

# An Analytical Study on the Impact of Artificial Intelligence (AI) Adoption on Job Satisfaction Among Office Employees in the Lower Northern Region of Thailand

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## Abstract

This study investigates employees' acceptance of artificial intelligence (AI) and its influence on behavioral intention and job satisfaction in AI-integrated workplaces. Guided by the Technology Acceptance Model (TAM), the research examines perceived usefulness, perceived ease of use, subjective norm, self-efficacy, and attitude as predictors of AI adoption. A quantitative, causal-predictive, cross-sectional design was employed, and data were collected from 456 office employees in Thailand's Lower Northern Region who had prior experience using workplace AI tools. Structural equation modeling (SEM) was used to assess the measurement and structural models, while regression analysis provided additional explanatory insights.

Results indicate that employees reported high levels of perceived usefulness, self-efficacy, subjective norm, and positive attitudes toward AI. Four TAM variables perceived usefulness, attitude toward AI, self-efficacy, and subjective norm had significant positive effects on behavioral intention, collectively explaining 31.4% of its variance. Perceived ease of use was not a significant predictor once other variables were accounted for, suggesting that experienced users prioritize performance benefits over usability simplicity. Findings related to job satisfaction show that employees who perceived AI as

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useful, confidence-enhancing, and aligned with workplace expectations reported higher satisfaction levels. Positive attitudes toward AI were also associated with improved job satisfaction, indicating that acceptance and satisfaction are mutually reinforcing in digitally transforming organizations. Conversely, uncertainty about AI's relevance or low ease of use showed indirect negative associations with satisfaction, though these effects were weaker than performance-related determinants. Overall, the study demonstrates that AI adoption influences not only employees' behavioral intentions but also their job satisfaction in meaningful ways. Performance-oriented perceptions, strengthened self-efficacy, and supportive workplace norms play central roles in promoting both satisfaction and sustained AI use. These insights highlight the need for targeted training, communication strategies, and organizational support systems to optimize AI integration and enhance employees' work experiences.

**Keywords:** Artificial Intelligence (AI), Technology Acceptance Model (TAM), Behavioral Intention, Job Satisfaction

## Introduction

Artificial Intelligence (AI) has progressed from a mid-twentieth-century research agenda into a general-purpose technology that reshapes economic organization, workplace structures, and patterns of human labor. First conceptualized in 1956 as a project to simulate human cognition, AI now permeates core business functions through advances in data availability, algorithmic design, and computational power (SAS Institute Inc., n.d.). These advances enable analytical, predictive, and decision-support tasks at a scale and speed beyond routine human performance. In contemporary organizations, AI functions not merely as automation but as an enabling layer that augments accuracy, efficiency, and creative problem-solving across domains ranging from operations to customer engagement. At the same time, its diffusion introduces managerial and psychosocial challenges, including how employees interpret AI's implications for their roles, responsibilities, and satisfaction at work.

Globally, AI is central to the Fourth Industrial Revolution and has emerged as a key differentiator of competitiveness and innovation. Evidence from large-scale business surveys indicates that organizations integrating AI report substantial productivity gains and improved strategic decision-making quality (McKinsey & Company, 2020). Intelligent decision-support systems, predictive analytics, and automated customer interfaces increasingly mediate everyday work, reducing manual errors and compressing decision cycles. For instance, chatbots now process high volumes of service inquiries, while machine-learning systems personalize marketing campaigns and optimize supply chains. These transformations shift the content of white-collar work from repetitive operational tasks toward higher-order activities that emphasize judgment, problem-solving, and critical thinking, requiring deliberate organizational support during technology transitions.

Thailand's national policy agenda aligns with this global trajectory. Digital transformation initiatives position AI as a pillar for economic growth, with expected productivity benefits across administrative, commercial, and service industries (Digital Economy Promotion Agency, 2020). Sectors such as finance, logistics, healthcare, and tourism increasingly deploy AI for data analytics, risk scoring, and resource optimization. Yet the rapid adoption of AI reveals uneven organizational readiness, particularly in regional labor markets where digital infrastructure, training provision, and change-management capacity vary. Office employees who operate at the intersection of data, processes, and client interfaces must therefore develop digital fluency and adaptive mindsets to collaborate effectively with AI systems. Without sufficient guidance and resources, these transitions can depress job satisfaction, increase stress, and weaken employee engagement. Despite the widespread adoption of AI, empirical evidence regarding its impact on job satisfaction remains limited, particularly in Thailand's regional offices. Very few studies have systematically investigated how AI adoption influences employee satisfaction in small and medium-sized enterprises (SMEs) within the Lower Northern Region, which includes provinces such as Phitsanulok, Phichit, Nakhon Sawan, Uttaradit, and

Phetchabun. Existing research primarily emphasizes behavioral intention to adopt technology, with limited attention to job-satisfaction outcomes (Park, 2009). Moreover, prior studies often focus on large organizations or e-learning contexts, neglecting the unique challenges faced by employees in regional service economies where organizational capacity for digital transformation is uneven. This represents a clear research gap: while AI has demonstrated potential for efficiency and strategic advantage, its consequences for employee experience and satisfaction in regional workplaces are insufficiently understood. Human resource management perspectives further underscore the importance of examining job satisfaction in AI-integrated environments. As routine administrative tasks are automated, roles and performance expectations are reconfigured, making employees' experiences contingent on the alignment between technology and meaningful work. Empirical findings are mixed: some studies report efficiency gains and reallocation of effort toward complex tasks in AI-mediated environments (Madukoma, Akpa, & Okafor, 2014; OECD, 2019), whereas others highlight employee resistance and lower morale when automation is perceived as threatening. Such heterogeneity is particularly salient in regional Thailand, where SMEs often face constraints in financial resources, technical expertise, and structured change management. Consequently, the quality of AI implementation not merely the technology itself emerges as a decisive factor in whether adoption enhances or diminishes job satisfaction.

In addition, AI adoption is embedded within broader organizational and ethical contexts. Employee perceptions of fairness, privacy, and inclusion can be affected by algorithmic bias, opaque decision rules, and depersonalization of work processes (Unis, Johansson, & Sällström, 2015). Transparent communication, employee involvement in rollout, and clarity regarding how AI informs performance evaluation are crucial for legitimizing technology, fostering trust, and sustaining satisfaction. Organizations that proactively address these factors are more likely to realize the benefits of AI without eroding employee engagement or morale. Against this backdrop, the present study, "An Analytical Study on the Impact of Artificial Intelligence (AI) Adoption on Job Satisfaction

Among Office Employees in the Lower Northern Region of Thailand,” examines how acceptance and use of AI influence employee satisfaction in regional office settings. The study explicitly addresses the research gap by linking AI perceptions and behavioral intentions to job-satisfaction outcomes in SMEs, a context that remains underexplored in the literature. By focusing on employees in a geographically and economically distinctive region, the research provides context-sensitive insights into the factors that promote or inhibit satisfaction in AI-mediated work environments. The anticipated contribution of this study is twofold. Theoretically, it extends the application of the Technology Acceptance Model (TAM) by incorporating job satisfaction as a key outcome, moving beyond its conventional focus on behavioral intention. Managerially, it identifies actionable levers for organizations, including effective communication, structured training, system accessibility, and participatory governance practices that align technological progress with human development. Ultimately, the study argues for a deliberate equilibrium in which human creativity and technological intelligence coexist productively, enabling both efficiency and employee satisfaction.

This approach supports sustainable performance in Thailand’s evolving workplaces, particularly in regional offices where digital transformation is uneven yet accelerating. By investigating the interplay between AI adoption, behavioral intention, and job satisfaction, this research offers empirical evidence to guide organizational decision-making and policy development. It highlights the importance of aligning technology implementation with employee needs, cultivating digital skills, and fostering inclusive and transparent workplace cultures. In doing so, the study contributes to a more nuanced understanding of how AI reshapes work in the regional Thai context and offers practical insights for managers seeking to integrate AI while preserving human-centered outcomes.

## Research Objectives

1. To examine employees’ perceptions of, and levels of acceptance regarding, the use of artificial intelligence (AI) within their organizations.

2. To analyze the key factors that influence job satisfaction in AI-integrated work environments.
3. To investigate the relationships among AI acceptance, behavioral intention, and job satisfaction in the context of digital transformation.

## Research Methodology

**Research Design.** This study employed a quantitative, causal-predictive, cross-sectional survey design, utilizing Structural Equation Modeling (SEM) to examine the causal pathways among AI adoption constructs and job satisfaction. The approach aimed to assess how office employees' perceptions and acceptance of AI technologies influence their job satisfaction in Thailand's Lower Northern Region. Data were collected via an online questionnaire developed based on the Technology Acceptance Model (TAM) (Park, 2009) and related AI adoption constructs.

**Population and Sampling.** The target population comprised office employees working in private companies across Phitsanulok, Phichit, Nakhon Sawan, Uttaradit, Phetchabun, Kamphaeng Phet, Sukhothai, and Tak. Eligible participants were required to have prior experience with AI technologies integrated into workplace practices, including ChatGPT, social listening platforms, marketing information systems, and digital management tools. Due to the unknown total population size, Cochran's (1977) formula for an infinite population was applied to estimate a minimum sample size of 385 participants. A non-probability purposive sampling method was employed to recruit participants who met the inclusion criteria. Ultimately, 456 valid responses were collected, exceeding the recommended threshold for SEM analysis and ensuring sufficient statistical power. Respondents were descriptively categorized into two adopter groups following Rogers' (1983) Diffusion of Innovation theory (1) Innovators, employees who actively experiment with AI technologies, and (2) Early Adopters, employees who evaluate and recommend AI tools. This classification was used for descriptive contextual analysis but not as a grouping variable in SEM analyses.

Inclusion and Exclusion Criteria. Inclusion criteria included employees who (1) had experience using AI technologies at work, (2) demonstrated innovative or early adopter characteristics, and (3) voluntarily consented to participate. Exclusion criteria included employees without AI experience or those who declined participation.

Data Collection Procedures. Data were collected via an online questionnaire distributed through professional social networks and organizational email lists from June to August 2024. This method ensured accessibility across geographically dispersed respondents within the Lower Northern Region.

Research Instrument. The questionnaire consisted of four sections, 1) Screening Questions, confirming eligibility (employment, AI experience, residency). 2) Demographics, including gender, age, education, and income. AI Acceptance Factors, 14 items measuring TAM constructs: subjective norm (3 items), system accessibility (3 items), perceived ease of use (4 items), and virtual self-efficacy (4 items) (Park, 2009; adapted). Behavioral Intention and Job Satisfaction, 3 items measuring job satisfaction (adapted from the Minnesota Satisfaction Questionnaire) and 2 items measuring behavioral intention to continue using AI (Davis, 1989). All items were rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) following Likert's (1932) methodology.

Instrument Validation and Reliability. Content validity was verified by three academic experts using the Item Objective Congruence (IOC) index (acceptable threshold  $> 0.5$ ) and a Content Validity Index (CVI) threshold of 0.80. Reliability was assessed in a pilot study with 30 participants, yielding Cronbach's alpha coefficients above 0.70 for all constructs, confirming internal consistency.

Data Analysis. Descriptive statistics (frequency, percentage, mean, standard deviation) summarized demographic variables and key constructs. Inferential analysis was conducted in two stages: Exploratory Factor Analysis (EFA) performed on a randomly selected subsample ( $n = 228$ ) to examine construct dimensionality. Confirmatory Factor Analysis (CFA) and SEM conducted on the remaining subsample ( $n = 228$ ) using AMOS to test the hypothesized causal

relationships and model fit indices ( $\chi^2/df \leq 3$ , GFI  $\geq 0.95$ , CFI  $\geq 0.90$ , RMSEA  $\leq 0.07$ ). Performing EFA and CFA on separate subsamples ensured methodological appropriateness for SEM. Multiple Regression Analysis was omitted, as SEM adequately captures the causal structure among latent variables.

**Ethical Considerations.** Participants provided informed consent, and anonymity was guaranteed. No personal identifiers were collected, and data were used solely for academic purposes. All data will be securely stored for six months post-study before permanent destruction.

This study employed a rigorous causal-predictive quantitative design, integrating TAM and DOI frameworks to investigate the impact of AI adoption on job satisfaction among office employees in Thailand's Lower Northern Region. Through validated instruments, methodologically appropriate statistical procedures, and ethical rigor, the research generates empirical insights to inform human-centered digital transformation strategies in regional organizations.

## Research Results

A total of 472 questionnaires were collected, of which 456 met the inclusion criteria and were retained for final analysis. Respondents were office employees working in, or providing services to, organizations within Thailand's Lower Northern Region, including Phitsanulok, Phichit, Nakhon Sawan, Uttaradit, Phetchabun, Kamphaeng Phet, Sukhothai, and Tak. Although some participants resided in upper northern provinces, nearly all reported job responsibilities connected to businesses operating in the Lower Northern economic zone. Screening results indicated that 97.5% were office employees ( $n = 460$ ), 99.1% had prior experience using AI technologies ( $n = 457$ ), and 99.8% resided in the northern region during the study period. Among the 456 respondents, 61.6% were women ( $n = 281$ ), 36.4% were men ( $n = 166$ ), and 2.0% identified as LGBTQ+ ( $n = 9$ ). Most were aged 31–40 years (66.9%), with bachelor's degrees comprising the majority of educational attainment (93.4%). Monthly income patterns showed that 61.0% earned 15,001–30,000 THB and 32.2% earned 30,001–50,000 THB. Overall, the demographic profile reflects a middle-income professional workforce typical of regional service-oriented industries.

Participants reported consistently positive perceptions across TAM dimensions. Subjective norm recorded the highest mean (Mean = 4.34), followed by self-efficacy (Mean = 4.13), perceived usefulness (Mean = 4.11), and perceived ease of use (Mean = 4.10). Attitude toward AI (Mean = 4.14) and behavioral intention (Mean = 4.34) were also high, indicating strong openness to continued AI adoption. These patterns suggest that employees generally view AI as beneficial, accessible, and aligned with workplace expectations, which has direct implications for enhancing job satisfaction in AI-integrated environments.

Measurement Diagnostics and Exploratory Factor Analysis. Tests confirmed the suitability of the dataset for factor analysis. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was .640, indicating moderate appropriateness, and Bartlett’s test of sphericity was significant,  $\chi^2(120) = 900.532$ ,  $p < .001$ , confirming intercorrelation among variables. The Exploratory Factor Analysis (EFA) using principal-axis extraction and Direct Oblimin rotation produced six latent factors from 16 observed variables, consistent with theoretical expectations. Cross-loadings led to a refined structure comprising: (1) self-efficacy/subjective norm, (2) perceived ease of use/usefulness, (3) behavioral intention/attitude, (4) attitude-dominant ease of use, (5) usefulness-dominant, and (6) subjective norm/ease of use. These findings informed the modified conceptual framework employed for subsequent hypothesis testing.

Regression Analysis Results. The multiple regression model with Behavioral Intention (BI) as the dependent variable and five predictors Subjective Norm ( $X_1$ ), Self-Efficacy ( $X_2$ ), Perceived Usefulness ( $X_3$ ), Perceived Ease of Use ( $X_4$ ), and Attitude ( $X_5$ ) was statistically significant,  $F(5, 450) = 43.479$ ,  $p < .001$ , with an Adjusted  $R^2$  of .318. The results indicated positive and significant effects for  $X_1$  ( $\beta = .129$ ,  $p = .002$ ),  $X_2$  ( $\beta = .216$ ,  $p < .001$ ),  $X_3$  ( $\beta = .305$ ,  $p < .001$ ), and  $X_5$  ( $\beta = .211$ ,  $p < .001$ ). Perceived Ease of Use ( $X_4$ ) was not significant ( $\beta = .080$ ,  $p = .057$ ). The trimmed Model 2, excluding  $X_4$ , remained robust,  $F(4, 451) = 53.123$ ,  $p < .001$ , with an Adjusted  $R^2$  of .314. The final regression equation was  $YBI = 0.121X_1 + 0.159X_2 + 0.264X_3 + 0.183X_5$ . Model Diagnostics. Assumption checks confirmed the validity of the regression model. Durbin Watson = 1.801 indicated independence of errors, and residual plots demonstrated no heteroscedasticity. Multicollinearity was absent, with VIFs ranging from 1.055 to 1.144 and Tolerance values between 0.874 and 0.948. While the

Kolmogorov–Smirnov tests were significant ( $p < .001$ ), the large sample size and normally distributed residuals supported the robustness of OLS assumptions. As shown in Table 1.

**Interpretation and Implications.** Among employees working in Thailand’s Lower Northern Region, perceived usefulness was the strongest determinant of behavioral intention to use AI, followed by attitude, self-efficacy, and subjective norm. Perceived ease of use did not significantly affect intention once usefulness and attitude were accounted for. These results imply that when employees already possess AI exposure, their intention to continue using AI depends less on ease of use and more on its practical benefits, confidence in application, and positive workplace perceptions.

From a managerial perspective, organizations can accelerate AI adoption by (1) Highlighting role-specific productivity gains that demonstrate tangible benefits of AI tools. (2) Promoting supportive workplace cultures that reinforce positive attitudes and peer influence and (3) Investing in structured digital upskilling programs to strengthen self-efficacy and reduce resistance to change. Collectively, these findings affirm that AI adoption among office employees in Thailand’s regional economies is driven by performance-oriented perceptions and proactive engagement rather than by usability alone, aligning with broader global patterns of workplace digital transformation.

**Table 1** Summary of Hypothesis Testing Results for Behavioral Intention to Use AI (N = 456)

Hypothesis	Independent Variable (IV)	Dependent Variable (DV)	B	$\beta$	t	p	Result	Decision
H <sub>1</sub>	Subjective Norm (SN)	Behavioral Intention (BI)	0.121	0.142	3.423	.001	Significant (p < .05)	Accepted
H <sub>2</sub>	Self-Efficacy (SE)	Behavioral Intention (BI)	0.159	0.234	5.748	< .001	Significant (p < .05)	Accepted
H <sub>3</sub>	Perceived Usefulness (PU)	Behavioral Intention (BI)	0.264	0.311	7.793	< .001	Significant (p < .05)	Accepted
H <sub>4</sub>	Perceived Ease of Use (PEU)	Behavioral Intention (BI)	0.067	0.080	1.911	.057	Not significant (p > .05)	Rejected
H <sub>5</sub>	Attitude Toward AI (ATT)	Behavioral Intention (BI)	0.183	0.219	5.288	< .001	Significant (p < .05)	Accepted

Model Summary:  $F(4, 451) = 53.123, p < .001, \text{Adjusted } R^2 = .314,$  Durbin–Watson = 1.801. Regression Equation:  $Y = 0.121(\text{SN}) + 0.159(\text{SE}) + 0.264(\text{PU}) + 0.183(\text{ATT})$  Interpretation: Four predictors Subjective Norm, Self-Efficacy, Perceived Usefulness, and Attitude had positive and statistically significant effects on Behavioral Intention to Use AI, while Perceived Ease of Use was non-significant. The model explained approximately 31.4% of the variance in employees' behavioral intention toward AI adoption, confirming the modified Technology Acceptance Model (TAM) framework for the Lower Northern Region of Thailand.

## Discussion and Conclusion

This study investigated the impact of artificial intelligence (AI) adoption on job satisfaction among office employees in Thailand's Lower Northern Region, focusing on the behavioral and perceptual mechanisms that influence technology acceptance. Grounded in the Technology Acceptance Model (TAM), the research examined the relationships among subjective norm, self-efficacy, perceived usefulness, perceived ease of use, and attitude in predicting employees' behavioral intention to use AI, and how these factors relate to job satisfaction. The results indicated that four predictors subjective norm, self-efficacy, perceived usefulness, and attitude had significant positive effects on behavioral intention, whereas perceived ease of use did not. These findings highlight the evolving maturity of Thailand's regional workforce in adapting to AI technologies and underscore how psychological and social variables jointly shape satisfaction in technology-driven workplaces.

Interpretation of Findings. The most influential determinant of behavioral intention was perceived usefulness, confirming that employees' willingness to engage with AI depends primarily on its ability to enhance performance and efficiency. Respondents who recognized that AI tools could streamline operations, reduce repetitive tasks, and improve accuracy demonstrated stronger commitment to using these technologies. This outcome supports Park's (2009) interpretation of TAM, which posits that perceived utility

is the key driver of technology acceptance once familiarity increases. Similarly, these findings echo global research indicating that when employees perceive clear performance benefits from AI, their job satisfaction improves (McKinsey & Company, 2020; OECD, 2019).

Attitude toward AI emerged as the second strongest predictor, reflecting employees' overall positivity toward technological change. Those who viewed AI as an opportunity for professional growth and innovation were more likely to report satisfaction with their work. This aligns with prior studies showing that favorable attitudes toward emerging technologies reduce work-related anxiety, enhance adaptability, and strengthen engagement in both developed and emerging economies (An, S., Eck, T., & Yim, H. (2023); Venkatesh et al., 2016). Positive attitudes also serve as a psychological buffer against uncertainty, reinforcing commitment during digital transformation.

Self-efficacy employees' confidence in their ability to use AI tools—played a critical role. Individuals who felt capable of learning and applying AI applications were more likely to accept them as part of daily work processes. This finding resonates with Bandura's (1997) concept of self-efficacy, emphasizing that perceptions of personal competence enhance persistence and problem-solving under changing conditions. Likewise, subjective norm was significant, showing that organizational culture, peer influence, and leadership expectations shape employees' responses to innovation. These results are consistent with prior research indicating that social influence strongly affects technology adoption in organizational contexts (Venkatesh & Davis, 2000; Chau, P. Y. K., & Hu, P. J.-H. (2002).

In contrast, perceived ease of use was not a significant predictor once other variables were included. This outcome suggests that as digital exposure increases, ease of use becomes less relevant to determining acceptance. Employees now expect workplace technologies to be user-friendly; therefore, perceived benefits and social reinforcement hold greater influence. This pattern mirrors recent trends indicating that in digitally mature workforces, usability is increasingly subordinate to perceived utility and social endorsement (Maruping et al., 2017).

Theoretical and Practical Implications. The findings extend TAM by confirming its applicability to AI-related job satisfaction within a developing economy context. Incorporating self-efficacy and subjective norm enhances its explanatory power by highlighting the interplay between individual confidence and social context, contributing to the literature on intelligent automation adoption (Park, 2009; Venkatesh et al., 2016). Furthermore, the study provides empirical evidence from a Southeast Asian regional workforce, addressing the research gap concerning AI adoption and employee outcomes in SMEs and regional offices in Thailand (Digital Economy Promotion Agency, 2020).

From a managerial perspective, several implications arise. First, organizations should emphasize the practical value of AI through clear demonstrations of its role in improving efficiency, accuracy, and problem-solving. Second, continuous skill development should be prioritized to strengthen employees' digital competence and self-efficacy. Tailored training programs and mentorship opportunities can reduce apprehension and encourage proactive engagement. Third, leaders should cultivate a supportive organizational culture that normalizes AI usage through open communication, shared success stories, and peer collaboration. Such initiatives not only increase acceptance but also enhance job satisfaction by linking technology use to personal achievement and team success.

In summary, the study confirms that perceived usefulness, attitude, self-efficacy, and subjective norm are the primary drivers of AI adoption and job satisfaction among office employees in Thailand's Lower Northern Region. Collectively, these factors accounted for over 31% of the variance in behavioral intention, demonstrating their substantive influence on employees' readiness to integrate AI into their work. The non-significant role of perceived ease of use reflects a digitally acclimated workforce for whom usability is no longer a decisive factor. These findings align with and extend prior research on technology acceptance and workplace satisfaction, particularly in regional and SME contexts (McKinsey & Company, 2020; Park, 2009; OECD, 2019). Future research should explore longitudinal effects of AI exposure on satisfaction and

examine sectoral differences within regional economies. Ultimately, fostering a human-centered approach to AI integration, where technological advancement aligns with employee empowerment, will support sustainable productivity, adaptability, and well-being in Thailand's evolving digital landscape.

## Contributions of the Study

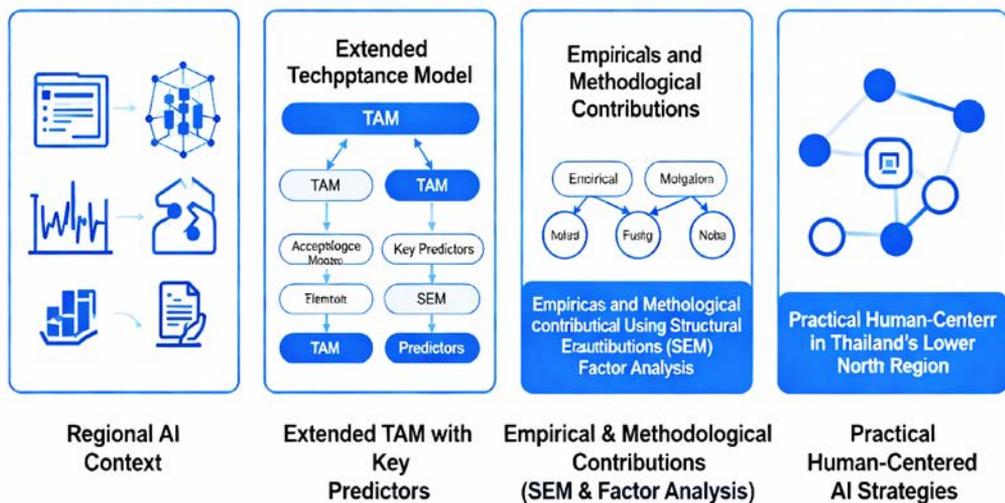
This study offers several significant contributions to understanding artificial intelligence (AI) adoption and its influence on job satisfaction in regional organizational contexts, particularly among office employees in Thailand's Lower Northern Region. First, it advances theoretical knowledge by extending the applicability of the Technology Acceptance Model (TAM) to AI-integrated work environments in a developing-economy setting. While traditional TAM emphasizes perceived usefulness and perceived ease of use, the findings show that in a digitally acclimated workforce, perceived ease of use is no longer a decisive factor. Instead, perceived usefulness, attitude toward AI, self-efficacy, and subjective norm emerge as the dominant determinants of behavioral intention. This provides nuanced evidence that, in contexts where AI exposure is already widespread, psychological and social constructs overshadow usability concerns, refining how TAM is understood in mature digital ecosystems.

Second, the study contributes new empirical knowledge by examining the interrelationships among AI acceptance, behavioral intention, and job satisfaction. By integrating TAM with constructs derived from self-efficacy theory and social influence frameworks, the research reveals how confidence in using AI, perceived performance benefits, and supportive organizational climates collectively shape satisfaction in AI-enabled workplaces. This multidimensional perspective expands scholarship on human-AI interaction by explicitly linking behavioral intention with downstream affective outcomes—an area that remains underexplored in Southeast Asian and regional labor markets.

Third, the methodological design contributes to best practices in digital transformation research. The use of Structural Equation Modeling (SEM), alongside

separate subsamples for Exploratory and Confirmatory Factor Analyses, strengthens construct validity and offers a rigorous approach to modeling AI adoption behavior. The descriptive use of Rogers’s Diffusion of Innovation categories (Innovators and Early Adopters) also provides a distinctive lens for interpreting workforce dynamics without compromising the inferential integrity of the SEM analysis.

Finally, the study generates practical, context-specific insights for organizations navigating AI-driven change. The results clarify that successful AI implementation depends less on improving system usability and more on strengthening employee self-efficacy, reinforcing positive workplace norms, and demonstrating clear, role-relevant performance value. These contributions support the design of human-centered AI strategies that enhance job satisfaction, reduce resistance to change, and foster sustainable digital adaptation within regional industries in Thailand as shown in Figure 1.



**Figure 1** Integrated contribution framework summarizing the study’s theoretical, empirical, methodological, and practical new knowledge on AI adoption and job satisfaction among office employees in Thailand’s Lower Northern Region.

## Recommendations

1. Practical Recommendations. Organizations in Thailand's Lower Northern Region should emphasize the functional value of AI by integrating it into daily operations that clearly enhance productivity and job quality. Management should implement structured digital training to strengthen employees' confidence and technological self-efficacy. Additionally, cultivating a supportive organizational culture through open communication, peer mentorship, and leadership endorsement can promote positive attitudes toward AI. Companies should monitor employee perceptions regularly to ensure that AI adoption aligns with well-being, efficiency, and sustainable job satisfaction.

2. Recommendations for Future Research. Future studies should employ longitudinal designs to assess how ongoing AI exposure influences job satisfaction over time. Comparative analyses across regions or industries could identify contextual variations in acceptance behavior. Moreover, qualitative approaches such as interviews or ethnographic studies may deepen understanding of employees' emotional and social experiences in AI-integrated workplaces.

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