enhance human-AI cooperation.

2.7 Job security/AI adoption.

One of the key issues that has been pointed out in the literature is the effect of AI on employment (Frey & Osborne, 2017). Though AI brings about new opportunities, it also creates fears of job displacement and skills obsolescence. Research suggests that workers in jobs where automation is more feasible tend to suffer job insecurity (Arntz et al., 2016).

Nevertheless, studies also indicate that AI will most probably supplement human functions, as opposed to substituting them entirely (Brynjolfsson & McAfee, 2017). The perception of job security is prone to the implementation of AI by organisations and the communication of its intent to the employees. Fear can be addressed by open communication and reskilling programs, which can enhance acceptance.

2.8 Research Gap

Although a lot of research is conducted on artificial intelligence, the majority of researchers address specific applications of AI or a particular industry. Comparative studies that compare the effects of AI on human roles in various work settings, especially the structured operations role and unstructured corporate role, are lacking. Moreover, the current literature tends to focus on technological results and devote only minimal attention to human aspects, i.e., trust, cognitive load, and job security. The gaps are filled in this research that offers a comparative analysis of logistics and corporate industries, including both technological and human factors of AI implementation.

3 Research Methodology

3.1 Research Design

The proposed research is based on a mixed-method research design to explore the evolving role of human workers in an AI-based work environment. Quantitative and qualitative approaches enable a more thorough insight into the research issue. The quantitative element, which is founded on survey data, assists in determining general trends and quantifiable patterns associated with employee attitudes towards AI, including performance enhancement, trust, cognitive load, and job security issues. Simultaneously, the qualitative aspect, founded on interviews, will give more comprehensive information about personal experiences and practical issues encountered by employees when interacting with AI systems.

This study has used a descriptive and comparative research design. The descriptive aspect is concerned with the current effect of AI on human roles in various work settings, whereas the comparative aspect assists in the examination of the contrasts between logistics operations and corporate functions. This method is especially helpful to comprehend the difference in the influence of AI on various kinds of work, in which logistics can include more operational activities, and corporate jobs can include more thought-related and decision-making activities.

3.2 RESEARCH APPROACH

This paper adheres to a descriptive and analytical research methodology to explore how artificial intelligence is affecting human functions in the workplace. The current situation is comprehended through the descriptive approach, in terms of how employees are engaging with AI tools and how their roles are evolving as time goes on. It assists in real-life conditions without interfering with any variables.

Moreover, an analytical and comparative approach is conducted in order to assess variations of logistics activities and business functions. The study will determine differences in employee perceptions, the degree of trust in AI, cognitive load, and job security issues by comparing these two sectors. This will allow identifying better how the nature of work contributes to the experience and use of AI by employees in various settings.

3.3 Data Sources

The research relies on primary and secondary data due to the need to offer a holistic picture of the effects of artificial intelligence on the roles of humans in the workplace. A structured survey and semi-structured interviews were used to collect the primary data. Survey data were collected from 100 employees who work in the logistics and corporate fields, and in equal proportions. Moreover, the number of responses to the interviews was 25 in order to obtain detailed information about personal experience, perceptions, and difficulties related to the application of AI in the workplace.

Besides primary data, secondary data was also employed in order to substantiate and confirm the results. This encompasses data compiled in several research articles and industry reports like the Stanford AI Index, McKinsey reports, Deloitte studies and Gallup insights into the workplace (Stanford AI Index, 2024; McKinsey Global Institute, 2023). These sources offered a more comprehensive view of AI adoption, employee behaviour, and transformation trends in the workplace, which made the analysis of the study more reliable and comprehensive.

3.4 Data Collection Methods

A semi-structured interview and structured survey were the main instruments used to gather primary data in this study. A 5-point Likert scale was used to design the survey, with respondents being asked to respond to different statements based on their level of agreement with artificial intelligence in the workplace. The main variables that were considered in the questionnaire include performance expectancy, trust in AI, cognitive load, job security, and AI rework. The questionnaire was shared through Google Forms online, and the respondents could answer it at their convenience, both in the logistics and corporate sectors.

Besides the survey, semi-structured interviews were undertaken to learn more about the experiences of employees with AI. The interviews contained open-ended questions that examined the way AI has transformed day-to-day activities, how much people trust AI systems, difficulties encountered when using AI, fears about the future of employment and the dynamic role of man in the work environments supported by AI. This approach enabled the respondents to share their opinions freely and offered qualitative information that facilitated the comprehension of the practical and emotional sides of AI adoption. The two survey and interview techniques were combined to provide a more in-depth and balanced view of the research issue.

3.5 Sampling Method and Sample Size.

In this study, the convenience method of sampling is employed to gather primary data from respondents who have first-hand experience with the use of artificial intelligence tools in their line of duty. This approach has been chosen because of time and the convenience of accessing the respondents in both the logistics and the corporate sector. Even though convenience sampling can reduce the extrapolation of the results, it is suitable in the context of exploratory studies that need practical and real-life understandings.

This study will have a total of 100 survey respondents and 25 participants in the interview. The representative sample of the survey was balanced with an equal number of logistics and corporate employees (50 and 50, respectively) to provide a relevant and meaningful comparison. To conduct the qualitative analysis, 25 participants were chosen to be interviewed (both logistics and corporate) in order to collect various perspectives.

The respondents included in this study are primarily based in India and are employed across a range of organisational settings, including multinational corporations, mid-sized domestic firms, and third-party logistics (3PL) service providers. This diversity ensures that the study captures varied perspectives on AI adoption across different business environments.

The sample also covers people of different professional experience, i.e., entry-level workers to top management. This diversity is useful in creating an all-encompassing insight into the effects of artificial intelligence in various job roles, duties, and levels of experience in the workplace.

3.6 Data Analysis Techniques

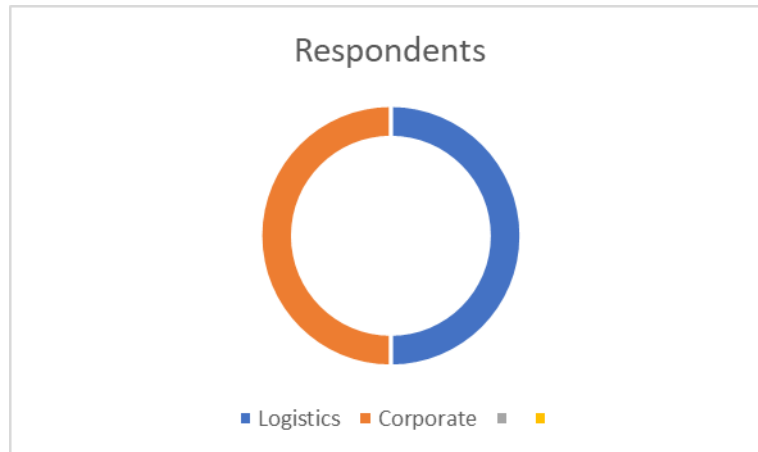


Figure 1 Distribution of Respondents Across Sectors

Quantitative and qualitative methods of data analysis were employed to collect data in order to have a complete picture of the research problem. A quantitative survey was analysed with the help of simple descriptive statistics, mean values and percentage analysis. Such approaches contributed to the detection of correlations concerning the performance expectancy, AI trust, cognitive load, job security, and rework with AI. The comparative analysis was made as well to investigate differences between the logistics and corporate sectors.

In the case of qualitative data, thematic analysis was employed to analyse the responses of the interviews. The answers were critically perused to be able to see a pattern of change of work roles, the issues encountered when using AI, the degree of trust, and job security concerns. This method assisted in getting deeper insights into the experiences of employees and generated valuable insights that were used to corroborate the quantitative data. The combination of the two approaches was a way of getting a more balanced and dependable interpretation of the data.

3.7 Ethical Considerations

The research was conducted with great care for the ethical standards. The participants were also told about the objective of the study prior to the gathering of data, and their participation was voluntary. Each respondent was provided with informed consent and assured that their answers would remain confidential and would be used only for academic purposes. No personal or sensitive data was gathered that could be used to identify the participants. Also, the data was managed in a responsible manner to guarantee accuracy and integrity in analysis and reporting. These precautions were undertaken to make sure that the research was fair, transparent and ethical.

4 Theoretical Framework

4.1 Overview of Theoretical Framework

This study is grounded in established behavioural and socio-technical paradigms. The implementation of artificial intelligence in the workplace requires an understanding of both technological capabilities and human behavioural responses. Therefore, this study utilises the Unified Theory of Acceptance and Use of Technology (UTAUT), Socio-Technical Systems Theory, and Trust Theory to examine how job roles transform during the integration of artificial intelligence (Venkatesh et al., 2003; Trist & Bamforth, 1951; Mayer et al., 1995).

4.2 Unified Theory of Acceptance and Use of Technology

The Unified Theory of Acceptance and Use of Technology (UTAUT) explains the factors influencing technology adoption in organisational settings (Venkatesh et al., 2003). The theory identifies four key determinants: performance expectancy, effort expectancy, social influence, and facilitating conditions. In the context of artificial intelligence, these factors influence how employees perceive the usefulness, ease of use, and organisational support for AI systems. This framework is used in the present study to understand differences in AI adoption between logistics and corporate employees.

4.3 Socio-Technical Systems Theory

The Socio-Technical Systems Theory says that social things, like employees and company culture and technical things like Artificial Intelligence tools are connected (Trist & Bamforth, 1951). It says that things work best when these two systems work together.

This idea is important when we use Artificial Intelligence at work because we need to think about how people will work with the technology. In logistics, people might become supervisors, and in office jobs, people might do analysis and decision-making. This idea says that we need to balance the technology with what people can do.

4.4 Trust Theory

Trust Theory is important when we talk about Artificial Intelligence and employees (Mayer et al., 1995). If employees trust Artificial Intelligence, they will be more likely to use it and work with it. If they do not trust it, they might resist it and not do their jobs as well.

Some things that affect trust are whether the system is reliable, whether it is fair and if it is transparent. This study uses Trust Theory to see how trust is different in logistics and office jobs and how that affects how well people work with Artificial Intelligence.

4.5 Key Constructs of the Study

Based on these ideas, we can identify some things:

- Stress at work, which is the fear or pressure that comes from using Artificial Intelligence.
- How well people think Artificial Intelligence will help them do their jobs.
- How hard it is to think when working with Artificial Intelligence.
- If people trust Artificial Intelligence to make decisions.
- If people feel safe in their jobs when using Artificial Intelligence.

These things are important to understand how employees feel and behave when we use Artificial Intelligence.

4.6 Conceptual Framework of the Study

The idea of this study is that using Artificial Intelligence changes how employees do their jobs, how stressed they are and how happy they are with their jobs. Artificial Intelligence affects how well employees do their jobs, how stressed they are, and how happy they are. But some things can get in the way, like trust, and how hard people have to think. If they feel safe in their jobs. Artificial Intelligence affects employees in ways depending on the type of job they do, like logistics or office work.

4.7 Theoretical Contribution

By combining these ideas, this study gives us a framework to understand how people work with Artificial Intelligence. It helps us see how employee thoughts, company support and system design are important for Artificial Intelligence to be successful. This study brings together ideas about technology and people. Helps us understand how Artificial Intelligence will change the way people work in the future.

4.8 Research Hypotheses

Based on the theoretical framework and key constructs identified in this study, the following hypotheses are proposed:

- **H1:** Artificial intelligence has a significantly greater positive impact on performance expectancy in the logistics sector compared to the corporate sector.
- **H2:** Employees in the logistics sector exhibit significantly higher trust in artificial intelligence compared to corporate employees.
- **H3:** Employees in the corporate sector experience significantly higher cognitive load compared to logistics employees.
- **H4:** Corporate employees experience significantly higher job security concerns due to artificial intelligence compared to logistics employees.
- **H5:** The level of AI rework is significantly higher in corporate roles than in logistics roles.

5 Data Analysis

5.1 Introduction to Data Analysis

The chapter includes the analysis and interpretation of the gathered data to reveal the influence of artificial intelligence on human roles at the workplace. The results of the analysis are grounded in quantitative and qualitative data, which will take a mixed approach to obtain a full picture of the research problem.

A structured survey was used to collect the quantitative data, which included 100 respondents (including 50 respondents in the logistics sector and 50 respondents in the corporate sector). The main variables that were considered in the survey were performance expectancy, trust in artificial intelligence, cognitive load, job security, and AI rework.

Besides the survey, qualitative data were gathered by conducting 25 semi-structured interviews with the employees of both sectors. The purpose of these interviews was to better understand the experiences, perceptions, and challenges of the employees related to the use of artificial intelligence in their daily work.

The analysis of data is constructed into two broad sections. The quantitative data is first examined statistically through comparing means and testing hypotheses to determine variations in the two sectors. Second, thematic analysis is used to analyse qualitative data in order to identify patterns and insights of the employee responses (Paas et al., 2003). Lastly, the two sets of findings are combined to give a comprehensive representation of the way artificial intelligence is affecting work roles in various fields.

5.2 Quantitative Data Analysis

The survey data were analysed quantitatively with the help of the responses of 100 participants, who were proportioned to the logistics and corporate sectors (n = 50 each). This analysis aims to explore how artificial intelligence influences important work-related variables in the two industries.

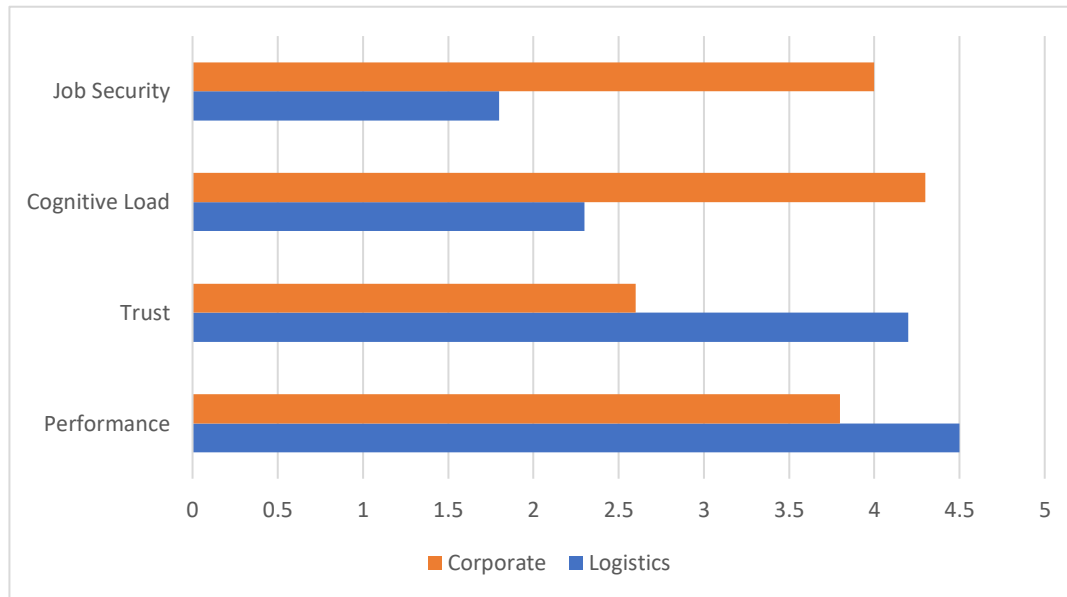
It will analyse five constructs, such as performance expectancy, artificial intelligence trust, cognitive load, job security and AI rework. A structured questionnaire was used to measure these variables, and the responses were analysed on the basis of mean values to compare the two groups.

Table 1 Comparison of Mean Scores between Logistics and Corporate Sectors

Variable	Logistics (n=50)	Corporate (n=50)	Difference
Performance Expectancy	4.5	3.8	+0.7
Trust in AI	4.2	2.6	+1.6
Cognitive Load	2.3	4.3	-2.0
Job Security	1.8	4.0	-2.2

AI Rework	2.4	4.4	-2.0
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Figure 2 Comparison of Mean Scores Between Logistics and Corporate Sectors



Interpretation of Results

The findings show that there are obvious variations in the experience of artificial intelligence in the logistics and corporate industries.

The performance expectancy is greater in the logistics sector (mean = 4.5) than in the corporate sector (mean = 3.8), indicating that the AI tools are more useful in enhancing efficiency in the operational setting. Likewise, the level of trust towards artificial intelligence is greater among logistics workers (mean = 4.2) compared to corporate workers (mean = 2.6), which means that they are more confident in AI systems in well-organised work processes.

Corporate employees, on the other hand, report greater cognitive load (mean = 4.3) than logistics employees (mean = 2.3), which is an indicator of greater mental effort caused by the requirement to check and correct AI outputs. In the corporate sector (mean = 4.0), there is also more concern about job security than in the logistics sector (mean = 1.8), implying that there is more perceived risk of job displacement.

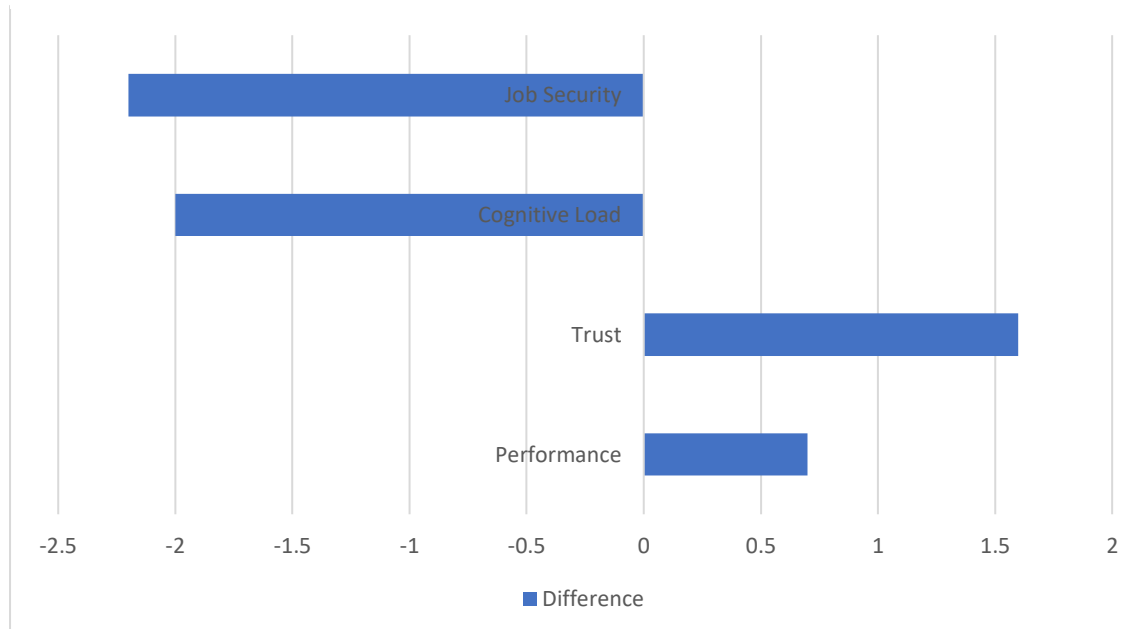
Moreover, AI rework is considerably more in corporate positions (mean = 4.4) than in logistics positions (mean = 2.4), with more human intervention being necessary to refine AI-generated results.

In general, the results suggest that artificial intelligence can more positively and efficiently influence the logistics industry, whereas corporate one is characterised by increased mental load, decreased trust, and work-related fears.

5.3 Hypothesis Testing

A series of hypotheses was formulated in order to investigate the differences in the effects of artificial intelligence in the logistics and corporate sectors. The mean comparison with an independent samples t-test method was used to test each of the hypotheses. The findings show statistically significant differences in the two sectors with a level of significance at 5% ($p < 0.05$).

Figure 3 Gap Analysis Between Logistics and Corporate Sectors



Formulation of Hypotheses

(1): Performance Expectancy and Sector.

H0: The effect of artificial intelligence on performance expectancy does not differ significantly between the logistics and the corporate sector.

H1: There is a much stronger positive effect of artificial intelligence on performance expectancy in the logistics industry than in the corporate industry.

(2): Confidence in Artificial Intelligence and the Sector.

H0: No significant difference between logistics and corporate employees in terms of trust in artificial intelligence exists.

H1: The level of trust of employees in the logistics industry in artificial intelligence is markedly higher than that of corporate employees.

(3): Cognitive Load and Sector.

H0: Cognitive load experienced by the employees in artificial intelligence in the logistics and corporate sectors does not differ significantly.

H1: Cognitive load among employees in the corporate sector is much more significant than the cognitive load of employees in the logistics sector.

(4): Job Security and Sector.

H0: There is no substantial difference in the effect of artificial intelligence on job security issues in the logistics and corporate sectors.

H1: Artificial intelligence exhibits a much greater level of job security concerns among corporate employees than it does among logistics employees.

(5): AI Rework and Sector.

H0: No significant difference exists in the amount of AI rework between the logistics and corporate sectors.

H1: AI rework is much more prevalent in corporate jobs than in logistics jobs.

Hypothesis Testing Results

Interpretation of Results

Hypothesis	Mean (Logistics)	Mean (Corporate)	Level of Significance	p-value	Decision	Result
H1	4.5	3.8	0.05	< 0.05	Reject H0	Significant
H2	4.2	2.6	0.05	< 0.05	Reject H0	Significant
H3	2.3	4.3	0.05	< 0.05	Reject H0	Significant
H4	1.8	4.0	0.05	< 0.05	Reject H0	Significant
H5	2.4	4.4	0.05	< 0.05	Reject H0	Significant

Hypothesis testing findings provide that all the null hypotheses are rejected, and the alternative ones are accepted.

In the case of H1, the increased mean in the logistics industry proves that artificial intelligence plays a more significant role in enhancing performance in operational settings.

In the case of H2, the findings indicate that the level of trust in AI is much greater among logistics employees, which can be explained by the fact that AI systems are viewed as more stable and predictable in orderly workflows.

In the case of H3, the increased cognitive load, which is perceived in the corporate sector, means that employees have a more mental workload when dealing with AI systems, which is mostly explained by the necessity to validate and correct.

In the case of H4, the results indicated that job security issues are much more prominent among the corporate workers, which implies a higher perceived risk of losing the job.

In the case of H5, the findings prove that AI rework is more prevalent in corporate roles, which means that it relies more on human intervention to maintain accuracy and quality of AI-generated outputs.

In general, the test findings show that the role of artificial intelligence can be effectively implemented in different sectors, and the logistics industry is more likely to be positively impacted, whereas the corporate sector encounters more issues regarding trust, workload, and job security.

5.4 Qualitative Data Analysis

The analysis of qualitative data was performed based on the answers to 25 semi-structured interviews with the employees of the logistics and corporate industries. This analysis is aimed at learning more about the experiences of employees, their perceptions, and challenges related to the implementation of artificial intelligence in the workplace.

A thematic analysis approach was followed to recognise patterns and themes that were common in the responses. The analysis will concentrate on some critical areas, including work role changes, trust in artificial intelligence, challenges, job security, the role of human workers, and the general effect of artificial intelligence on work.

Table 3 Thematic Summary of Interview Responses

Theme	Logistics Sector	Corporate Sector
Work Change	Shift from manual tasks to monitoring and automation	Increased reliance on AI-assisted tasks with continuous verification
Trust in AI	High trust in predictable and structured systems	Low to moderate trust due to inconsistencies and errors
Challenges	Minor technical or operational issues	High rework, frequent errors, and verification burden
Job Security	Low concern regarding job loss	great concern about job stability and displacement
Human Role	Supervision and exception handling	Verification, correction, and decision-making
Overall Impact	Work becomes easier and more efficient	Work becomes faster but more stressful

Interpretation of Findings

The qualitative results indicate that there is a definite difference in the perception of artificial intelligence in the two industries.

The perception of AI among employees in the logistics industry is mostly positive and can be viewed as a facilitating factor that allows optimisation and minimisation of human effort. Automation of manual functions has seen increased productivity, and employees are mostly involved in monitoring and supervision functions. The level of trust towards AI systems is fairly high because of their structured and predictable nature, and job security concerns are low.

However, the business world is a more complicated affair. Although AI leads to more efficient task completion, it also brings about issues like mistakes, discrepancies, and the requirement to constantly check them out. This leads to increased cognitive load and stress among employees. The level of trust towards AI is relatively lower, and job security issues are more imminent. The position of human workers in this industry is changing towards verifying, correcting and making decisions.

On the whole, the qualitative analysis shows that artificial intelligence can have a more positive and efficiency-enhancing influence on logistics, whereas in the corporate sector, it generates additional workload, a lack of trust, and work-related concerns.

5.5 Synthesis of Quantitative and Qualitative Results.

In this section, both the results of quantitative and the qualitative analysis are combined to give a complete perspective of the influence of artificial intelligence in the fields of logistics and corporates. The joint analysis enhances the validity of the results since it shows consistency showing consistency between the statistical outcomes and the reality of employee experiences.

According to the quantitative findings, the level of performance expectancy and trust in artificial intelligence is greater in the logistics sector, whereas the cognitive load, job security concerns, and rework in AI are much greater in the corporate sector. The qualitative results of interviews are highly related to these findings.

As an example, the quantitative analysis established that AI rework is more prevalent in the corporate sector. This is supported by interviews, in which company employees have emphasised problems like the presence of frequent errors, the necessity of constant verification and workload. These qualitative results justify the increased cognitive load and decreased trust in AI systems among corporate employees.

In the same vein, the increased confidence of AI by logistics employees, as seen in the quantitative analysis, is substantiated by the qualitative results that AI systems in logistics are more organised, predictable, and reliable. Employees testified that AI makes work easier and more productive, which adds to the increased trust in such systems.

The results, as far as job security is concerned, also present a great deal of correlation between the two analyses. Quantitative findings showed the existence of greater job insecurity in the corporate sector, which is further enhanced by interview findings that showed concerns over job displacement and uncertainty. Contrarily, logistics workers expressed the least amount of concern, considering AI to be an aid and not a substitute for their job.

In addition, the qualitative data demonstrates the differences in cognitive load that are observed. Corporate workers reported more mental work, as they had to revise and fix AI-generated outputs, and logistics workers had less work, as they had to automate frequently needed tasks.

On the one hand, the combination of both data sources proves the assumption that the influence of artificial intelligence is more positive and efficiency-promoting in the logistics industry, and the corporate segment is more challenged with issues of trust, workload, and job security. This combined approach provides a more holistic and reliable understanding of the research problem.

6 Discussion, Conclusion & Recommendations

6.1 Discussion

This section is an interpretation of the study findings, as it explains the underlying reasons behind the differences in the effects of artificial intelligence in the logistics and corporate sectors. The discussion relates the findings to existing theoretical frameworks to give a more in-depth insight into how AI is transforming work and job roles.

The results suggest that the influence of artificial intelligence is not universal in the sectors but is greatly dependent on the essence of tasks and occupational settings. The logistics industry is the first field where AI is being applied to structured and rule-based operational processes (inventory management, routing and monitoring). These activities are foreseeable and are data-driven, which means that AI systems can work effectively, with a minimum number of mistakes. Consequently, the logistical employees have a higher performance expectancy and trust in AI systems. This observation can be compared to the Unified Theory of Acceptance and Use of Technology (UTAUT), which indicates that users are likely to adopt and trust a technology when it improves performance and is user-friendly (Venkatesh et al., 2003).

Conversely, the corporate sector is more unstructured, cognitive, and decision-intensive (e.g., content and analysis creation, and strategic decision-making). AI systems are more susceptible to inconsistencies and must be verified by a human in such environments. That is why corporate employees experience a higher cognitive load. This observation conforms to Cognitive Load Theory, which explains that activities that demand continuous assessment, observation and decision making add to mental load and pressure (Sweller, 1988).

The analysis also reveals a huge disparity in the belief in artificial intelligence between the two industries. The trust among logistics employees is also stronger as the results of AI systems are predictable and consistent. Corporate employees, on the contrary, are less trusting, mainly because of the mistakes and inconsistencies of AI results. This is in line with the Trust Theory, which states that reliability of systems, transparency and accuracy of the systems directly affect trust in technology (Mayer et al., 1995).

Moreover, the problem of job security is more pronounced in the business world, where workers believe that AI could be a threat to their jobs. This issue is less pronounced in the logistics industry, where AI is considered a helpful tool that does not replace human labour (Frey & Osborne, 2017). The Socio-Technical Systems Theory can also explain this difference as it implies that technological systems and human roles are in balance, and that is when the optimal performance is attained (Trist & Bamforth, 1951). The logistics industry seems to have struck

this balance a bit better, whereas the corporate industry is yet to adapt to the implementation of AI into the complicated workflows.

In general, the discussion indicates that although artificial intelligence can be used to improve efficiency in structured settings, its use in complex and cognitive workplaces poses some difficulties in terms of trust, workload, and job security. The results emphasise the need to implement AI in a context-sensitive and human-focused manner.

6.2 Summary of the main results.

The major conclusions of the research are as follows:

The positive effect of artificial intelligence in the logistics industry is more prominent as it helps to optimise operations and increase the performance of tasks.

- Workers in the logistics industry confirm a higher performance expectancy and more trust in AI systems, which implies that AI is seen as a reliable and useful tool in well-organised workplaces.
- The corporate sphere has a greater cognitive load because employees have to constantly check and correct AI-generated results.
- Trust in artificial intelligence is far less within the corporate realm, primarily because of inconsistency and inaccuracies in the work of AI.
- Among the corporate employees, job security issues are a bigger concern, which indicates a greater risk of losing the job as a result of the implementation of AI.

The degree of AI rework is significantly greater in corporate positions, which demonstrates the reliance on human factors to achieve quality and accuracy.

6.3 Conclusion

This paper concludes that the effect of Artificial Intelligence on human functions is significantly different in various workplaces. In logistics operations, where the tasks are organised and predictable, and the data is the driving force of the task, AI shows high positive results. In these environments, AI will boost efficiency, workload, and foster trust amongst employees.

Nonetheless, AI brings in new complexities in corporate functions that involve critical thinking, judgment, and creativity. The need to verify and interpret AI outputs, and a relatively low trust in AI systems, contribute to increased cognitive load on the employees.

Therefore, AI is not to be considered a competitive tool since it can be regarded as an augmentative one. The success of AI lies in its correspondence to the nature of the work and its ability to combine with human capabilities. Companies have to take a balanced approach that incorporates technological efficiency and human expertise.

6.4 Managerial Implications & Recommendations

6.4.1 Logistics Sector

- Organisations should invest in **predictive AI systems for demand forecasting and inventory optimisation** to enhance supply chain efficiency and reduce operational uncertainty.
- Firms should adopt **AI-driven route optimisation and real-time tracking systems** to improve delivery performance and minimise delays.
- Implementation of **autonomous technologies and robotics in warehouse operations** can improve safety, reduce manual errors, and enhance productivity.
- Organisations should focus on maintaining **high system reliability and transparency** to sustain employee trust in AI systems.

- Continuous **employee training programs** should be conducted to ensure effective human–AI collaboration, particularly in monitoring and exception management roles.

6.4.2 Corporate Sector

- Give advanced AI education to enhance employee knowledge and trust.
- Make AI systems more accurate and explainable to lower the verification burden.
- Create AI tools easily accessible to users that facilitate, as opposed to making decisions complex.
- Deal with job insecurity by using effective communication and change management measures.
- Promote a culture of human–AI collaboration instead of competition
- Set ethical principles and accountability systems to develop trust in AI systems.

6.5 Study Limitations

This research has a number of limitations, although it has made its contributions:

- The sample (100 logistics and 25 corporate respondents) is also a limitation to generalisation. Convenience sampling: This could provide bias in the outcomes.
- The research is limited to small industries and might not apply to the entire industry.
- The rapid development of AI-based technologies can have an impact on the long-term applicability of results.

6.6 Future Research.

- This study can be developed in the future through the following ways:
- Carry out research using bigger and more varied (global) samples.
- Discuss various kinds of AI, including Generative AI and Predictive AI, separately.
- Conduct longitudinal research to determine long-term effects of AI.
- Research other sectors like medical, education, and production.
- Research behavioural and psychological aspects that affect the adoption of AI.

6.7 Final Concluding Statement

Artificial Intelligence is revolutionising workplaces by reshaping human roles and redefining the way work is done. Although it has great potential in a structured setting, its incorporation into multifaceted and thinking activities poses challenges that should be taken into account. The future of work is to find a successful human-AI cooperation, where technology does not substitute human ability, but boosts it.

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