

## Moderating Role of Organizational Support in the Relationship between Technology Change Management, Innovation, and Operational Performance in Technology-driven Era

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**Abstract:** This research explores how organizational support moderates the relationship between technology change management, innovation, and operational performance in a technology-intensive environment. A quantitative research approach was employed, focusing on employees from technology-driven firms in Ekiti State. The selected organizations; MTN Nigeria, Globacom, Guarantee Trust Bank and Zenith Bank were chosen due to their reliance on technological innovation to enhance operational outcomes. Prior studies captured direct relationship but did not measure the moderating role of organizational support in the relationship between technology change management and operational performance. Using purposive sampling, 150 participants were selected for the study. Data were analysed through structural equation modeling and path analysis. The findings indicate that innovation management has a significant positive influence on operational performance, underscoring its importance in fostering organizational adaptability and competitiveness. However, organisational support was found to have a mixed moderating impact: while it enhances technology change management, it can hinder innovation efforts and operational results if not properly aligned. Overall, the research emphasizes that organizational support should be closely aligned with innovation objectives, encourage creative input from employees, and avoid becoming overly rigid to be truly effective.

**Keywords:** Innovation; Technological Change; MTN-Nigeria; Globacom- GLO; GTBank

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## 1. Introduction

To address these challenges, organizations must rely on robust support systems. Such organizational support includes access to resources, supportive policies, effective leadership, and a culture that fosters employee motivation and involvement elements that are crucial for the success of technological and innovative efforts (Xie et al., 2023).

The swift evolution of technology has compelled organizations to consistently adapt and pursue innovation to stay competitive. In today's tech-centric environment, companies need not only to manage technological transitions effectively but also to embed innovation strategies within their operations. Technology change management refers to the methods and procedures used to introduce and optimize new technologies, while innovation management deals with generating and implementing novel ideas, processes, or products (Cao et al., 2022). Both elements play a vital role in enhancing organizational performance.

Given this, examining how organizational support influences the relationship between technology change management, innovation, and operational outcomes becomes critical. Although existing studies have explored the direct effects of technology and innovation on performance, there is limited research on how organizational support might strengthen or weaken these effects (Zhao et al., 2021). This research seeks to address that gap by investigating the moderating function of organizational support in the context of technology-driven transformation efforts.

As organizations seek to harness technological innovations to boost their operational performance, they frequently face obstacles related to managing change and driving innovation. The growing intricacy of technological transitions demands that organizations respond quickly while simultaneously overseeing innovation projects efficiently. However, the effectiveness of these initiatives is not determined solely by the technical execution of change or innovation strategies. Rather, the presence of strong organizational support including leadership, adequate resources, and a supportive organizational culture significantly influences the extent to which these efforts lead to improved performance outcomes.

Despite the recognized importance of organizational support, limited research has investigated its moderating influence on the relationship between technology change management, innovation management, and operational performance. Most existing studies examine these elements in isolation or emphasize their direct impacts, often overlooking the complex interconnections among them. This oversight creates a notable gap in the literature, particularly regarding how organizational support can either strengthen or weaken the outcomes of technological and innovative initiatives.

The objectives of this study are to:

- examine the direct relationship between technology change management and operational performance.
- evaluate the direct relationship between innovation management and operational performance.
- investigate the moderating role of organizational support in the relationship between technology change management and operational performance.

## 1.1. Research Questions

This study seeks to answer the following research questions:

- What are the direct relationship between technology change management and operational performance?
- What are the direct relationship between innovation management and operational performance?
- How does organisational support moderate the relationship between technology change management and operational performance?

## 1.2. Hypotheses

The following hypotheses guided this study:

**H<sub>01</sub>:** There is no significant relationship between technology change management and operational performance.

**H<sub>02</sub>:** There is no significant relationship between innovation management and operational performance

**H<sub>03</sub>:** The moderating role of organizational support does not have significant influence in the relationship between technology change management and operational performance.

## 2. Literature Review

### 2.1. Conceptual Review

#### 2.1.1. Technology Change Management

Technology change management encompasses the strategies and actions organizations use to introduce and oversee technological updates or new systems. Its primary aim is to facilitate the seamless integration of these technological changes, minimizing operational disruptions while maximizing potential gains (Kotter, 1996). Key components of this process include evaluating the necessity for change, effectively communicating the transition, offering adequate training, and tracking the performance of the implemented technologies. In an era marked by constant technological advancements, effective management of these changes is essential for organizations to remain competitive in ensuring not only the adoption but also the optimal utilization of new technologies to improve internal operations (Cao et al., 2022).

#### 2.1.2. Innovation Management

Innovation management refers to the systematic approach an organization takes to oversee the generation, development, and execution of new ideas, products, or services. It includes the coordination of resources, strategic planning, and implementation practices that support innovation across the organization (Tidd & Bessant, 2018). This process can be influenced by internal research efforts, evolving market demands, or emerging technological trends. Core stages in innovation management typically involve idea creation, evaluation, refinement, and bringing innovations to market (Zhao et al., 2021). In highly competitive markets, the ability to manage innovation effectively

is vital, as it enables organizations to introduce novel offerings or improve processes, providing a distinct edge over competitors.

### **2.1.3. Organizational Support**

Organizational support encompasses the tools, leadership, and systems that an organization provides to assist employees in reaching their goals. This support may include training opportunities, access to necessary equipment, open and effective communication, encouragement, and a workplace culture that appreciates employee input (Eisenberger et al., 2002). Such support is essential for the effective implementation of technological and innovative changes. When employees perceive that the organization is backing them, they are more inclined to participate in and adapt to new technologies and innovation efforts. Within the context of managing technological change and innovation, organizational support is considered a vital factor that shapes how employees respond to and carry out these transformations.

### **2.1.4. Operational Performance**

Operational performance describes how effectively an organization meets its objectives, delivers products and services, and manages its resources. It typically reflects key performance areas such as productivity, quality assurance, cost efficiency, customer satisfaction, and overall profitability (Kaplan & Norton, 1992). When viewed through the lens of technology and innovation, operational performance can be enhanced by adopting advanced technologies, streamlining processes, and developing new or improved offerings. Properly managing technological changes and fostering innovation can result in notable gains in performance by boosting efficiency, lowering operational costs, and enhancing product or service quality.

### **2.1.5. The Moderating Role of Organizational Support**

This study considers organizational support as a moderating factor that affects the nature and intensity of the relationships between technology change management, innovation management, and operational performance. As defined by Baron and Kenny (1986), a moderating variable alters the strength or direction of the connection between an independent and a dependent variable. Within this framework, organizational support is proposed to amplify the positive effects of effective technology and innovation management on operational performance. Additionally, it may help mitigate resistance to change, enhance the success of innovation initiatives, and ultimately contribute to improved organizational results.

## **2.2. Theoretical Review**

### **2.2.1. Technology Acceptance Model (TAM)**

The Technology Acceptance Model (TAM), introduced by Davis (1989), is a widely recognized theoretical model for explaining how individuals come to accept and use technology within organizational settings. According to TAM, two primary factors perceived ease of use and perceived usefulness shape an individual's willingness to adopt a new technology. In the context of this study,

organizational support may play a crucial role in shaping these perceptions by offering appropriate training, resources, and direction, thereby making the technology appear more accessible and beneficial to employees. TAM serves as a useful lens for analyzing how technology change initiatives can succeed when backed by supportive organizational structures that promote adoption and effective utilization of new systems.

### **2.2.2. Innovation Diffusion Theory (IDT)**

Rogers' Innovation Diffusion Theory (1983) examines the processes through which new technologies and ideas are adopted across social systems, including the speed and reasons behind their spread. The theory identifies several key factors that influence adoption: relative advantage, compatibility, complexity, trialability, and observability. Within this framework, organizational support plays a vital role in facilitating innovation diffusion by minimizing resistance and providing essential resources. For instance, leadership-driven training and effective communication can enhance how well new technologies align with existing operations and highlight their benefits, thereby encouraging quicker adoption and more effective innovation implementation.

### **2.2.3. Resource-Based View (RBV)**

The Resource-Based View (RBV) of the firm, introduced by Barney (1991), posits that sustained competitive advantage arises from the effective management of resources that are valuable, rare, difficult to replicate, and not easily substituted. When considered through this lens, organizational support can be regarded as a strategic resource that strengthens an organization's capacity to manage technological transitions and innovation efforts. RBV highlights the critical role of organizational competencies such as employee expertise, leadership quality, and managerial skills in driving successful change and innovation processes. This framework offers valuable insight into how organizational support can boost operational performance by reinforcing internal strengths and capabilities.

## **2.3. Empirical Review**

Research by Cao et al. (2022) revealed that organizations that successfully oversee technological changes tend to experience increased productivity and lower operational expenses. Similarly, Zhao et al. (2021) reported that companies with well-defined technology change management approaches benefit from enhanced operational efficiency and higher levels of customer satisfaction. These findings highlight the critical role of managing technological transitions to achieve better performance outcomes.

Innovation management has also been consistently associated with improved organizational effectiveness. Tidd and Bessant (2018) noted that firms adept at managing innovation are better positioned to stand out in competitive markets, resulting in greater profitability and expanded market presence. Xie et al. (2023) further observed that effective innovation practices positively affect the diversity and quality of an organization's offerings, leading to higher customer satisfaction and stronger operational performance. Moreover, innovation-oriented organizations are often more agile in

responding to market shifts and technological developments, supporting long-term competitiveness and sustainability.

Organizational support has been identified as a vital factor in the effective management of both technological change and innovation. According to Eisenberger et al. (2002), employees who perceive a high level of support from their organization are more inclined to accept technological advancements and engage in innovative activities. Similarly, Xie et al. (2023) found that providing adequate resources, training, and leadership significantly improved the outcomes of innovation efforts. This aligns with the Resource-Based View, which highlights organizational support as a strategic resource that fosters adaptability and innovation, thereby offering a competitive edge.

While limited research has directly explored the moderating role of organizational support, findings from Xie et al. (2023) indicate that it significantly influences the strength of the relationship between innovation management and organizational performance. Their study demonstrated that innovation efforts were more effective in environments with strong support systems, including effective communication and employee development programs. In a similar vein, Cao et al. (2022) noted that organizational support plays a moderating role in the link between technology implementation and operational performance, helping to ensure smoother integration of new technologies into existing organizational workflows.

### **3. Methodology**

This research employed descriptive research design to explore the relationships among technology change management, innovation management, organizational support, and operational performance, with a particular emphasis on the moderating effect of organizational support. Data will be gathered through a structured survey administered to employees within technology-oriented organizations. A quantitative approach was chosen to enable statistical analysis of variable relationships, offering objective and generalizable findings. The study population comprised staff members from technology-driven companies operating in Ekiti State. These include MTN Nigeria, Globacom (GLO), Guarantee Trust Bank (GTBank), and Zenith Bank, organizations that significantly depend on technological change and innovation to enhance their operational efficiency. A purposive sampling technique was applied to select 150 respondents for the study.

Where,

TCM = Technology Change Management

IM = Innovation Management

MRO = Moderating Role of organizational Support

OPT = Operational Performance in Technology-Driven Era

IM = Innovation Management

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OPT = Operational Performance in Technology-Driven Era

4. Results

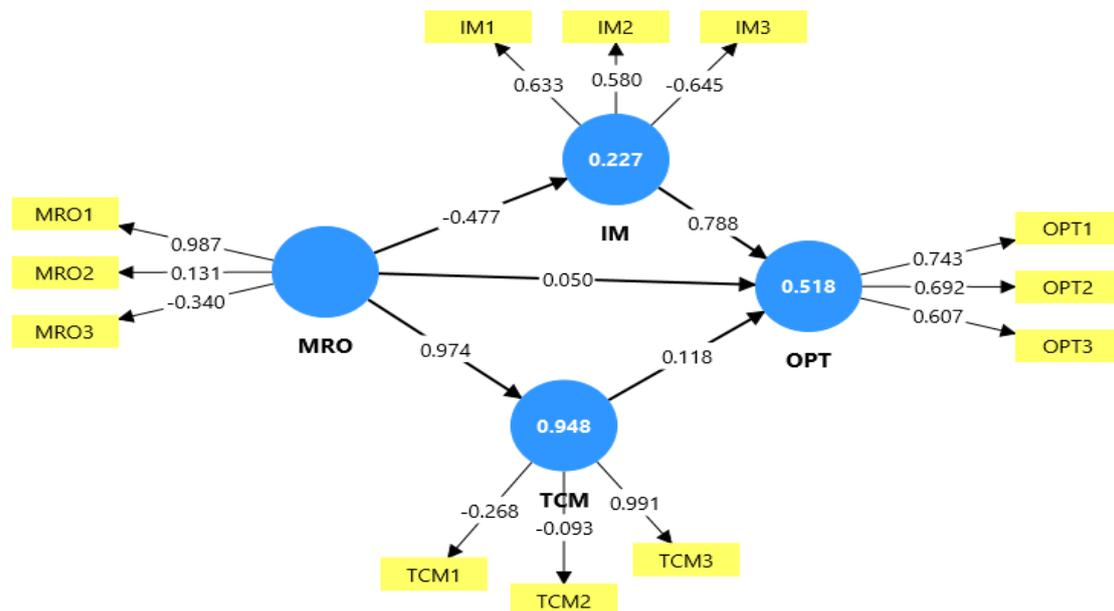


Figure 1. Moderating Roles of Organizational Support on Operational Performance

Table 1. Path Coefficient of Moderating Role of Organizational Support in the Relationship between Technology Change Management, Innovation Management

Items	Sample mean (M)	Standard deviation (STDEV)	T- statistics
IM -> OPT	0.802	0.052	15.264
MRO -> IM	-0.465	0.09	5.292
MRO -> OPT	-0.013	0.429	0.116
MRO -> TCM	0.965	0.048	20.085

Source: Authors' Computation (2025)

The analysis shows a positive and statistically significant path coefficient between Innovation Management (IM) and Operational Performance (OPT) ( $\beta = 0.802, t = 15.264$ ), indicating that innovation efforts strongly contribute to enhanced performance. This finding supports previous research highlighting the importance of innovation in improving efficiency, responsiveness, and long-term competitiveness (Zhao et al. 2021)). In a period of continuous technological advancement, organizations that proactively manage innovation are better equipped to leverage new technologies and drive productivity gains.

On the other hand, the path coefficient from Organizational Support (MRO) to Innovation Management (IM) is significant but negative ( $\beta = -0.465, t = 5.292$ ). This suggests that, in certain contexts, organizational support might hinder rather than facilitate innovation. A possible reason for this could be that overly rigid structures or excessive oversight may limit employee creativity or lead to bureaucratic slowdowns. This interpretation aligns with Xie et al. (2023) who found that excessive managerial control can undermine intrinsic motivation and creative thinking. The result illustrates the

complexity of organizational support it must strike a balance between offering necessary resources and preserving employee autonomy (Eisenbeiss, et al., 2008).

Conversely, the path coefficient from Organizational Support (MRO) to Operational Performance (OPT) is minimal and statistically insignificant ( $\beta = -0.013$ ,  $t = 0.116$ ), indicating that organizational support does not have a direct effect on performance outcomes. This aligns with the work of Xie et al. (2023); Purwanto et al. (2020) who noted that while support systems are crucial, their influence typically operates through internal mechanisms such as innovation or technological integration. As a result, for support to enhance performance, it must be effectively aligned with innovation or change management strategies.

In contrast, a strong and statistically significant positive relationship was found between Organizational Support (MRO) and Technology Change Management (TCM) ( $\beta = 0.965$ ,  $t = 20.085$ ), demonstrating that support systems play a vital role in enabling successful technological change. This finding is consistent with the Resource-Based View (RBV), which emphasizes that internal strengths such as leadership, infrastructure, and employee development are fundamental to managing technological advancements (Barney, 1991). Well-structured organizational support helps ease the transition to new technologies by lowering resistance, improving employee preparedness, and enhancing implementation processes.

Overall, the findings highlight that while innovation management directly drives operational performance, organizational support must be carefully designed to avoid stifling creativity. At the same time, such support plays a critical role in facilitating technological change, emphasizing the importance of cultivating a supportive and adaptable organizational environment that fosters innovation and enables effective technology adoption.

**Table 2. Total Effect of Moderating Role of Organizational Support in the Relationship between Technology Change Management, Innovation Management**

Items	Sample mean (M)	Standard deviation (STDEV)	T statistics	P values
IM -> OPT	0.802	0.052	15.264	0
MRO -> IM	-0.465	0.09	5.292	0
MRO -> OPT	-0.218	0.081	2.588	0.01
MRO -> TCM	0.965	0.048	20.085	0
TCM -> OPT	0.175	0.412	0.287	0.774

*Source: Authors' Computation (2025)*

The analysis shows that innovation management (IM) has a strong, statistically significant positive influence on operational performance, with values of  $t = 15.264$  and  $p = 0.000$ . This supports previous research that highlights innovation as a major factor in enhancing organizational adaptability, operational efficiency, and sustaining competitive advantage (Xie et al.,2023)). In today's digital environment, innovation enables firms to integrate emerging technologies, improve process efficiency, and respond to changing customer expectations, thereby boosting overall performance (Zehir et al., 2015).

The relationship between Organizational Support and Innovation Management (MRO → IM) is also statistically significant ( $t = 5.292$ ,  $p = 0.000$ ), but notably negative. This unexpected result suggests that existing forms of support within the organization might be counterproductive to innovation.

Although organizational support is typically seen as a driver of innovation (Eisenbeiss et al., 2008), support mechanisms that are overly rigid, bureaucratic, or poorly aligned with innovation goals may restrict creativity and discourage experimentation (Amabile et al., 1996). Not all support fosters innovation its effectiveness depends on being empowering, adaptable, and strategically aligned. Excessive control or centralized decision-making can inhibit innovative thinking and risk-taking behaviors.

Similarly, the negative and statistically significant link between Organizational Support and Operational Performance further suggests that support structures may become a barrier rather than a facilitator when not well-designed. Inflexible policies or overly complex procedures can reduce agility, hinder decision-making, and compromise responsiveness to dynamic market conditions (Voola et al., 2012). Thus, organizational support should not be assumed inherently beneficial; it must be thoughtfully constructed to foster autonomy, reduce structural barriers, and promote proactive engagement to positively impact performance.

In contrast, Organizational Support has the most substantial positive influence on Technology Change Management (MRO → TCM), as indicated by  $t = 20.085$  and  $p = 0.000$ . This underscores the crucial role of support systems in managing technological transitions effectively. Successful change management is often driven by factors such as strong leadership, adequate training, open communication, and sufficient resource availability in supportive of organizational development.

## **5. Conclusion**

This research explored how organizational support moderates the relationships among technology change management, innovation management, and operational performance in a technology-intensive context. The results demonstrated that innovation management has a strong positive impact on operational performance, emphasizing its key role in maintaining a competitive edge in rapidly evolving environments. Interestingly, the study also revealed a complex role for organizational support, although it significantly enhances the management of technological change, it can negatively affect both innovation efforts and performance outcomes when not effectively structured.

These findings indicate that organizational support can serve as both an enabler and a barrier. To be effective, it must be strategically directed, adaptable, and aligned with innovation goals. Overly rigid or misaligned support systems may inhibit creativity, reduce organizational responsiveness, and impair overall efficiency. Additionally, the absence of a significant direct link between technology change management and performance suggests that merely adopting new technologies is not enough; success depends on integrating innovation and prioritizing human-centered implementation approaches.

In summary, this study highlights that organizational support must go beyond simply offering resources it should actively foster innovation and support change in a way that leads to tangible improvements in performance. Further research is recommended to investigate how various forms and dimensions of organizational support interact with innovation culture, leadership dynamics, and technological readiness to influence organizational outcomes.

## 6. Recommendations:

- Organization should invest in strategic planning and training programs that address how technology changes can be integrated smoothly into existing systems to improve overall performance
- Organisation should encourage feedback loops and regular assessments of innovation initiatives to ensure that they remain in line with both organizational goals and operational realities.
- Collaboration can help organizations better adapt to technology changes, streamline innovation processes, and ultimately drive improved operational performance.

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## References

- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). *Assessing the work environment for creativity. Academy of Management Journal*, 39(5), 1154–1184.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Cao, Q., Liu, Z., & Zhang, X. (2022). Technology change management in the digital era: Insights and challenges. *Journal of Business Research*, 78, 225-234.
- Davis, F. D. (1989). Perceived ease of use and perceived usefulness: A test of the technology acceptance model. *MIS Quarterly*, 13(3), 319-340.
- Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (2002). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, 87(3), 506-516.
- Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard: Measures that drive performance. *Harvard Business Review*, 70(1), 71-79.
- Kotter, J. P. (1996). *Leading change*. Harvard Business Press.
- Purwanto, A., Bernarto, I., Abdi Suryo, H., & Asbari, M. (2020). Effect of transformational leadership, organizational culture, work motivation on employee performance and organizational citizenship behavior (OCB). *International Journal of Social and Management Studies*, 1(1), 1–16
- Rogers, E. M. (1983). *Diffusion of innovations*. Free Press.
- Tidd, J., & Bessant, J. (2018). *Innovation and entrepreneurship: Managing the new enterprise*. Wiley.
- Voola, R., Casimir, G., Carlson, J., & Anushree Agnihotri, M. (2012). The effects of market orientation, technological opportunism, and e-business adoption on performance: A moderated mediation analysis. *Australian Marketing Journal*, 20(2), 136–146.

Xie, H., Zhang, J., & Li, W. (2023). Organizational support and its role in technology innovation. *International Journal of Innovation Management*, 21(2), 57-68.

Xie, H., Zhang, J., & Li, W. (2023). Organizational support and its role in technology innovation. *International Journal of Innovation Management*, 21(2), 57-68.

Zehir, C., Can, E., & Karaboga, T. (2015). Linking entrepreneurial orientation to firm performance: The role of differentiation strategy and innovation performance. *Procedia. Social and Behavioral Sciences*, 210, 358–367.

Zhao, Y., Wang, L., & Lin, S. (2021). The impact of organizational support on innovation management and performance outcomes. *Journal of Technology Management & Innovation*, 16(3), 33-45.