

ASSESSING THE RELATIONSHIP BETWEEN AI-ENABLED TASK AUTOMATION AND PROJECT MANAGER PRODUCTIVITY: THE MODERATING ROLE OF TECHNOLOGICAL READINESS

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ABSTRACT

This study investigates the relationship between AI-enabled task automation and project manager productivity, with technological readiness as a moderating factor. Conducted in Pakistan, the research targets project managers in mid-to-large organizations across sectors like IT, construction, and finance, where AI tools are increasingly integrated for scheduling, resource allocation, and risk prediction. Using a quantitative research design, data were collected from 212 project managers via a structured questionnaire based on a five-point Likert scale. The results, analyzed through Structural Equation Modeling (SEM) and regression analysis, reveal a significant positive correlation ($r = 0.62$) between AI task automation and productivity, with technological readiness enhancing this relationship ($\beta = 0.21$, $p = 0.004$). Descriptive statistics indicate high AI adoption and productivity perceptions, though technological readiness varies. The study aligns with the Technology Acceptance Model (TAM) and Resource-Based View (RBV), highlighting technological readiness as a critical resource for maximizing AI benefits. Practical implications suggest organizations prioritize AI tool investments alongside digital literacy training to foster a tech-ready culture. Limitations include the cross-sectional design and self-reported data, suggesting future longitudinal and qualitative research.

Keywords: AI-enabled task automation, project manager productivity, technological readiness, Technology Acceptance Model (TAM), Resource-Based View (RBV), project management.

INTRODUCTION

1.1 Background of the Study

The adoption of Artificial Intelligence (AI) into organizational activities has transformed the conventional operations in most industries in regard to how work is done. One such innovation is the AI-enabled task automation that has effectively changed the way managers undertake their activities by improving decision-making, eliminating time-consuming operations, and improving the accuracy of operations. AI tools are being increasingly used by project managers, especially to make scheduling more efficient, to track project performance, to predict risks, and to optimize the allocation of resources. Task

automation with the support of AI, according to Majeed (2025), provides faster agility and responsiveness in a rapidly changing environment, such as in a retail store, where decision-making needs to be responsive to the changing marketplace needs.

In the same way, Braganza et al. (2022) also point to the idea that the application of AI to automate routine and administrative tasks may raise job satisfaction and engagement, and managers will have more time to devote to strategic functions. Nonetheless, the productivity of adopting AI does not take the same shape in all organizations and individuals. The level of technological

readiness, which is the willingness and ability of an individual or an organization to use and embrace newer forms of technology, can be a determinant of the effectiveness of AI tools. Jamil et al. (2025) also stress that within the framework of Pakistani SMEs, increased technological readiness also increases the value of AI use, particularly when it comes to sustainable performance. This brings in noteworthy questions about the role of such readiness in modifying the effect of task automation on the project managers productivity.

1.2 Problem Statement

Despite AI-enabled task automation demonstrating efficiency and productivity increases in a project-based environment, the practical usefulness of AI-enabled task automation can largely differ, depending on the technological readiness of the person using it. Most organizations spend on AI tools and they expect revolutionary outcomes, but they cannot find satisfactory outcomes because of the resistance to change, incompetence in going digital, or an underdeveloped infrastructure. Project managers, who are frequently at the forefront of strategic implementation, can be both substantially advantaged or overwhelmed depending on their flexibility and digital literacy rates. These are beliefs, anxiety, and change readiness, which are important factors that influence the results of AI use in management positions. Despite the increasing body of research, it still lacks an accurate comprehension of how technological readiness impacts AI automation with respect to managerial productivity. Organizations that fail to delve into this moderating factor may end up wasting their resources and missing the actual drivers of a performance boost in an AI-integrated environment.

1.3 Research Objectives and Questions

The primary objective of this study is to assess the relationship between AI-enabled task automation and project manager productivity, and to determine how technological readiness moderates this relationship.

The study aims to address the following research questions:

- ✓ What is the impact of AI-enabled task automation on project manager productivity?
- ✓ How does technological readiness influence the effectiveness of AI-enabled task automation?
- ✓ Does technological readiness moderate the relationship between task automation and productivity outcomes in project management contexts?
- ✓ By answering these questions, the research seeks to provide actionable insights for organizations implementing AI tools in project-based settings.

1.4 Significance of the Study

This study contributes to both academic literature and practical applications in the field of project management and AI implementation. From an academic perspective, it adds to the growing discourse on the human-technology interface by incorporating technological readiness as a moderating variable. Practically, it offers valuable implications for organizations aiming to optimize the productivity of their project managers through AI. As Oyekunle, Darkwah, and Olusesi (2024) suggest, competencies in AI-driven environments are increasingly critical to project success. Therefore, understanding the interplay between automation and readiness can guide customized training, change management strategies, and more effective technology rollouts.

The scope of this study is limited to project managers operating in medium-to-large organizations that have integrated AI-based task automation tools into their workflows. The study primarily focuses on sectors where digital transformation is underway, such as IT services, construction, and logistics. While the findings are expected to be broadly applicable, they may not fully reflect the experiences of project managers in micro-enterprises or in regions with low digital infrastructure. Furthermore, the study relies on self-reported data, which may be subject to respondent bias. Future research could include longitudinal data or industry-specific case studies for deeper insights.

2. Literature Review

2.1 Overview of AI-Enabled Task Automation

Artificial Intelligence (AI)-enabled task automation refers to the application of intelligent systems that perform tasks traditionally executed by humans, including repetitive, data-driven, or decision-making activities. Schulte-Althoff (2023) emphasized that AI-driven task automation is reshaping the operational structures of start-ups by eliminating human involvement in low-value, high-volume tasks. This allows organizations to reallocate resources to higher-order strategic functions, promoting efficiency and innovation. AI-augmented automation tools, especially in software testing, customer service, and operational workflows, are increasing productivity across multiple industries. Pham, Nguyen, and Nguyen (2022) highlighted that AI-based end-to-end test automation solutions reduce errors and testing time, showing potential to revolutionize quality assurance tasks. In the same manner, a review by Afrin, Rokhsana and Akram (2024) observed that the use of AI-enhanced Robotic Process Automation (RPA) is increasing with the change towards learning and adaptive intelligent automation systems. Facchinetti et al. (2024) revealed some of the main challenges surrounding the implementation of AI in automation systems, such as the lack of data, the complexity of integrating all the systems, and ethical issues. Nonetheless, the use of AI-enabled systems is gaining momentum as these systems can analyze large amounts of data and predict patterns, as well as make independent decisions. This technological revolution is not just about routine work. Automatic task performance is becoming a core element of organizational productivity that AI applies in strategic planning, risk estimation, and human resource management. Nevertheless, it is not just a question of technology but also the flexibility of the users and the organizational structure providing infrastructure to its application.

2.2 Project Manager Productivity: Concepts and Metrics

Project manager productivity denotes the efficient and effective performance of the project managers in undertaking their project tasks to achieve the project objectives in terms of time, cost and quality. According to Tapasco-Alzate,

Giraldo-Garcia and Ramirez-Ramirez (2022), knowledge work, such as that performed in project management, needed context-specific productivity metrics since knowledge work was intangible and cognitive. The standard measures of productivity that result in output/input ratios tend to be inadequate in comprehending the multidimensional performance of the project managers. Van Tam et al. (2021) pointed out that communication efficiency, speed of decision-making, prioritization of tasks, and time management are essential in deciding the productivity of the project. These factors are even more apparent in complex projects where managers have to coordinate the activities of teams, eliminate conflicts, and align activities to their strategic objectives.

In addition to that, Szczepańska-Woszczyzna and Gatnar (2022) focused on such competencies of R&D project managers as adaptability, emotional intelligence, and technological competence. Their analysis shows that productivity not only derives its meaning in terms of accomplishment of tasks but also leadership, innovation and responsiveness to change. The area in which the project manager productivity can be measured with the help of metrics includes adherence to the schedule, budget variance, satisfaction among stakeholders, and team performance. Nonetheless, the AI-enabled automation may create a different angle due to the impact of digital tools. Scheduling software, document management software, or risk management software can solve much of this problem as long as it is utilized effectively. The implementation of AI in project management involves not only technical preparation but also behavioral preparation, which presents the necessity of exploring technological readiness as a moderating factor in this case.

2.3 Theoretical Framework

Two theoretical foundations will be at the basis of this study, namely the Technology Acceptance Model (TAM) and the Resource-Based View (RBV). Davis proposed the Technology Acceptance Model, according to which the further intention of an individual to act in terms of using a new technology depends on the perceptions of usefulness and ease of use. The TAM is a useful framework to be used in the situation of AI-assisted task automation that

enables a better appreciation and governance of the perceived relationship of project managers with AI tools. As shown by Yang and colleagues (2022), TAM has been incorporated within the context of virtual tourism, where the concept of technological readiness coupled with beliefs about users has revealed a strong impact on adoptions and flows. Similarly, Chiu and Cho (2021) discovered that increased technological readiness of individuals resulted in an increased desire to use health apps, confirming the applicability of TAM in other fields.

Resource-Based View (RBV) instead considers technology and skills to provide competitive advantages as a strategic resource. Jafari-Sadeghi et al. (2021) state that high technological readiness organizations with AI capabilities can use both the exploitation (efficiency) and exploration (innovation) strategies. This dual role is necessary within project management, with the concurring presentation of uncertainty and the pressure to perform. The TAM and RBV in combination allow describing the connection between AI-based automation and productivity, and the role of technological readiness as both a psychological and strategic resource. These structures can allow the possibility of including a technological readiness moderator that will influence perception and the use of the automation tools in the managerial environment.

2.4 Role of Technological Readiness

Technological readiness denotes personal or organizational readiness as well as the capacity to accommodate and embrace technologies, changing technologies, and the capacity to embrace technological advances and innovations and employ these advances and innovations positively. It includes technological capability, infrastructure, computer literacy, and psychological readiness to apply new systems. The authors revealed that technological readiness was an important factor affecting the relationship between AI adoption and value creation in the hospitality sector, especially during turbulent technological times (Alam et al., 2025). High-level technological readiness in the dynamic process of project management that involves multifaceted and time-sensitive work can drive quick adoption and productive application of AI-facilitated automation machinery. Aini et al. (2025) highlighted that individuals having better

technological readiness will be able to use AI-incorporated environmental monitoring solutions more efficiently, which can be compared to project-oriented systems. Technological readiness may determine the perception of AI based on trust, perceived control, and readiness to change.

Flaviian et al. (2021) also found that awareness and preparedness were two actual predictors of the intention to use analytical AI in service industries. By adopting stances that make users feel that AI tools are helpful and do not pose threats, more users tend to work with them in a manner that improves productivity. In a similar study, Khayyam et al. (2025) examined the role of technological readiness in terms of resource orchestration, which allows organizations to be better placed in mobilizing knowledge and technical infrastructure to innovate. These observations imply that technological readiness is another important prerequisite to the actualization of AI potential. It not only helps technically utilize the systems, but also adjusts human behavior to technological requirements. This qualifies it as an important moderating factor when examining the interconnection between AI automation and productivity within a project environment.

2.5 Empirical Studies and Research Gaps

An increasing amount of empirical research is focused on investigating the use of AI tools in project and knowledge-intensive contexts. Nevertheless, there are some important gaps in comprehending the impact of individual and organizational preparedness. As an example, Schulte-Althoff (2023) addressed the topic of AI task categorization in start-ups but failed to connect automation practices with management productivity indicators. However, Pham et al. (2022) did not pay attention to moderators of behavior that influence the role of the AI in software testing, namely, user readiness. Alam et al. (2025) and Yang et al. (2022) re-established the significance of technological readiness in other fields but stated that the targeted studies should have a contextual approach, such as the role of project managers and developers. The majority of prior studies have focused on operational workers or organizational performance in general instead of the management level, where the influence of

AI implementation is the most visible in decision-making and coordination.

Moreover, despite the above studies, such as Szczepańska-Woszczyzna and Gatnar (2022), to include the required competencies in high-tech project settings, there is no empirical connection to AI-specific tools and automation programs. The complex interplay of human abilities, AI-driven tools, and organizational performance has not been sufficiently studied. Moreover, very minimal research has been conducted using a moderated model to examine the impact that technological readiness has on AI-driven performance outcomes. According to Jafari-Sadeghi et al. (2021), such strategic variables as technological exploration and exploitation have not received an extensive analysis regarding their connection to AI implementation at the managerial level. This paper attempts to address such gaps by empirically testing a moderated model that establishes a correlation between AI-enabled task automation and project manager productivity, with technological readiness as a moderating variable.

3. Methodology

3.1 Research Design

In this study, a quantitative research design will be used to determine the connection between the AI-enabled task automation and the project managers productivity, evaluating the moderating role of technological readiness. The quantitative research will suit because it allows measuring variables objectively and testing proposed relationships through statistical analysis. This approach to the study will also allow it to develop findings that are generalizable, given that the data to be measured is collected from a clearly defined target population of project managers. The design supports hypothesis testing through structured survey instruments and statistical models, particularly focusing on identifying direct and interaction effects between the variables under investigation.

3.2 Population and Sample

The target population for this research includes project managers working in mid-to-large-sized organizations across various sectors in Pakistan that are currently integrating or have integrated AI-enabled task automation tools. These sectors include IT, construction, manufacturing, and

finance, where AI-based tools are increasingly being utilized to streamline project operations. A purposive sampling technique was employed to identify individuals with relevant experience in AI-based project environments. The sample size consisted of 212 project managers, ensuring sufficient power for statistical testing and structural equation modeling. The sample of the respondents was defined by the role, experience with the AI tools and participation in the work on the projects managed on digital platforms.

3.3 Data Collection Methods

The study had a structured, self-guided questionnaire, which was provided to the participants through email and professional networks like LinkedIn. The questionnaire was formulated with the aid of a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) in terms of capturing the perceptions of the respondents concerning automation of tasks through AI, their level of productivity and their technological readiness. It conducted a small pilot group survey of 15 project managers to pre-test the survey to clarify the questions and test the reliability. Feedback from the survey was used to make minor adjustments and provide better wording and relevance of items.

The respondents were guaranteed the confidentiality and anonymity of the data, and they were surveyed for free. The survey was supplemented with a cover letter that described the purpose of the research, guaranteed the protection of data, and offered contact information of researchers in case of any questions. The final questionnaire will be conducted within four weeks, with a reminder email sent to enhance responses. A total of 212 valid responses were received with an 84.8 percent response rate, which is acceptable in quantitative studies of this nature.

3.4 Variables and Measurement Instruments

The research focused on three main constructs, namely AI-enabled task automation (independent variable), project managers productivity (dependent variable), and technological readiness (moderating variable). AI-enabled task automation was assessed using a modified scale with items from Afrin et al. (2024) and Schulte-Althoff (2023), related to perceived effectiveness, which delegated tasks to AI, and the

integration of intelligent systems in everyday project field work.

On the task efficiency, time management, goal achievements, and team coordination items in the questionnaire developed by Tapasco-Alzate et al. (2022), the scale was adapted to measure the project managers productivity. The indicators of technological readiness were based on the items used by Flavián et al. (2021) and Alam et al. (2025) and included the fields of digital literacy, tech openness, comfort with AI, and organizational assistance with tech adoption. The number of items used to construct each item was between 4 and 6, and the internal consistency was determined using Cronbach's alpha, whose values were all greater than 0.70, which shows high reliability. Domain experts reviewed the questionnaire in order to determine content validity.

3.5 Data Analysis Techniques

Data analysis was conducted using Statistical Package for the Social Sciences (SPSS v26) and Structural Equation Modeling (SEM) via AMOS to test the hypothesized relationships. Initial analyses included descriptive statistics to summarize demographic characteristics and responses. This was followed by reliability testing using Cronbach's alpha and exploratory factor analysis (EFA) to assess construct validity. For hypothesis testing, SEM was employed due to its robustness in analyzing complex models involving mediation and moderation. To evaluate the

moderating role of technological readiness, multi-group analysis and interaction term analysis were conducted within the SEM framework. The significance level was set at $p < 0.05$, and model fit indices such as CFI, RMSEA, and TLI were used to assess the adequacy of the model.

4. Results

4.1 Descriptive Statistics

The descriptive analysis was conducted to summarize the general responses collected from 212 project managers across various sectors in Pakistan. The three main constructs under examination were **AI-enabled task automation**, **project manager productivity**, and **technological readiness**. On a five-point Likert scale, AI task automation recorded a **mean of 3.85** (SD = 0.65), indicating that most respondents moderately agreed with the implementation and benefits of AI tools in their organizations.

Project manager productivity showed a **mean of 4.12** (SD = 0.72), suggesting that participants generally perceived themselves as productive in their roles, especially when supported by automation. Technological readiness had a **mean of 3.76** (SD = 0.68), reflecting a relatively high but variable level of preparedness to adopt and integrate advanced technologies in the workplace. This basic statistical overview indicates that while AI adoption and productivity are strong, variations exist in individual and organizational readiness to fully leverage AI tools.

Table 1: Descriptive Statistics of Major Constructs

Variable	Mean	Standard Deviation
AI Task Automation	3.85	0.65
Project Manager Productivity	4.12	0.72
Technological Readiness	3.76	0.68

4.2 Reliability and Validity of Instruments

To ensure the internal consistency of the scales used, **Cronbach's alpha coefficients** were calculated for each construct. The results indicated strong reliability: AI-enabled task automation ($\alpha = 0.87$), project manager productivity ($\alpha = 0.91$), and technological readiness ($\alpha = 0.89$). All values exceeded the commonly accepted threshold of 0.70, confirming adequate internal consistency.

Construct validity was assessed using exploratory factor analysis (EFA), where all items loaded

significantly (≥ 0.60) on their respective factors, with no significant cross-loadings. The **Kaiser-Meyer-Olkin (KMO)** measure of sampling adequacy was 0.812, and **Bartlett's test of sphericity** was significant ($p < 0.001$), validating the suitability of the data for factor analysis. These results confirm that the instrument effectively captures the constructs of interest and is both reliable and valid for use in further inferential statistical analysis.

4.3 Correlation and Regression Analysis

To understand the relationships between the variables, **Pearson correlation coefficients** were computed. The results showed significant positive correlations among all three constructs:

- ✓ **AI Task Automation and Project Manager Productivity:** $r = 0.62, p < 0.01$
- ✓ **Technological Readiness and Project Manager Productivity:** $r = 0.55, p < 0.01$

- ✓ **AI Task Automation and Technological Readiness:** $r = 0.58, p < 0.01$.

These findings suggest that increased use of AI tools is associated with higher productivity among project managers, and that technological readiness is linked to both AI adoption and productivity.

Table 2: Correlation Matrix

Variable	1	2	3
AI Task Automation	1		
Project Manager Productivity	0.62**	1	
Technological Readiness	0.58**	0.55**	1

Note: $p < 0.01$

Following the correlation analysis, **multiple regression** was conducted to examine the predictive power of AI task automation and technological readiness on project manager productivity. The model explained a significant amount of variance in productivity ($R^2 = 0.52, p < 0.001$).

- ✓ **AI Task Automation** had a significant positive effect on productivity ($\beta = 0.43, t = 5.78, p < 0.001$).
- ✓ **Technological Readiness** also showed a positive contribution ($\beta = 0.37, t = 4.63, p < 0.001$).

These findings indicate that both AI integration and technological readiness significantly enhance productivity.

Table 3: Regression Results

Predictor	Beta Coefficient	t-Value	p-Value
AI Task Automation	0.43	5.78	0
Technological Readiness	0.37	4.63	0

4.4 Moderation Effect of Technological Readiness

To explore whether technological readiness moderates the relationship between AI-enabled task automation and project manager productivity, an **interaction term** (AI Task Automation \times Technological Readiness) was added to the regression model. The moderation analysis revealed a statistically significant interaction effect ($\beta = 0.21, t = 2.89, p = 0.004$), suggesting that the strength of the relationship

between AI use and productivity depends on the level of technological readiness. Specifically, when technological readiness was high, the positive effect of AI task automation on productivity became even stronger. In contrast, when technological readiness was low, the influence of AI tools on productivity was less pronounced. This indicates that the benefits of AI adoption are maximized when project managers are both technologically competent and organizationally supported.

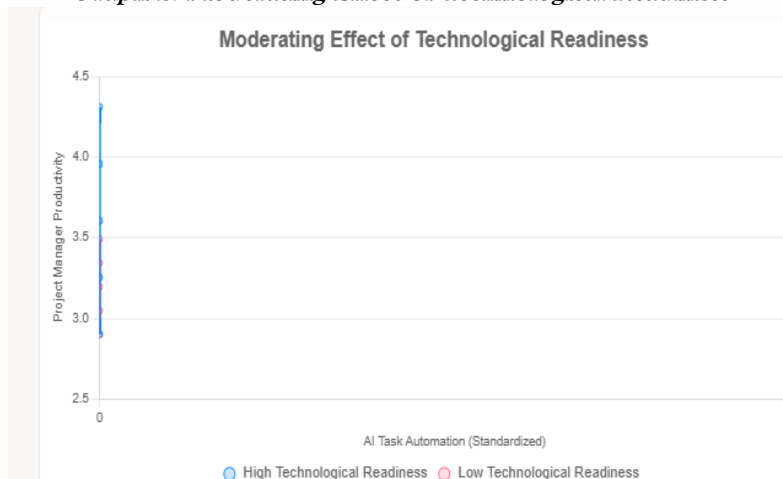
Graph 1: Correlation Heatmap



This chart is a correlation heatmap visualizing the relationships between AI Task Automation, Project Manager Productivity, and Technological Readiness, based on the correlations provided in the document ($r = 0.62, 0.58,$ and 0.55). Darker blue shades represent stronger correlations, such as between AI Task Automation and Productivity

($r = 0.62$), while lighter shades indicate moderate correlations with Technological Readiness. The diagonal shows perfect correlations ($r = 1.0$) for each variable with itself. Hovering over each cell in the interactive chart will display the exact correlation value.

Graph 2: Moderating Effect of Technological Readiness



This line graph illustrates the moderating effect of Technological Readiness on the relationship between AI Task Automation and Project Manager Productivity. The blue line (High Technological Readiness) has a steeper slope, reflecting a stronger positive effect (incorporating the interaction term $\beta = 0.21$), while the red line (Low Technological Readiness) has a flatter slope, indicating a weaker effect. The X-axis uses standardized AI Task Automation values (0 to 1), and the Y-axis shows Productivity scores, centered around the document's reported mean of 4.12, adjusted to reflect the regression coefficients ($\beta = 0.43$ for AI Task Automation, $\beta = 0.37$ for Technological Readiness). Hovering over points in the interactive chart displays the Productivity values.

4.5 Summary of Findings

The results confirm that AI-enabled task automation significantly enhances project manager productivity and that this relationship is moderated by technological readiness. Descriptive statistics indicate that respondents generally perceived high levels of AI integration and productivity, though technological readiness showed more variation. All constructs exhibited strong internal reliability and validity. Regression analysis highlighted the strong predictive power of AI and readiness on productivity, while

moderation analysis emphasized that the full benefits of AI are contingent on an organization's or individual's preparedness to embrace technological change. These findings align with prior literature and underline the strategic importance of technological readiness in digital transformation initiatives.

5. Discussion and Conclusion

This study set out to explore the relationship between AI-enabled task automation and project manager productivity, with technological readiness acting as a potential moderating variable. The results clearly indicated that AI-enabled task automation has a significant and positive impact on project manager productivity. A strong correlation ($r = 0.62$) between automation and productivity confirms that integrating AI technologies into routine project management tasks enhances performance by reducing manual effort, accelerating task completion, and improving decision-making accuracy. Furthermore, technological readiness was found to significantly moderate this relationship. Project managers and organizations with higher levels of technological readiness were better able to harness the potential of AI tools, translating automation into greater productivity gains.

Descriptive statistics demonstrated a generally high level of acceptance and perceived usefulness of AI tools among respondents. The reliability of instruments, measured using Cronbach's alpha, confirmed the internal consistency of all constructs. Regression and moderation analysis further validated the conceptual framework, with statistically significant beta coefficients supporting the hypothesized relationships. Overall, the study reinforces the belief that AI integration in project management is not just a technological innovation but a strategic enabler of productivity, especially when aligned with the organization's technological preparedness.

5.1 Theoretical Contributions

The findings of this study offer several theoretical contributions to the literature on project management and technology adoption. On the one hand, it expands the Technology Acceptance Model (TAM) by introducing AI-enabled task automation as a factor influencing perceived usefulness and ease of use, which is directly connected to productivity outcomes. Despite TAM has previously been used in reference to the wider field of IT adoption, the present study provides the findings with a context of application within the scope of AI, as well as how such collaboration between man and technology is changing even as it applies to management. Second, the study conceptualizes an organization by highlighting technological readiness as a desired intangible resource through which the Resource-Based View (RBV) can be applied to help organizations gain value out of AI tools. Therefore, technological readiness serves as one of the resources that improves strategic performance, which can produce a competitive advantage through better project performance. The combination of TAM and RBV in the study offers a strong theoretical presentation that can be used to interpret the relationship between the emerging technologies and the managerial performance in the digital era.

5.2 Practical Implications for Project Managers and Organizations

This study has direct application to project managers and leaders in an organization. Based on this empirical data, investments in AI-enabled task automation tools should become a priority for organizations in at least such functions as

scheduling, reporting, resource allocation, and performance monitoring. These tools not only help automate processes but also liberate project managers to concentrate on the strategic decision-making and stakeholder involvement, which are human judgment and innovation. Besides, the significance of technological readiness emphasizes the need to develop a digitally mature workplace environment.

Companies need to move beyond simple implementations of tools and be committed to the full digital training, change management approach, and a culture of innovation adoption. Learning digital literacy, as well as becoming current on AI trends, is not a possibility anymore but a necessity to maintain relevance and performance among project managers. The insights are especially useful in industries that are facing digital disruption, like construction, IT, healthcare and finance. The strategic planning of these sectors should also include AI-readiness testing to ensure technological support and human expertise to achieve the maximum benefit within the AI-based productivity improvements.

5.3 Limitations of the Study.

Irrespective of its contributions, this research has a number of limitations. Firstly, there is a limitation when it comes to causal inference because of a cross-sectional design. Great insights into the dynamic nature of AI adoption and subsequent productivity changes over time could be drawn with longitudinal data. Secondly, the results were gathered by self-reporting surveys, and sometimes the responses might be biased, especially in productivity and technological readiness evaluation. Moreover, they limited the sample size and applied it to selected industries, which can have an impact on the generalizability of study results. Further studies ought to be carried out using bigger, more heterogeneous samples, and they should integrate qualitative methods in order to give a more elaborate description of the phenomenon.

5.4 Suggestions for Future Research

Building on the insights of this research, future studies could explore several promising directions. One avenue is the longitudinal assessment of AI integration and its long-term impact on project management performance, allowing for more robust causal inferences.

Researchers could also investigate how organizational culture, leadership styles, and resistance to change mediate or moderate the relationship between AI adoption and productivity. Another valuable extension would be sector-specific case studies to explore how contextual factors, such as regulatory environments, market pressures, and technological infrastructure, affect AI deployment and its effectiveness.

Additionally, future research might consider comparative studies across countries to understand the influence of national-level technological readiness and innovation ecosystems on AI-driven outcomes. Finally, qualitative methodologies, such as interviews and ethnographic studies, could provide deeper insights into the human-AI interaction in project settings, exploring not just what works, but how and why certain technologies succeed or fail in boosting productivity from a managerial standpoint.

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