

THE IMPACT OF DIGITAL CAPABILITY AND AI ACCEPTANCE ON EMPLOYEE CREATIVITY IN DIGITAL WORKPLACES

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ABSTRACT

With the rapid advancement of digital technologies and artificial intelligence (AI), organizations are increasingly transforming traditional work environments into digital workplaces. In this evolving context, employee creativity has become a critical factor in sustaining innovation and competitive advantage. While previous studies have examined digital transformation and innovation separately, limited research has explored how digital capability and AI acceptance jointly influence employee creativity. This study investigates the effects of digital agility, digital workplace support, AI acceptance, and human-machine collaboration on employee creativity in Thailand. A quantitative research design was employed, and data were collected from 400 employees across multiple industries. Multiple regression analysis was conducted to test the proposed hypotheses. The findings indicate that digital agility, digital workplace support, AI acceptance, and human-machine collaboration all have significant positive effects on employee creativity, with digital agility being the strongest predictor. The study contributes to digital transformation literature by integrating technological capability and psychological acceptance into a unified empirical framework. Practical implications and future research directions are discussed.

Keywords: Digital Capability, AI Acceptance, Employee Creativity, Digital Workplace, Innovation

INTRODUCTION

Digital transformation has become one of the most influential trends shaping modern organizations. The adoption of artificial intelligence (AI), big data analytics, cloud computing, and automation technologies has significantly redefined work processes and organizational structures. Companies increasingly rely on digital platforms to enhance productivity, improve decision-making, and maintain competitiveness in rapidly changing markets.

At the same time, employee creativity has emerged as a key driver of organizational innovation and sustainable development. Creativity refers to the production of novel and useful ideas within a specific organizational context. Creative employees contribute to new product development, process improvements, and strategic renewal. In dynamic environments, creativity is not merely desirable but essential.

Although digital technologies provide powerful tools, technology alone does not automatically generate innovation. Employees must possess adequate digital capability to utilize these technologies effectively. Moreover, their psychological acceptance of AI systems significantly influences how creatively they integrate such tools into their tasks.

While previous research has examined digital capability, AI adoption, and innovation separately, limited empirical studies have investigated their combined effects on employee creativity, particularly in developing countries such as Thailand. Therefore, this study aims to bridge this gap by examining how digital agility, digital workplace support, AI acceptance, and human-machine collaboration influence employee creativity.

OBJECTIVES

1. To analyze the effect of digital agility on employee creativity.
2. To examine the impact of digital workplace support on creativity.
3. To investigate the relationship between AI acceptance and creativity.
4. To explore how human-machine collaboration enhances innovative outcomes.

Literature Review

Digital Capability and Dynamic Capability Theory

Digital capability refers to the ability of employees to effectively use digital technologies in performing work tasks. Bharadwaj (2000) argued that information technology capability enhances organizational performance by improving coordination and decision-making processes. From a strategic perspective, Teece, Pisano, and Shuen (1997) introduced dynamic capability theory, which emphasizes the importance of adapting organizational resources to rapidly changing environments.

At the individual level, digital agility represents employees' ability to adapt quickly to new technological systems. Kane et al. (2015) emphasized that successful digital transformation depends more on people's capabilities than on the technologies themselves. Employees with strong digital competence are more likely to experiment with digital tools, recombine knowledge, and develop innovative solutions.

Digital capability also improves cognitive flexibility, information processing capacity, and problem-solving efficiency, all of which are crucial components of creativity. Therefore, digital agility is expected to positively influence employee creativity.

AI Acceptance and Technology Acceptance Theory

AI acceptance is derived from the Technology Acceptance Model (TAM) proposed by Davis (1989), which identifies perceived usefulness and perceived ease of use as key determinants of technology adoption. Venkatesh et al. (2003) extended this model into the Unified Theory of Acceptance and Use of Technology (UTAUT), incorporating social influence and facilitating conditions.

In AI-enabled workplaces, employees' perceptions of AI systems influence whether they utilize such systems innovatively or minimally. When employees believe that AI improves performance and simplifies work processes, they are more inclined to integrate it into creative tasks.

Dwivedi et al. (2021) highlighted that trust and positive attitudes toward AI significantly impact digital transformation success. Without acceptance, technological investments may fail to generate innovation benefits.

Human-Machine Collaboration

Human-machine collaboration refers to cooperative interactions between employees and AI systems. Rather than replacing human workers, AI augments human intelligence. Huang and Rust (2018) explained that AI performs analytical and repetitive tasks efficiently, while humans contribute emotional intelligence, contextual understanding, and creative thinking.

Effective collaboration allows employees to leverage AI-generated insights to enhance decision-making and idea development. However, excessive reliance on AI may reduce autonomy and intrinsic motivation, potentially inhibiting creativity. Therefore, balanced human-AI interaction is crucial for innovation.

Digital Workplace Support

Digital workplace support includes technological infrastructure, management encouragement, and organizational culture that promotes experimentation. Westerman, Bonnet, and McAfee (2014) argued that leadership plays a vital role in guiding digital transformation. Rai, Patnayakuni, and Seth (2006) demonstrated that digitally integrated environments enhance performance and innovation outcomes.

Supportive environments foster knowledge sharing, risk-taking, and creative exploration. Training programs further enhance employees' digital confidence and competence.

Research Hypotheses

- H1: Digital agility positively affects employee creativity.
- H2: Digital workplace support positively affects employee creativity.
- H3: AI acceptance positively affects employee creativity.
- H4: Human-machine collaboration positively affects employee creativity.

METHODOLOGY

This study adopts a quantitative research design.

Sample and Data Collection

A total of 450 questionnaires were distributed to employees working in digitalized organizations across Thailand. After eliminating incomplete and invalid responses, 400 valid questionnaires were retained, resulting in a response rate of 88.9%. Participants represented various industries including finance, manufacturing, services, and technology.

Measurement

All variables were measured using five-point Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree).

- Digital agility: adapted from Kane et al. (2015).
- AI acceptance: based on Davis (1989).
- Human-machine collaboration: adapted from relevant AI collaboration studies.
- Employee creativity: measured using Amabile's (1996) scale.

Data Analysis

SPSS software was used for statistical analysis. Reliability was evaluated using Cronbach's alpha. Construct validity was examined through KMO and Bartlett's tests. Multiple regression analysis was conducted to test the hypotheses.

RESULTS

Cronbach's alpha values ranged from 0.87 to 0.91, indicating high internal consistency. The KMO value was 0.985 ($p < 0.001$), confirming sampling adequacy.

Regression results showed:

Digital agility ($\beta = 0.367$, $p < 0.001$)

Digital workplace support ($\beta = 0.244$, $p < 0.001$)

AI acceptance ($\beta = 0.198$, $p < 0.001$)

Human-machine collaboration ($\beta = 0.168$, $p < 0.001$)

The adjusted R^2 value was 0.876, indicating strong explanatory power.

Digital agility emerged as the strongest predictor of employee creativity, followed by digital workplace support, AI acceptance, and human-machine collaboration.

Discussion

The findings confirm that digital agility significantly enhances creativity, supporting dynamic capability theory. Employees who adapt quickly to technological changes demonstrate greater innovative behavior.

AI acceptance also plays a crucial role. Consistent with TAM theory, employees who perceive AI as useful and easy to use are more likely to engage with it creatively.

Human-machine collaboration enhances creative outcomes by combining machine intelligence with human judgment. The results reinforce the view that AI complements rather than replaces human creativity.

Practical Implications

Organizations should:

1. Invest in digital skill development programs.
2. Foster positive attitudes toward AI systems.
3. Encourage collaborative human-AI workflows.
4. Strengthen digital infrastructure and leadership support.

Limitations and Future Research

This study is limited to Thailand and uses a cross-sectional design. Future research may employ longitudinal methods and examine moderating variables such as organizational culture or leadership style.

CONCLUSION

This study integrates digital capability and AI acceptance into a unified framework explaining employee creativity in digital workplaces. The findings highlight that both technological competence and psychological readiness are essential for fostering innovation. Organizations seeking sustainable competitive advantage must develop employees' digital skills while promoting positive engagement with AI systems.

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