Assessing the Relationship Between Perceived Usefulness of AI, Job Displacement Fears, and Work-place happiness

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Abstract*—With the increasing integration of Artificial Intelligence (AI) across industries, concerns have arisen regarding its implications for employment and workplace dynamics. This study investigates the relationship between the perceived usefulness of AI, fears of job displacement, and overall workplace happiness. Drawing data from 165 professionals working in AI-integrated environments, the study employs Pearson's correlation and multiple regression analysis to evaluate how AI perception affects job satisfaction.The findings indicate that while employees acknowledge AI's potential in improving efficiency and reducing workload, its adoption also generates concerns related to job security and role redundancy. Interestingly, the direct impact of AI-related factors on overall job satisfaction was found to be minimal, suggesting that other organizational elements play a more significant role in employee well-being. The study highlights the need for proactive organizational strategies—such as ethical AI implementation, employee upskilling, and transparent communication—to foster a balanced and supportive AI adoption culture.This research contributes to a deeper understanding of how employees perceive AI within workplace settings and provides practical recommendations for managing its integration to promote both productivity and workforce stability.

Keywords*—*Artificial Intelligence, Job Displacement, Workplace Happiness, Employee Perception, AI Usefulness

I. INTRODUCTION

A. Background

Artificial Intelligence (AI) has emerged as a cornerstone of digital transformation, influencing nearly every facet of business operations. From automating repetitive tasks to enabling data-driven decision-making, AI technologies have fundamentally redefined organizational workflows and employee roles. In domains such as finance, healthcare, manufacturing, and customer service, the deployment of AI-driven tools—including machine learning models, robotic process automation (RPA), and intelligent chatbots—has led to noticeable improvements in efficiency, accuracy, and scalability.
However, while AI offers undeniable operational advantages, it also prompts profound questions regarding its implications for the human workforce. Historically, technological disruptions have altered employment landscapes by rendering certain job roles obsolete while simultaneously creating demand for new skill sets. Scholars such as Autor argue that technology tends to polarize labor markets, expanding demand for both high-skill and low-skill jobs while reducing the need for routine middle-skill roles. Frey and Osborne echo this concern, estimating that nearly half of current job roles in the U.S. could be susceptible to automation due to advances in AI. These perspectives underscore the dual-edged nature of AI in the workplace—offering both opportunity and uncertainty.

B. Motivation

The integration of AI into organizational ecosystems has created a new paradigm where machines augment or even replace human labor. Employees increasingly interact with intelligent systems that support, complement, or sometimes compete with their tasks. While some perceive AI as an enabler of personal growth and task efficiency, others regard it with apprehension—fearing redundancy, devaluation of human skills, and diminished job stability. This emotional and psychological tension forms the core of modern workplace discourse surrounding AI.

As organizations race toward AI adoption, a nuanced understanding of employee sentiment becomes vital. Employers must recognize that perceptions of AI's usefulness can shape not only job performance but also workplace morale and retention. Yet, much of the existing discourse remains polarized—either emphasizing AI's disruptive potential or championing its benefits, without capturing the lived experience of employees navigating this technological shift.

C. Research Gap

Although extensive studies have explored the economic and technical implications of AI, there remains a paucity of empirical research focused on the psychological and emotional dimensions of AI integration at the workplace. Most prior research tends to analyze AI adoption either from a productivity standpoint or from a macroeconomic perspective. Few investigations delve into how employees reconcile the perceived usefulness of AI with underlying fears of job displacement, and how this interplay influences their workplace happiness.

Moreover, current literature does not sufficiently explore how these variables interact across diverse sectors where AI adoption is at varying levels of maturity. There is also limited insight into the mediating role of organizational practices, such as upskilling initiatives and ethical AI policies, in shaping employee attitudes toward automation.

D. Research Objectives

This study aims to fill the identified research gap by investigating the interconnected relationship between the perceived usefulness of AI, job displacement fears, and workplace happiness. The primary objectives are:

- To examine how employees perceive the impact of AI on job efficiency, work engagement, and daily productivity.
- To evaluate whether fears of AI-induced job displacement mediate the relationship between AI adoption and overall job satisfaction.
- To assess the extent to which AI is seen as a supportive tool or a threat, based on sectoral and experiential differences.
- To provide strategic recommendations for organizations aiming to foster a positive AI culture while safeguarding workforce morale and stability.

Through this research, we aim to contribute to a more balanced and human-centered narrative on AI adoption—one that acknowledges both its promise and its challenges in shaping the future of work.

II. LITERATURE REVIEW

A. AI and Workplace Efficiency

1) Artificial Intelligence has been widely acknowledged for its transformative impact on workplace productivity and operational optimization.

2) Simon (1956) laid the groundwork by suggesting that machines could simulate human decision-making, foreshadowing AI's role in automating tasks.

3) Brynjolfsson and McAfee (2011) emphasized that AI-driven tools enhance work performance but may also reinforce inequality without skill alignment.

4) Bessen (2019) found that AI increases demand for roles involving human oversight, rather than replacing them entirely.

5) Tambe et al. (2019) observed that AI augments employees' capabilities by reducing cognitive overload, leading to more strategic decision-making.

6) Chui et al. (2016) noted that automation tools improve workflow by replacing routine operations, especially in administrative and manufacturing sectors.

7) Ford (2015) warned that AI productivity often benefits top-tier professionals while marginalizing others.

8) Gomez and Vargas (2018) emphasized that companies investing in AI training report higher efficiency and lower resistance.

9) Makridakis (2019) showed that AI-driven forecasting models improve speed and accuracy in business decisions.

10) Fountaine et al. (2021) revealed that organizations adopting AI in structured ways experience up to 40% improvements in efficiency.

11) Agrawal et al. (2018) argued that AI frees up employee bandwidth for creative tasks by handling repetitive operations.

B. Job Displacement Fears

The implementation of AI has simultaneously triggered concerns about job security and redundancy.

1) Frey and Osborne (2017) estimated that 47% of jobs in the U.S. are at high risk due to automation.

2) Acemoglu and Restrepo (2018) found that AI displaces routine roles but generates supervisory and creative roles.

3) Daugherty and Wilson (2018) stressed that balancing AI automation with human-centered planning mitigates job loss anxiety.

4) Arntz et al. (2020) argued that fears are often inflated, as AI tends to complement rather than replace human tasks.

5) Martin Ford (2015) claimed that without proactive intervention, AI will lead to widespread structural unemployment.

6) Bessen (2021) observed a paradox where AI adoption grows, yet human labor remains essential in key domains.

7) Goos et al. (2014) discussed job polarization, where mid-skill roles vanish, but AI-resistant high and low-skill jobs persist.

8) Chatterjee et al. (2021) found that leadership-driven AI adoption reduces job loss fears through better communication.

9) Manyika et al. (2017) suggested that up to 375 million workers may need to transition to new occupational categories.

10) Kaplan (2016) highlighted concerns about "technological unemployment," where AI capabilities outpace human reskilling efforts.

C. Psychological Impact and Workplace Sentiment

The psychological consequences of AI adoption extend beyond job security, affecting stress levels, motivation, and emotional well-being.

1) Tarafdar et al. (2021) coined the term "technostress," linking AI overuse to rising employee anxiety.

2) Bloom et al. (2020) found that AI reduced workload stress when implemented alongside job enrichment policies.

3) Lindebaum et al. (2020) emphasized that AI's psychological effects depend on transparency and clarity of purpose.

4) Haenlein and Kaplan (2020) positioned AI as a catalyst for workplace satisfaction if deployed as a support tool.

5) Wang et al. (2018) reported higher engagement levels among employees who viewed AI as augmentative.

6) Glikson and Woolley (2020) explored human trust in AI, finding it correlates with job satisfaction.

7) Duggan et al. (2022) concluded that AI-human collaboration reduces uncertainty and promotes workplace clarity.

8) Wilson and Daugherty (2017) advocated for collaborative intelligence, noting higher morale among AI-trained employees.

9) Jarrahi (2018) found that human-AI symbiosis reduces mental fatigue and improves job confidence.

10) Hancock and Hancock (2019) highlighted that trust in AI is fragile and directly impacts workplace harmony.

D. Ethical Considerations and Trust in AI

Transparency, fairness, and accountability are central to ethical AI adoption and employee acceptance.

11) Pasquale (2015) introduced the idea of the "Black Box Society," critiquing opaque AI decision-making systems.

12) Zuboff (2019) warned that surveillance-based AI undermines workplace trust.

13) Floridi and Cowls (2020) proposed ethical frameworks emphasizing AI fairness and explainability.

14) Bryson (2021) noted that ethical AI guidelines lead to greater employee alignment with AI processes.

15) Mittelstadt (2022) emphasized that ethical transparency correlates with higher employee engagement.

16) Raghavan et al. (2019) researched the risks of AI bias in hiring, emphasizing the need for transparent and fair AI systems.

17) Howard and Borenstein (2018) found that AI tools enhance diversity when built with equity parameters.

18) Binns et al. (2021) noted that inclusive AI design improves retention and trust.

19) Dastin (2020) exposed how poorly trained hiring algorithms can reinforce systemic biases.

20) D'Ignazio and Klein (2022) promoted inclusive data practices to counter algorithmic discrimination in hiring.

E. Organizational Adaptation and Career Progression

A critical factor in successful AI integration is how organizations prepare their workforce for the transition.

1) Bessen (2018) showed that employees with AI skills see enhanced career mobility.

2) Frank et al. (2019) found new career opportunities in hybrid human-AI roles.

3) Garg et al. (2020) reported that AI-enabled workplaces drive personal development if proper tools are provided.

4) Acemoglu and Johnson (2021) emphasized that job restructuring should prioritize human capital over cost efficiency.

5) Westerman et al. (2022) discovered that AI-trained employees show greater stability and promotional readiness.

6) Ahuja (2020) argued that AI reshapes human resource management by aligning digital skills with organizational needs.

7) Sharma and Bansal (2022) linked digital transformation strategies to improved employee well-being.

8) Leicht-Deobald et al. (2019) warned of resistance when algorithms are imposed without employee consultation.

9) Colbert et al. (2016) explored the digital workplace, asserting that human adaptability is crucial for AI success.

10) OECD (2021) stressed the importance of government and institutional support for sustainable workforce development.

III. RESEARCH METHODOLOGY

A. Research Design

This study adopts a quantitative research design aimed at empirically examining the relationship between the perceived usefulness of AI, job displacement fears, and workplace happiness. A survey-based descriptive and correlational approach was employed to explore associations and potential causal links among the variables. This framework was selected to capture employee sentiments across sectors where AI adoption is active and growing.

The research sought to assess how employees across different industries perceive AI technologies in terms of enhancing their work performance while simultaneously triggering concerns regarding job security. The design emphasized structured measurement, allowing for statistical interpretation of observed relationships between variables.

B. Sampling and Data Collection

Data was collected using a structured questionnaire distributed via online channels to professionals working in AI-integrated environments. The questionnaire included both demographic items and Likert-scale questions assessing perceptions of AI and job satisfaction.

A convenience sampling technique was adopted to recruit participants from multiple sectors, including finance, healthcare, manufacturing, and information technology. This approach enabled inclusion of respondents with varied degrees of exposure to AI systems.

A total of 165 valid responses were gathered for final analysis. The demographic breakdown included gender, age groups, industry types, and self-reported levels of AI exposure. This diverse sample allowed for generalized insights across different occupational contexts.

C. Research Instrument and Variables

The primary instrument used was a Likert-scale survey, ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). The survey was structured into the following key constructs:

- **Perceived Usefulness of AI:** Captured through items measuring how AI impacts productivity, efficiency, and job support.
- **Job Displacement Fear:** Measured by respondents' concerns about AI replacing human roles, perceived job insecurity, and fears of skill obsolescence.
- **Workplace Happiness:** Evaluated through statements related to emotional well-being, job satisfaction, and daily work experience.

Reliability of the instrument was ensured using Cronbach's Alpha, confirming internal consistency of the constructs.

D. Analytical Tools and Techniques

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS). The following statistical methods were applied:

- Descriptive Statistics: To summarize demographic characteristics and variable distributions.
- Pearson's Correlation: To examine bivariate relationships between AI perceptions, job displacement fears, and workplace happiness.
- Multiple Regression Analysis: To determine the predictive value of AI usefulness on workplace happiness, while accounting for the mediating influence of displacement fears.

The combination of these techniques enabled the identification of significant patterns and the strength of relationships among variables of interest.

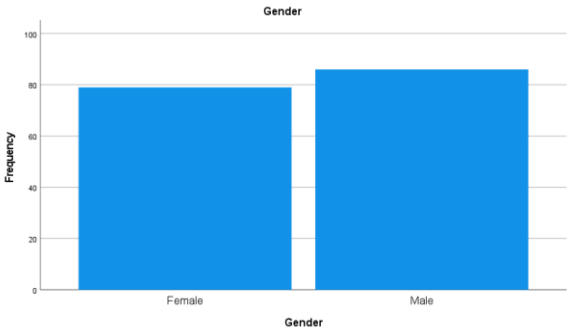
IV. RESULT AND DISCUSSION

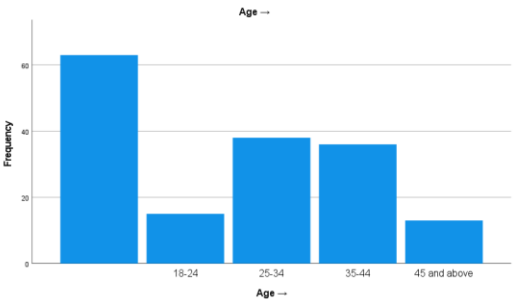
A. Demographic Analysis

To understand the profile of respondents, a demographic breakdown was conducted across gender, age, and industry. Out of 165 participants, 52.1% were male and 47.9% were female, reflecting a fairly balanced gender representation (Table I).

Most participants were between 25 and 44 years of age, with the highest representation in the 25–34 group (23%) followed closely by the 35–44 bracket (21.8%). Younger professionals (18–24) comprised 9.1% of the sample, while only 7.9% were above 45.

In terms of industry, Finance (20.6%) and Healthcare (20%) led the representation, followed by Manufacturing (15.8%), IT (14.5%), and Other industries (29.1%) (Table II). The data suggests a broad spread of participants across sectors where AI is actively implemented.





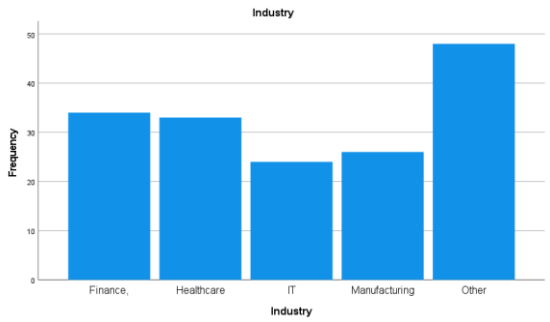


Figure 1–3. Gender, Age Group, and Industry-wise distribution of survey respondents.

Table I: Gender Distribution of Respondents

Gender	Frequency	Percentage
Male	86	52.1%
Female	79	47.9%

Table II: Industry-wise Distribution of Respondents

Industry	Frequency	Percentage
Finance	34	20.6%
Healthcare	33	20.0%
IT	24	14.5%
Manufacturing	26	15.8%
Other	48	29.1%

B. Correlation Analysis

To examine relationships between AI adoption and workplace metrics such as efficiency, productivity, and satisfaction, Pearson correlation coefficients were computed.

Table III: Correlation Matrix – AI Adoption and Job Satisfaction

Variables	AI Efficiency	AI Decision-Making	AI Workload Reduction	AI Productivity
AI Efficiency	1	0.158*	0.200**	0.197*
AI Decision-Making	0.158*	1	0.179*	0.083
AI Workload Reduction	0.200**	0.179*	1	0.131
AI Productivity	0.197*	0.083	0.131	1

*p < 0.05, **p < 0.01

The data revealed significant positive correlations between AI's role in improving job efficiency and reducing workload ($r = 0.200$, $p < 0.01$), and increasing productivity ($r = 0.197$, $p < 0.05$). A weaker correlation was found between AI decision-making and productivity ($r = 0.083$), suggesting mixed employee perceptions about AI's contribution to high-level cognitive tasks.

C. Regression Analysis

To test the predictive influence of AI-related factors on workplace satisfaction, a multiple regression analysis was conducted. The model included perceived AI usefulness, job displacement fear, and confidence using AI as independent variables.

Table IV: Regression Model Summary – Predictors of Job Satisfaction

Model Metrics	Value
R	0.236
R^2	0.056
Adjusted R^2	0.026
Std. Error	1.301

Model Metrics	Value
Significance (ANOVA p)	0.102

Table V: Coefficients – AI Predictors and Job Satisfaction

Predictor	Beta	Std. Error	t-Value	Sig.
AI Decision-Making	0.023	0.081	0.281	0.779
AI Workload Reduction	0.153	0.081	1.880	0.062
AI Productivity	0.125	0.077	1.626	0.106
Confidence in Using AI	0.028	0.080	0.352	0.725
Fear of AI Replacing Job	0.057	0.081	0.703	0.483

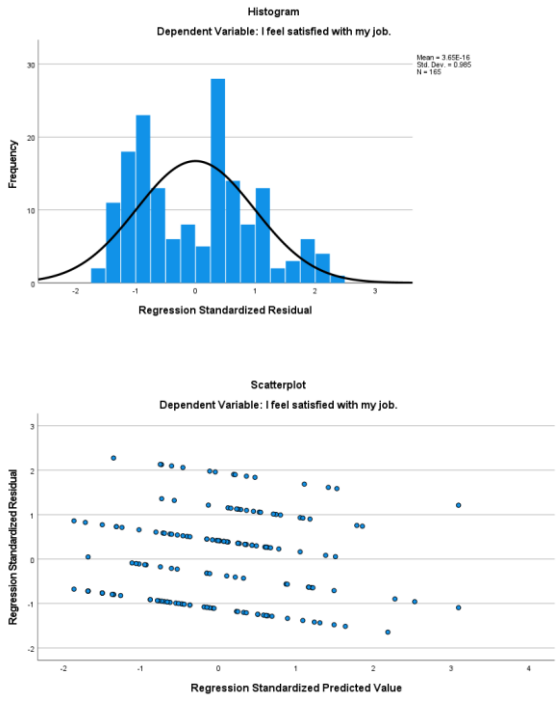


Figure 2: Regression Model of AI Adoption and Job Satisfaction

Although AI workload reduction showed the highest coefficient ($\beta = 0.153$), none of the predictors were statistically significant at $p < 0.05$. This indicates that while AI-related factors influence work processes, they do not strongly predict overall job satisfaction.

V. CONCLUSION

This study explored the multifaceted relationship between the perceived usefulness of Artificial Intelligence (AI), job displacement fears, and workplace happiness. The findings indicate that while AI is widely recognized by employees as a tool for improving efficiency, decision-making, and productivity, its direct impact on job satisfaction is limited. Correlation analysis showed positive associations between AI-driven automation and improved work performance, yet regression results revealed that these factors do not significantly predict job satisfaction. This suggests that job satisfaction is influenced by a broader range of workplace dynamics, such as organizational culture, leadership quality, and employee support systems. Additionally, while concerns about AI-induced job displacement were present, they did not emerge as dominant predictors of dissatisfaction, highlighting that fear alone may not diminish morale unless reinforced by poor change management or lack of communication. These results emphasize the importance of a balanced AI adoption strategy that not only focuses on technological efficiency but also integrates human-centric practices such as reskilling, emotional reassurance, and inclusive AI governance. For organizations to fully leverage AI's benefits, it is imperative to align AI implementation with workforce development initiatives and transparent communication, thereby fostering a culture where innovation and human potential can co-exist harmoniously.

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