EXPLORING THE IMPACT OF WORK ENVIRONMENT AND ROLE OF MIDDLE MANAGERS IN PROMOTING KNOWLEDGE SHARING AND INNOVATION IN ORGANIZATIONS

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This study examines the significant role of middle managers and the work environment that promotes knowledge sharing and innovative work behavior in the Thai private sector in Bangkok. Using quantitative research methodology, this study aims to understand how

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competitive work environments affect middle managers and how middle managers can influence workplace culture to promote knowledge sharing and innovation. The study involved 422 operational employees of enterprises with more than ten employees. The study uses multiple regression analysis to analyze the relationships between variables. The results suggest that while middle managers can play a critical role in facilitating knowledge sharing and innovation, an overly competitive environment can undermine these efforts, highlighting the need for balanced work dynamics. Supportive middle management practices can enhance knowledge sharing and innovation in organizations, but a highly competitive environment may impede these positive outcomes.

Keywords: middle management; competitive work environment; knowledge sharing behaviors; innovative work behaviors

Introduction

Over the past decade, the role of middle management has increasingly been recognized as crucial to organizational success. Middle managers act as vital links between the strategic objectives of senior management and their operational execution by frontline employees. Middle managers play a crucial role in the success of contemporary organizations. Their position in the organizational hierarchy allows them to act as vital links between the strategic directives of senior management and the operational execution by rank-and-file employees.

Recent studies have highlighted the multifaceted role of middle managers in various aspects of organizational success. One study emphasizes the importance of middle managers in implementing total quality management (TQM) practices, demonstrating a positive impact on managerial performance (Rifa'i, 2024).

Moreover, the role of middle managers in green supply chain management has been recognized as crucial for achieving sustainability goals (Andalib et al., 2024). These managers play an important role in balancing operational efficiency with environmental responsibility. Developing management skills, especially those related to people management and leadership, is essential to prevent middle managers from becoming stagnant in their careers, a phenomenon known as the Peter Principle (Asuyama & Owan, 2024).

This principle suggests that individuals in an organization are promoted to their level of incompetence, highlighting the need for continuous skill development. Their role in facilitating knowledge sharing, innovation, and strategic implementation is critical in today's rapidly changing business environment (Birkinshaw, 2012).

Problems statement

Existing literature extensively documents the positive impact of middle manager support on knowledge sharing and innovation (Radaelli et al., 2014; Jansen et al., 2009).

However, the impact of competitive pressure on these dynamics still need to be explored. Competitive pressures can change organizational priorities and individual behavior (Porter, 2008). Understanding how these pressures influence middle managers’ abilities to support their teams provides insight into managing and mitigating potential negative impacts on organizational learning and innovation (Carmeli & Spreitzer, 2009).
Identifying the constraints that middle managers face in competitive environments can help organizations develop strategies to support knowledge sharing and innovation even in highly competitive environments.

This may include adjustments to the organizational structure, leadership development programs, or changes to performance indicators (Černe et al., 2014).

Bangkok, Thailand's vibrant capital is not only Southeast Asia's central hub of trade and culture, but also a vibrant melting pot of innovation and entrepreneurship. The city's dynamic business landscape, characterized by a mix of traditional enterprises and emerging startups, presents a unique context for organizational research.

Given its diverse workforce and competitive market environment, research conducted in Bangkok can offer valuable insights into the complexities of managing in culturally rich and economically diverse settings (Pholphirul, 2015).

Studies in Bangkok contribute to the broader understanding of how middle management practices influence organizational behavior in a rapidly developing economy. The city's unique blend of industries, from finance and tourism to manufacturing and technology, provides a rich backdrop for investigating the impact of competitive work environments on innovation and knowledge sharing.

Given these considerations, research conducted in Bangkok has the potential to make a significant contribution to the global discourse on management and organizational behavior by offering insight into the challenges and opportunities of working in an economically and culturally diverse environment. There is also a need to better understand how these dynamics are affected by a highly competitive work environment.

This study argues that strong competitive pressures limit the ability of middle managers to effectively support knowledge sharing and innovation, potentially impacting organizational performance and adaptability. Closing this gap is critical to developing strategies that support innovation and knowledge sharing, even in the face of competitive challenges.

**Research questions**

How do middle managers' supportive behaviors impact the cultivation of a knowledge-sharing culture in competitive organizational environment?

How does a competitive work environment affect middle managers' ability to promote innovative work behavior among employees?

What strategies can middle managers implement to effectively balance competitive pressures with the promotion of knowledge sharing and innovation within their organizations?

**Research Objectives**

- Investigate the impact of middle managers' supportive behavior on the development of a knowledge sharing culture in organizations facing competitive pressures.
- Examine how a competitive work environment influences middle managers' ability to promote innovative work behavior among employees.
- Explore strategies that middle managers can use to balance competitive pressures with the need to increase knowledge sharing and innovation within the organization.
Literature review

Middle managers facilitate knowledge sharing by creating an organizational culture that encourages open communication and collaboration. Their position allows them to facilitate the flow of information between different organizational levels, enhancing learning and adaptability (O'Brien & Marakas, 2011).

Moreover, they play a significant role in promoting innovative work behaviors. Middle managers can drive organizational growth and competitive advantage by supporting a culture of experimentation and providing resources necessary for innovation (Wooldridge & Floyd, 2010).

Furthermore, the strategic role of middle managers has evolved beyond mere implementation. They are increasingly involved in strategy formulation, offering insights from operational realities that can inform strategic decisions (Mantere, 2013). Their ability to manage change, engage in participative leadership, and influence organizational culture is crucial for successfully executing strategic initiatives (Huy et al., 2014).

Working environment

The working environment profoundly influences organizational competitiveness. A highly competitive work environment is often dynamic, challenging, and marked by a strong emphasis on performance and results. In contrast, a low competitive environment may offer a more stable, cooperative, and relaxed atmosphere.

A highly competitive environment typically necessitates adaptability, rapid innovation, and a focus on productivity. Such environments are associated with high levels of employee motivation and achievement but can also increase stress and burnout if not managed properly (Campion et al., 1993).

In such environments, competitive pressure can drive efficiency and innovation, which, if unchecked, leads to short-term orientation and unethical behavior (Chen, 2017).

A low, competitive work environment might foster greater collaboration and knowledge sharing, which can also lead to innovation but at a potentially slower pace. Such an environment supports employee well-being and long-term organizational learning (Amabile et al., 2004).

Such a climate can support employees' intrinsic motivation and satisfaction, potentially reducing turnover (Deci & Ryan, 2000).

The effects of high and low competitive environments on productivity and well-being are nuanced. High competition can increase productivity and efficiency, but can also lead to unethical behavior and employee burnout (Kohn, 1992; Molinsky et al., 2012). Organizations with less competitive climates may succeed in retaining and satisfying employees while promoting sustainable rates of innovation and growth (Ryan & Deci, 2001).

Knowledge sharing behavior

Knowledge sharing is critical to organizational learning and innovation, improving the organization's collective understanding and experience. This involves sharing information, skills or experience between individuals or groups, developing a culture of collaboration and continuous improvement.

For example, the adoption and use of blockchain technology among software developers demonstrates the importance of technology platforms in facilitating knowledge
sharing, which indicates behavioral intention to use new technologies for information sharing (Stojanović et al., 2024).

Moreover, knowledge workers play a crucial role in innovation linkages and knowledge absorption, with their behavior significantly influencing organizational knowledge-sharing and transformation processes (Wang et al., 2024). This relationship underscores the importance of creating an environment that supports and encourages knowledge sharing among employees.

In addition, the implementation of knowledge sharing in educational institutions was studied to evaluate the level of knowledge sharing tents, providing insight into the factors that promote or hinder knowledge sharing in academic settings (Romadhoni et al., 2024).

**Knowledge-sharing**

Individual and organizational factors, including trust, perceived benefits, and the availability of knowledge-sharing platforms, also influence knowledge-sharing behavior. Effective knowledge-sharing practices can improve organizational performance, innovation, and competitiveness.

**Innovative work behavior**

Innovative Work Behavior (IWB) includes activities related to the generation, implementation, and application of new ideas, processes, products, or procedures in the workplace. Innovative Work Behavior (IWB) is increasingly recognized as a critical factor for organizational growth, competitiveness, and adaptability in the rapidly changing business environment. Innovative Work Behavior encompasses a range of activities, from idea generation and idea promotion to the realization of innovative solutions within an organizational context (Anderson et al., 2014). This behavior is critical for organizational adaptability and competitive advantage in fast-evolving markets.

Recent studies have explored various dimensions of Innovative Work Behavior (IWB), including its antecedents, characteristics, and outcomes. For instance, the role of transformational leadership in fostering an innovative climate has been highlighted, demonstrating its positive impact on employees' enthusiasm for innovation (Rahmatika, 2024).

Moreover, the significance of ethical leadership in promoting organizational citizenship behavior, which is closely linked to Innovative Work Behavior (IWB), has been underscored in the Indian context (Arora & Arora, 2024).

**Theoretical framework**

Many theories suggest that middle managers, through transformational leadership and creating a positive organizational climate, promote knowledge sharing, which leads to innovative work behavior, thereby enhancing the organization's competitive advantage. This synergy highlights the role of the middle manager as the linchpin in developing a sustainable and innovative organizational culture.

The Social Exchange Theory (SET), as proposed by Blau (1964), shapes our understanding of the reciprocal nature of human interactions within an organization. Employees tend to reciprocate the supportive behavior of middle managers, which manifests in a positive exchange cycle.
When middle managers create a supportive environment for their subordinates, they create a social exchange that encourages employees to respond with innovative behavior, as noted by Cropanzano & Mitchell (2005). This reciprocation is further empowered by the Transformational Leadership Theory, which posits that middle managers who adopt transformational leadership styles can inspire employees to exceed expectations by engaging their self-worth and fostering a culture of innovation (Bass, 1999).

When middle managers embody this leadership style, as elucidated by Bass et al. (2003), they encourage knowledge sharing and embolden their employees to pursue innovative endeavors. According to the firm's Resource-Based View (RBV), Barney (1991) conceptualizes organizations as collections of unique resources, where those that effectively utilize their unique and valuable knowledge resources gain a competitive edge. Middle managers play a pivotal role in this process by fostering an environment that supports the sharing and development of these knowledge assets, thereby enhancing the firm's innovative capacity (Wernerfelt, 1984).

Finally, the Knowledge-Based Theory of the Firm accentuates the strategic value of knowledge within an organization (Grant, 1996). As Nonaka (1994) highlights, middle managers' facilitation of knowledge creation and sharing processes is crucial. This theory underscores the importance of knowledge as a critical resource and the role of middle managers in mobilizing this resource to foster innovation.

The research framework (illustrated in Fig. 1) visually represents the theoretical narrative constructed by the literature: The Role of Middle Managers influences both Knowledge Behavior and Innovative Work Behavior. The Working Environment is also linked to both behaviors, signifying that it has a direct effect on them. There are bidirectional arrows between Knowledge Sharing Behavior and Innovative Work Behavior, suggesting that not only does knowledge sharing lead to innovation, but innovative practices can also feed back into and enhance knowledge sharing within the organization.

This framework is grounded in the literature by establishing a conceptual flow from the leadership and environment to the behavior that contribute to organizational competitiveness and innovation.
EXPLORING THE IMPACT OF WORK ENVIRONMENT

Research methodology

This study uses a quantitative approach to assess how competitive environments influence middle managers’ support for knowledge sharing and innovation among employees in Bangkok. Using advanced statistical techniques and a validated questionnaire, the study ensures the accuracy and applicability of the outcomes (Field, 2013).

The survey, reviewed by three social science academics, uses a five-point Likert scale to gauge responses, enhancing the study's methodological rigor (Vanpetch & Sattayathamrongthian, 2022).

The population targeted for this research comprises the Thai working force employed in the private sector within Bangkok, specifically focusing on those in operational positions within organizations employing more than ten employees. A purposive sampling method is employed, ensuring the selection of participants is directly relevant to the study's objectives and the generalizability of its findings to similar competitive work environments.

G*Power software is used for statistical power analysis. This approach follows best practices in research design by allowing the calculation of a sample size that balances feasibility and statistical power needed to test study hypotheses (Vanpetch & Sattayathamrongthian, 2023; Faul et al., 2007).

Data collection is carried out using a structured electronic questionnaire, allowing for efficient data collection across a broad segment of the target population. The questionnaire, developed based on a rigorous academic literature review, measures variables such as knowledge-sharing behavior, innovative work behavior, and perceived support from middle managers, ensuring reliability and relevance in capturing the constructs of interest.

Data are analyzed using statistical software packages adept at handling complex quantitative data. An initial descriptive analysis will provide foundational insights into the data distribution and central tendencies. Multiple regression analysis examines the relationships between competitive work environment pressures, middle manager support, knowledge-sharing behavior, and innovative work behavior (Cohen et al., 2003).

The multiple regression formula is a process to predict a dependent variable (Y) based on multiple independent variables (X1, X2, ..., Xn).

The equation can be written in a more conventional format as

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_n X_n + \varepsilon. \]

\( Y \) - dependent variable.

\( \beta_0 \) - y-intercept or constant term. It represents the value of Y when all the independent variables (\( X_s \)) are 0.

\( \beta_1, \beta_2, \ldots, \beta_n \) - regression coefficients for each independent variable. They measure the strength and direction of the relationship between each independent and dependent variable.

If a coefficient is positive, it means that there is a positive association between the independent variable and the dependent variable. If it is negative, the association is negative.

\( X_1, X_2, \ldots, X_n \) - independent variables, also called predictors or explanatory variables. They are the factors that may influence the dependent variable.

\( \varepsilon \) - error term, also known as the residual. It represents the amount of variability in the dependent variable that the independent variables cannot explain.
Research Result

Table 1 - Demographic (n = 422)
(compiled by co-authors)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>278</td>
<td>65.9</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>144</td>
<td>34.1</td>
</tr>
<tr>
<td>Age</td>
<td>16-30</td>
<td>105</td>
<td>24.9</td>
</tr>
<tr>
<td></td>
<td>31-45</td>
<td>165</td>
<td>39.1</td>
</tr>
<tr>
<td></td>
<td>46-60</td>
<td>152</td>
<td>36</td>
</tr>
<tr>
<td>Organization Size</td>
<td>11-50 employees</td>
<td>139</td>
<td>32.9</td>
</tr>
<tr>
<td></td>
<td>51-200 employees</td>
<td>57</td>
<td>13.5</td>
</tr>
<tr>
<td></td>
<td>201-500 employees</td>
<td>75</td>
<td>17.8</td>
</tr>
<tr>
<td></td>
<td>501-1000 employees</td>
<td>79</td>
<td>18.7</td>
</tr>
<tr>
<td></td>
<td>More than 1000 employees</td>
<td>72</td>
<td>17.1</td>
</tr>
<tr>
<td>Industry</td>
<td>Banking, Finance, and Insurance</td>
<td>113</td>
<td>26.8</td>
</tr>
<tr>
<td></td>
<td>Education and Training</td>
<td>125</td>
<td>29.6</td>
</tr>
<tr>
<td></td>
<td>Retail and Consumer Goods</td>
<td>97</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Travel, Hospitality, and Leisure</td>
<td>87</td>
<td>20.6</td>
</tr>
<tr>
<td>Working experience</td>
<td>0-5 years</td>
<td>112</td>
<td>26.5</td>
</tr>
<tr>
<td></td>
<td>6-10 years</td>
<td>107</td>
<td>25.4</td>
</tr>
<tr>
<td></td>
<td>11-15 years</td>
<td>110</td>
<td>26.1</td>
</tr>
<tr>
<td></td>
<td>16-20 years</td>
<td>86</td>
<td>20.4</td>
</tr>
<tr>
<td></td>
<td>More than 20 years</td>
<td>7</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Most respondents are female, aged between 31-45 years, working in small organizations with 11-50 employees across various industries, including Banking, Finance, and Insurance; Education and Training; Retail and Consumer Goods; and Travel, Hospitality, and Leisure. Their work experience ranges from 0 to more than 20 years.

Tab. 2 is a descriptive statistical overview of responses to various aspects of organizational behavior as perceived by employees.

**Multiple regression**

From Multiple regression formula

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_n X_n + \epsilon \]

\[ EN = B + MP_1 X_1 + MP_2 X_2 + \ldots + MP_6 X_6 + \epsilon \]

\[ EN = 5.022 - 0.157X_1 - 0.0872X_2 - 0.094X_3 - 0.077X_5 + \epsilon \]

\[ R = 0.225 \quad R^2 = 0.214 \quad SEE = 0.651 \quad F = 20.115 \quad \text{Sig. of } F = 0.00 \]

EN represents the dependent variable, Competitive Environment

The results suggest that certain aspects of middle management performance are significantly associated with the competitive environment as perceived by employees.
# Exploring the Impact of Work Environment

Table 2 - Descriptive statistics on organizational behaviors
(Compiled by co-authors)

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive Environment</td>
<td>EN</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.5055</td>
</tr>
<tr>
<td>1 In my work environment, there is a constant push to outperform competitors.</td>
<td>EN 1</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.4502</td>
</tr>
<tr>
<td>2 My organization emphasizes the importance of being ahead in market trends and innovations.</td>
<td>EN 2</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.5498</td>
</tr>
<tr>
<td>3 My organization's work pace is fast due to the need to stay competitive.</td>
<td>EN 3</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.4858</td>
</tr>
<tr>
<td>4 Employees in my organization often feel pressured to work longer hours to meet competitive demands.</td>
<td>EN 4</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.5616</td>
</tr>
<tr>
<td>5 Challenging Key Performance Indicators, KPIs, primarily measure success in my organization.</td>
<td>EN 5</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.5190</td>
</tr>
<tr>
<td>6 There is a high-stress level among employees due to competitive pressures in the workplace.</td>
<td>EN 6</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.4668</td>
</tr>
<tr>
<td>Middle Managers Performance</td>
<td>MP</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.5758</td>
</tr>
<tr>
<td>1 Middle managers effectively communicate organizational goals and strategies.</td>
<td>MP 1</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.7014</td>
</tr>
<tr>
<td>2 Middle managers facilitate cross-departmental collaboration.</td>
<td>MP 2</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.4573</td>
</tr>
<tr>
<td>3 Middle managers are available to discuss ideas and provide feedback.</td>
<td>MP 3</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.5995</td>
</tr>
<tr>
<td>4 Middle managers advocate strongly for team needs and resources.</td>
<td>MP 4</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.5782</td>
</tr>
<tr>
<td>5 Middle managers recognize and reward contributions to knowledge sharing and innovation.</td>
<td>MP 5</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.6351</td>
</tr>
<tr>
<td>6 Middle managers understand the role, are well prepared, and are good at teamwork.</td>
<td>MP 6</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.4834</td>
</tr>
<tr>
<td>Knowledge Sharing Behaviors</td>
<td>KS</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.7749</td>
</tr>
<tr>
<td>1 My organization provides platforms or tools that facilitate the easy sharing of knowledge.</td>
<td>KS1</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.7962</td>
</tr>
<tr>
<td>2 I receive the necessary support from my team to share knowledge.</td>
<td>KS2</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.7962</td>
</tr>
<tr>
<td>3 Knowledge sharing is recognized and rewarded by my organization.</td>
<td>KS3</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.8152</td>
</tr>
<tr>
<td>4 I feel comfortable sharing failures and lessons learned with my colleagues.</td>
<td>KS4</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.6540</td>
</tr>
<tr>
<td>5 There are sufficient opportunities for learning from others within my organization.</td>
<td>KS5</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.8270</td>
</tr>
<tr>
<td>6 The communication channels within my organization effectively facilitate knowledge sharing.</td>
<td>KS6</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.7607</td>
</tr>
<tr>
<td>Innovative Work Behaviors</td>
<td>IN</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.7768</td>
</tr>
<tr>
<td>1 My organization encourages innovation and taking calculated risks.</td>
<td>IN1</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.7701</td>
</tr>
<tr>
<td>2 My immediate supervisor or middle manager supports trying new and untested ideas.</td>
<td>IN2</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.9076</td>
</tr>
<tr>
<td>3 Resources are made available for experimenting with new ideas.</td>
<td>IN3</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.8318</td>
</tr>
<tr>
<td>4 The organizational culture tolerates failure in innovation attempts.</td>
<td>IN4</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.7322</td>
</tr>
<tr>
<td>5 My ideas are valued and taken seriously by the organization.</td>
<td>IN5</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.6706</td>
</tr>
<tr>
<td>6 Employees are given opportunities to present innovative solutions to management.</td>
<td>IN6</td>
<td>422</td>
<td>1.00</td>
<td>5.00</td>
<td>3.7488</td>
</tr>
</tbody>
</table>
This means that these aspects of middle management (effective communication (MP1), facilitation of cross-departmental collaboration (MP2), availability to discuss ideas and provide feedback (MP3), recognition, and reward of contributions (MP5) have a significant negative relationship with the competitive atmosphere in the organization.

\[
RM = B + EN1 X1 + EN2 X2 + EN3 X3 + EN4 X4 + EN5 X5 + EN6 X6 + \varepsilon
\]

\[
RM = 5.080 - 0.082X3 - 0.075 X4 - 0.68X5 - 0.1256 X6 + \varepsilon
\]

\[
R = 0.454 \quad R^2 = 0.194 \quad SEE = 0.651 \quad F = 17.941 \quad \text{Sig. of } F = 0.00
\]

The competitive environment has a statistically significant negative relationship with the performance of middle managers.

Specifically, as the pace of work increases (EN3), as employees feel pressure to work longer (EN4), as success is primarily measured by key performance indicators (EN5), and as stress levels increase due to competitive pressures (EN6), productivity middle managers are likely to decline.

\[
KS = B + MP1 X1 + MP2 X2 + MP3 X3 + MP4 X4 + MP5 X5 + MP6 X6 + EN1 X7 + EN2 X8 + EN3 X9 + EN4 X10 + EN5 X11 + EN6 X12 + \varepsilon
\]

\[
KS = 3.564 + 0.110 X3 + 0.068 X5 - 0.071X8 - 0.077X9 + \varepsilon
\]

\[
R = 0.545 \quad R^2 = 0.276 \quad SEE = 0.651 \quad F = 14.385 \quad \text{Sig. of } F = 0.00
\]

The model suggests that middle management has a positive influence on knowledge sharing. In particular, knowledge sharing behavior tends to increase when middle managers are willing to discuss ideas (MP3) and acknowledge contributions (MP5). Conversely, a competitive environment, such as staying ahead of market trends (EN2) and fast pace of work (EN3), is associated with a decreased propensity to share knowledge.

This may mean that too much emphasis on competition and pace can negatively impact the collaborative and open environment that fosters knowledge sharing. Supportive management and a less stressful work environment can lead to improved knowledge sharing practices among employees.

\[
IN = B + B + MP1 X1 + MP2 X2 + MP3 X3 + MP4 X4 + MP5 X5 + MP6 X6 + EN1 X7 + EN2 X8 + EN3 X9 + EN4 X10 + EN5 X11 + EN6 X12 + \varepsilon
\]

\[
IN = 3.858 + 0.061 X2 + 0.077X3 + 0.081X6 - 0.111X9 + \varepsilon
\]

\[
R = 0.489 \quad R^2 = 0.214 \quad SEE = 0.612 \quad F = 10.72 \quad \text{Sig. of } F = 0.00
\]

The model indicates that middle managers' behavior that promote interdepartmental collaboration, availability for discussion, and good understanding of role and teamwork are correlated with innovative work behavior in the organization.

This suggests that supportive and collaborative middle management can foster an environment conducive to innovation.

A rapidly changing competitive environment (EN3) is negatively associated with innovation.

This may mean that employees who are too focused on keeping up with competitive pressures may reduce their ability to engage in innovative behavior, perhaps due to stress or lack of time for creative thinking.
Discussion

Impact of middle management on knowledge sharing and innovation

The results of the study indicate a clear link between middle management practices and the promotion of knowledge sharing and innovative organizational behavior. Middle managers who excel at communication and collaboration, especially those who provide sufficient support and recognition to their teams, go a long way toward creating an environment conducive to knowledge sharing and innovative thinking. This is consistent with transformational leadership theory, which emphasizes the role of leadership in inspiring and motivating employees beyond their initial expectations and in developing a culture conducive to knowledge sharing and innovation (Bass et al., 2003).

Influence of competitive work environment

Evidence shows that a highly competitive work environment, characterized by a fast pace of work and high pressure to achieve key performance indicators, is negatively correlated with the effectiveness of middle managers in driving innovation. This can be attributed to the stress and potential burnout that such an environment creates, overshadowing the potential benefits of increased motivation and productivity. This finding is consistent with concerns raised by Kohn (1992) and Molinsky et al. (2012), who argue that excessive competition may lead to counterproductive outcomes such as unethical behavior and reduced employee well-being.

Strategic evolution of middle managers

Consistent with the literature, the results also reflect the strategic shift in the role of middle managers. No longer are they seen merely as implementers of top-down strategy, but they are also recognized as crucial contributors to the strategic formulation, drawing from their unique insights into the operational facets of the organization (Mantere, 2013; Huy et al., 2014). Their dual roles as strategic players and operational experts give them a unique opportunity to positively influence organizational culture.

Knowledge sharing behavior and organizational learning

Knowledge sharing emerges as a pivotal component of organizational learning, as suggested by the findings. The research points to middle managers as critical players in nurturing the practices that lead to a rich knowledge-sharing environment.

Such an environment is central to innovation and a strategic asset per the Knowledge-Based Theory of the Firm (Grant, 1996). This is also supported by recent empirical studies demonstrating the impact of technological platforms in promoting knowledge sharing among professionals.

Consequences for Innovative Work Behavior (IWB)

The findings illustrate that the presence of supportive middle management positively influences IWB. Middle managers can significantly boost innovative practices by providing the necessary resources and fostering a climate that values collaboration and open communication (Anderson et al., 2014).

Ethical leadership and transformational leadership styles also foster IWB by promoting organizational citizenship behaviors that support a culture of continuous innovation (Arora & Arora, 2024).
Practical implications

It is necessary to enhance leadership development programs to cultivate transformational leadership skills linked to increased innovation and knowledge sharing (Bass et al., 2003). Such programs can focus on teaching middle managers how to effectively communicate, recognize, and reward innovative efforts among employees.

It is motivating and not unduly stressful to assess the work environment regularly. It is wise to balance competitive pressures with a supportive culture to maintain employee well-being and productivity (Molinsky et al., 2012). Implementing employee feedback mechanisms can be instrumental in monitoring the organizational climate.

Theoretical implications

Transformational Leadership Theory: The study suggests expanding the scope of Transformational Leadership Theory to examine how leaders can facilitate innovation and knowledge sharing in different organizational settings (Bass et al., 2003). Future research might examine how various transformational leadership behaviors impact these outcomes.

Social Exchange Theory (SET): The findings encourage a deeper examination of SET in organizational contexts, particularly how positive social exchanges initiated by middle managers can lead to innovative work behaviors and enhanced knowledge sharing (Cropanzano & Mitchell, 2005).

Limitations

The study's findings are based on responses from a specific demographic group - predominantly female employees aged 31-45 working in small organizations within specific industries. This may limit the generalizability of the results to different demographics, organizational sizes, and sectors.

The use of cross-sectional data limits the ability to infer causation. Longitudinal studies would be better equipped to assess how changes in management practices impact knowledge sharing and innovation over time.

Future recommendations

Future research should include a more diverse range of participants in terms of gender, age, organization size, and industry to increase the robustness and applicability of the findings.

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