

# An overview on employee innovation behavior

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## Keywords

Employee Innovation Behavior, Employee Competency, Innovation, Innovation Work Behavior

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## Abstract

*Purpose:* This article presents a review of recent research on factors that influence employee innovation behavior at the workplace. From the review of existing studies, this paper defines the concept of employee innovation behavior, explaining why these behaviors are so important for organizations and discusses the determinants of innovation behavior.

*Design/Methodology,* based on a literature search on 15 peer-reviewed journals published during the period 2014-2021 and other relevant materials, it summarizes and discusses individual characteristics, employee competency and organizational level factors that have been found to influence innovativeness in organizations.

*Conclusion:* Innovation has been recognized as one of the main strategies for organizations to remain competitive in today's competitive economy. Employees' innovation behavior is the key driver for organizational-wide innovation. Innovation behavior is the production of usable products, processes, or services originating from identifying problems to generating ideas. From the review of existing studies, this paper defines the concept of employee innovation behavior, explaining why these behaviors are so important for organizations and discusses the determinants of innovation behavior.

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## 1. Introduction

Innovation is crucial for an organization to create and sustain competitive advantage. In an unstable and competitive environment, organizations seek various ways to gain a competitive advantage, one of which is to lead innovations. As a result, the types of implemented innovations tend to change as the organization grows and business models evolve. Because innovation is founded on good ideas from employees, organizations increasingly expect their employees to exhibit innovative behavior. Previous research has deduced and argued that the terms innovation and innovative behavior are frequently used interchangeably when describing phenomena.

Given the fact that employees are one of the most valuable resources for developing and implementing innovations in organizations, and their attitude toward innovation is the most important. Leaders, on the other hand, play an important role in shaping innovative attitudes in organizations. As a result, leaders must be open to new ideas and initiatives from employees; they must trust their employees by creating a positive working environment based on teamwork, loyalty, and trust. Employees must be aware of their true impact on organizational innovation processes.

Furthermore, among various levels of innovation, employee innovation behavior has become an important aspect of organizational innovation (Shih & Susanto, 2011). Employee innovation behavior (EIB), according to (Li & Hsu, 2016) is the foundation of organizational innovation and is defined as employees' activities that seek, generate, and apply new ideas and solutions. Employee innovation (EI), on the other

hand, includes both in-role components that are part of the prescribed work tasks and extra-role components that go beyond formal role descriptions (Potocnik & Anderson, 2016). Furthermore, the role of human resources has become more important in assisting firms in seeking ways to predict EIB (Seeck & Diehl, 2017). Veenendaal & Bondarouk (2015) proposed the role of HR practices in identifying, developing, assessing, and compensating EIB based on the belief that employees who contribute to firms' capacity to innovate through their imagination, creativity, and intelligence.

Moreover, employee innovation is a critical component of the innovation required by an organization to create and maintain a competitive advantage. According to Amabile and Michael (2016), organizational level innovation is directly related to employees' innovation effort; thus, organizations must pay attention to their employees' innovative behavior. Roshayati (2020) defined employee innovative behavior as a process consisting of multiple phases involving a set of behaviors that include idea creation, as well as seeking support from others and realizing ideas. This paper discusses the historical context of innovation, employee innovation behavior, employee work behavior, and the impact of employee innovation behavior on organizational performance and competitive advantage.

## **2. Literature Review**

### **2.1 Innovation**

Innovation is a significant driving force for enterprises seeking to achieve sustainable operations and competitive advantages (Mokhber et al., 2018). According to, Wang & Dass (2017) defined innovation as an organization's capacity to create innovative vision, and implement new ideas, to drive the success of the organization in a constantly changing environment. Thus, innovation management is a critical aspect for organizations since it ensures an effective design of routines, processes, and techniques that serve as a foundation for creativity and knowledge creation (Martínez-Costa et al, 2018). Therefore, innovation management helps organizations to achieve a sustained competitive edge (Hassi, 2019).

Additionally, Kadar et al., (2014) defined Innovation management as a systematic process used by organizations to improve their existing products, services, methods, and marketing strategies and to develop new ones. It also includes the development of a networked environment and focusing on managing talented employees to encourage individuals to generate creative ideas within the organization. Mavroeidis & Tarnawsk (2017) also stated that the efficient innovation management needs tools, practices, and sequential processes that can be organized by a management standard and innovative structure.

Nevertheless, Lei et al. (2021) argued that one of the most important dynamics that enable firms to gain a competitive advantage is innovation performance. According to Tajaso (2015), innovation performance refers to firm outcomes in terms of the extent to which they introduce inventions to the market. Furthermore, according to Le and Tran (2020), innovation performance is not only an important source for firms to gain a competitive advantage, but it is also a key antecedent to product and process innovations and firm performance.

The innovativeness of a company is largely determined by its employees. Employee innovativeness is defined as the ability, proclivity, and desire to develop and implement novel solutions. Furthermore, it has been demonstrated that innovative behaviors are perceived as deliberate creation and implementation of new ideas by employees in the workplace. According to Moghimi & Subramaniam (2013), innovative employees generate new ideas, solve current problems, and contribute to the development of an organization.

#### **2.1.2 Employee Explorative and Employee Exploitative behaviors for innovation**

Considering the crucial role of employee within the organization, several studies have examined the association of employee explorative and exploitative for innovation behaviors (Alghamdi, 2018). Exploration and exploitation are distinct modes of innovation with contradictory characteristics and behaviors (Gupta et al., 2006). Furthermore, many models of innovation present exploration and exploitation innovation in a linear and sequential order; however, both occur extemporaneously and cannot be easily separated, regardless of whether a firm is more inclined to exploration or exploitation innovation (Berkhout & Van Der Duin, 2007). Cao et al. (2009) investigated whether balancing exploration and exploitation innovation improves firm performance by mitigating the risks associated with

overemphasizing either exploration or exploitation. As a result, the combination of exploration and exploitation innovation has been found to be extremely important, with firms that can engage in both reporting optimal innovation (Zacher & Rosing, 2015).

### **Employee Explorative Behaviors**

By increasing variance in employee behaviors, a leader supports the adoption of generative and explorative thinking processes (Alghamdi, 2018). According to Hunter et al. (2011), leaders have more information and knowledge about all aspects of the innovation task than their followers. Furthermore, expertise is distributed among employees, and employees frequently have detailed knowledge and insights into the innovation processes and activities (Hoegl & Parboteeah, 2006). Furthermore, leaders who demonstrate open leadership behaviours encourage error learning and allow employees to think for themselves (Zacher et al., 2014). Supportive supervision behaviors, on the other hand, were found to be positively related to employee exploratory innovation behaviors. Other researchers (Alghamdi, 2018; Zacher et al., 2014) discovered that open leadership behaviors influence employee exploratory innovation behaviors positively.

### **Employee Exploitative Behaviors**

Exploitation innovation focuses on incrementally improving or refining existing knowledge. To accomplish this, a directive approach as closing leadership behavior is required to reduce variance in behaviors and ensure employee behavior alignment with standard work routines (Bledow et al., 2011). Leaders who exhibit closing leadership behavior signal to employees that work should be done in a routine but efficient manner and limit employees' efforts to pursue opportunities outside of their existing capabilities (Zacher et al., 2014). This promotes exploitation innovation behaviors and the enhancement of existing knowledge (Alghamdi, 2018). Closing leadership behaviors are critical for leaders in the early stages of innovation because they are required to convert creative ideas into commercial goods or services (Bledow et al., 2011). Furthermore, Zacher et al. (2014) discovered that closing leadership behavior influences employee exploitative innovation behavior. Moreover, exploratory innovation broadens its existing knowledge base to create fundamental or radical change, whereas exploitative innovation deepens the core knowledge basis to bring about incremental changes.

## **2.3 Innovation Culture**

The tendency of an organization to compete or resist innovation is reflected in its innovation culture. Dabi (2018) defined innovation culture as a set of shared values within a company that produces the best results by exploring new ideas and opportunities, establishing innovative practices, encouraging innovative behaviors, and building infrastructure for innovation processes. Creating this culture provides the infrastructure and internal environment that inspires employees to support the processes, practices, and actions required for innovation. According to Hilmarsson (2014), an innovation culture encourages open communication, reduces competition among individuals, and allows for decentralized decision-making. Thus, an innovation culture allows for the discovery of new ways of doing things, increasing an organization's competitive advantage and innovation performance.

Resource-Based According to View, high organizational performance and competitive advantage are dependent on factors other than the firm's assets or one of their internal resources (Kiyabo & Isaga, 2019). On the other hand, task context, follower characteristics, and organizational culture and characteristics all have an impact (Aboramadan et al., 2019). As a result, innovation culture may be critical in developing organizational performance (Alosani et al., 2020). This culture is characterized by the intention to be innovative and by individuals' commitment to learning new ways to conduct business. These have an impact on the motivation to generate and implement new ideas (Villaluz & Hechanova, 2019). This practice also includes establishing the infrastructure that supports employees' innovative work behaviors, configuring the elements of the innovation process, and demonstrating management's commitment to innovation (Hilmarsson et al., 2014). Furthermore, innovation culture is made up of beliefs, systems, encouragement, the ability to safeguard new technological innovations, and tolerance for failure. Furthermore, the psychological empowerment of employees to stimulate innovation and improve

performance is central to the concept of innovation culture (Xie et al., 2016). According to Dabi et al. (2018), an organization's innovation culture is critical to its success and has a significant impact on its business performance.

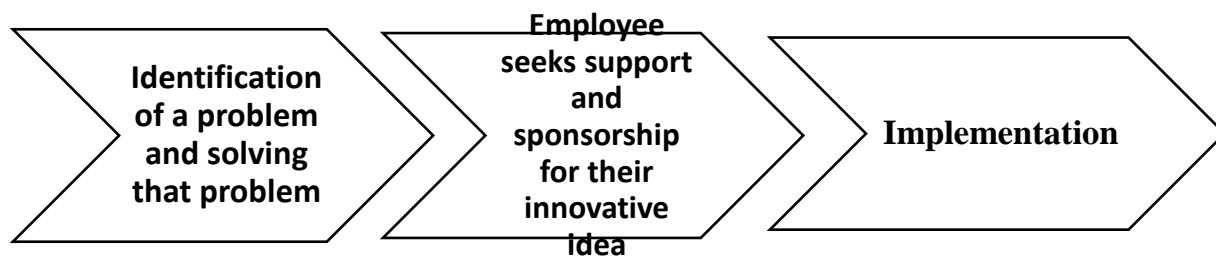
#### 2.4 Employee Innovative Behavior

According to Agarwal (2014), employees have been identified as important sources of innovation; consequently, their innovative behaviors are critical to organizational innovation. Innovative behavior, according to Janssen (2000), is the result of a comprehensive set of behaviors associated with idea creation, idea support, and idea implementation. Furthermore, employee innovative behavior is defined as the ability to generate new ideas and apply these ideas to job-related tasks that benefit the organization's performance (Lei, Haider & Hussain, 2018).

Davidson, Dyne, & Lin (2017), employee voice is a type of constructive voice that involves the expression of ideas or opinions with the goal of benefiting the organization. Employee voice is defined as an upward-directed improvement-oriented behavior that emphasizes the expression of constructive opinions about work-related issues (Detert & Burris, 2007). Employees will become more task-oriented and creative if they are encouraged to voice their opinions on ideas.

Besides, Scott and Bruce (1994), employee innovative behavior is a three-step process that begins with identifying a problem and ending with a solution that is either existing, adopted, or completely new. In the second step, the employee seeks internal or external support and sponsorship for their innovative idea. The third stage is implementation, in which employees prototype ideas that can be put into production.

Figure 1: Employee Innovative Behavior process



Source: Developed by the Researcher.

Moreover, Wang & Zhu (2018) indicate the main factors affecting employee's innovative behavior include individual factors, leadership factors, organizational factors, job characteristics factors, team factors and human-environment interaction factors. However, few studies have tackled innovation from an individual perspective (Perez-Penalver, Aznar-Mas & Montero-Fleta, 2018). Individual factors mainly focused from the aspects of cognitive abilities, personality, motivation, knowledge, and psychological factors (Batra & Vohra, 2016). Nieves & Quintana (2018) stated that employees with high levels of knowledge, abilities and experience are a source of new ideas for organization.

Fischer, Oget, & Cavallucci, (2015), highlighted that the impact of training and employee participation which may enhance the individual aspects such as knowledge, experience, abilities, and motivation. The training designed by organization might involve creativity requirements which will encourage employees toward innovative behavior. Moreover, Employee participation will create employees' loyalty (Bhatnagar, 2012), thus may positively influence employee innovative behavior. Besides, Employee participation are given more autonomy and have more control in the decision-making process which will leads to more innovative behavior (Li & Hsu, 2016).

#### 2.5 Innovative Work Behavior

Employee innovative work behavior continues to gain a considerable amount of attention as it has been clearly demonstrated to contribute to organizational performance (Bos-Nehles et al., 2017). This is especially vital as the business environment becomes more dynamic and challenging, where employee

innovative work behaviors will play a part in aligning the business vision and models with the constant technological changes. Thus, employee innovative work behavior that is developing, adopting, and implementing new ideas for products and work methods have been considered a major reason why some organizations survive and create competitive business environment (De Jong & Den Hartog, 2010).

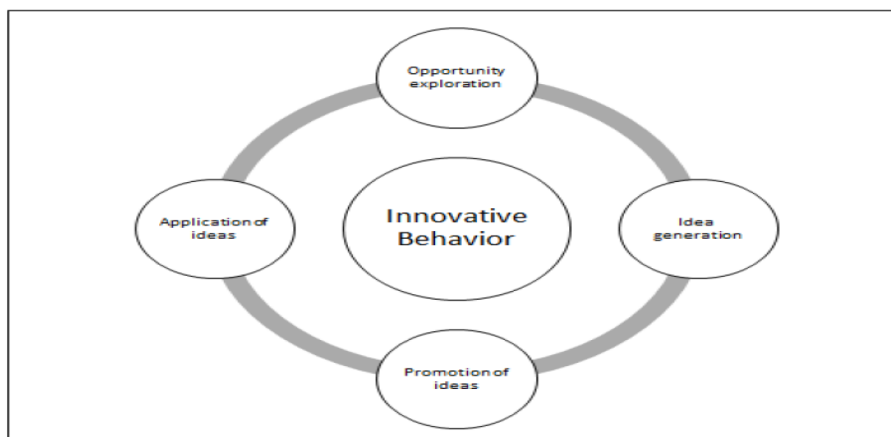
Bos-Nehles et al., (2017, p.382) describe IWB as “All individual actions directed at the generation, processing and application/implementation of new ideas regarding ways of doing things, including new products, ideas, technologies, procedures or work processes with the goal of increasing the organizational effectiveness and success”. According to, Yuan & Woodman (2010) identified IWB as the development, adoption, and implementation of new ideas for products, technologies, and work methods by employees. On the other hand, Researchers agree that IWB consisted of the three stages of idea generation, idea promotion and idea realization (De Jong & Den Hartog, 2010). The first stage is idea generation; employees encountering work-related problems will find ways to improve existing processes or products and try to solve problems using new and alternative ways. The Second stage is idea promotion, employees engaged in IWB need to promote newly developed ideas, processes, and products to potential partners, through the building of networks and coalitions of allies. Finally, at the implementation stage, employees need to produce a model of the new process and attempt to routinize it, to ensure the process or product becomes part of the routine at the workplace (De Jong & Den Hartog, 2010).

Previous research has focused on the antecedents of employees’ innovative work behavior; some of the proposed antecedents of IWB include personality and contextual characteristics (Yuan & Woodman, 2010). Other studies stated that strategy, organizational structure and climate, and individual and group capabilities as important determinants of IWB (Mumford & Licuanan, 2004). Moreover, (Bos- Nehles et al., (2017) highlighted the role played by effective leadership in shaping employee IWB.

### 2.5.1 Dimensions of Innovative Work Behavior

Innovative behaviors refer to the individual actions that aimed at generating and applying new ideas to improve outcomes in a better way (Messmann & Mulder 2017). De Jong & Den Hartog (202) suggested that innovative behavior is consisted of four dimensions: opportunity exploration, idea generation, promotion of ideas and the application of ideas. Besides, Borasi & Finnigin (2018) focus only on the dimensions of the production and application of ideas, while (Messmann & Mulder, 2017) added another dimension which is a reflection that makes innovative behaviors five dimensional.

**Figure 2: Illustrate the Innovative Work Behavior Dimensions**



Source: Adapted from (De Jong & Den Hartog, 2020).

**Figure 2 shows Innovative Work Behavior four dimensions:**

The first dimension of exploration of opportunity is referred as "opportunity identification" which includes activities such as discovery, search, creation, and problem identification (Örnek & Ayas 2015).

Innovation begins by identifying opportunities to create something new towards better results. This clearly shows that the exploration of opportunities plays a vital role in innovation. It is a significant first step to begin before any other action can be taken. The ability of an individual to identify something or something that requires change or improvement should be a key element in innovation. By identifying the opportunities available, individuals will be able to take further action.

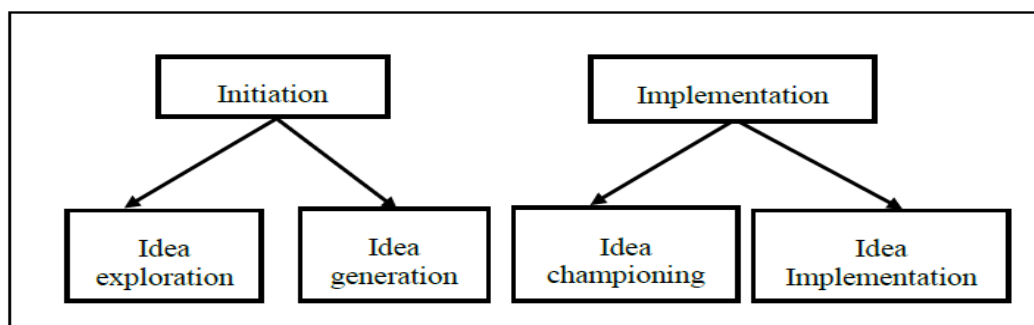
Idea generation is the second dimension of innovative behavior that refers to an individual's behavior to improve a current product or process, or to solve a problem, by developing an innovative solution to solve the problem by generating new ideas, finding alternatives, or combining and rearranging existing information and concepts based on the exploration of identified opportunities (De Spiegelaere et al. 2014). Luke & Stephan (2017) consider this second dimension as one aspect of creative behavior. Difficult or challenging situations often stimulate these dimensions.

The third dimension of innovative behavior is the behavior of promoting new ideas that have been created. This behavior is considered important because once a new idea has been developed, it needs to be promoted and championed because in general, the new idea generated will make a difference to the current product and process (De Jong & Den Hartog 2020). The changes proposed by this idea need the consent of the parties as they involve them directly and indirectly (Janssen 2004).

The last dimension refers to the behavior of individuals in applying the ideas generated. These dimensions will implement new ideas through the production of prototypes or new product models, technologies, or processes (Janssen 2004), testing and modifying prototypes according to the needs and making improvements in ways that innovations are thought to be part of the work process in the entire organization (De Jong & Den Hartog 2020).

Additionally, most studies have focused on the generation of innovative ideas and creativity rather than the behaviors involved in championing or implementing these creative ideas. Consequently, De Jong & Hartog, (2010) established a network to cover the overlapping dimensions from previous studies and came out with a new model for IWB based on the two stages of innovation.

**Figure 3: Illustrate Model for Innovative Work Behavior**



Source: Adapted From (De Jong & Hartog, 2020).

The figure shows the two stages of innovation, which are initiation and implementation. Every stage of innovation consisted of two dimensions that are related to initiation and implementation phase. Innovative Work Behavior "IWB" concept is related to problem recognition, idea championing, and idea implementation, while employee creativity was only focused on idea generation of employee itself (De Jong & Hartog, 2020) which will be discussed next under Employee Innovative Behaviors "EIB".

## 2.6 Individual Characteristics and Employee Innovative Behavior

Individual is always influenced by their culture, sub-culture, and psychological factors (Orji et al, 2017). Thus, understanding individual characteristics in an organization are crucial for continuous innovation and improvement where innovation proven as the crucial factors for sustaining organizational competitive advantage (Monteiro, et al., 2017). According to, Jalil et al. (2015) indicate that individual

characteristics may influence work performance and may change the workers' responses to them. Individual characteristics that influence employee innovative behavior are self-leadership, self-efficacy, and proactive trait.

Balau et al. (2013) investigated that employee directly and indirectly stimulates the development of innovations in the workplace. Previous studies showed that there is a positive relationship between self-leadership and organizational performance (Tastan, 2013; Hauschildt & Konradt, 2013). On the other hand, Di Liello & Houghton (2006) showed positive linkage in their study on self-efficacy and EIB. Additionally, Idrus & Salleh (2017) stated that the level of self-efficacy depends highly on the difficulty level of a task, with high self-efficacy are more likely to engage in higher levels of creativity in their work.

## 2.7 Knowledge Management and Employee Innovative Behavior

According to, Darrouxa, Jonathan, & Thibeli (2013) creativity and innovation are two standards of knowledge management that lead to sustain economic development and competitiveness. Wilson II (2016) argues that members of an organization recreate and use knowledge to facilitate organization innovation, core capability and competitive advantage. Acquiring knowledge and skills through collaboration have been effective and efficient means of successful innovation. On the other hand, Ragab & Arisha (2013) identified knowledge as the currency of the current economic situation; is an important asset of an organization and the key towards sustainable competitive advantage. Knowledge is a strategic advantage that helps companies maintains corporate excellence when turbulence occurs (Abdi and Senin, 2015).

Furthermore, knowledge sharing is an important process that influences the improvement of innovativeness at both the organizational and individual levels (Zhao et al., 2020). Expert knowledge, including knowledge of previous solutions and events, can serve as a foundation for and inspiration for new solutions. Sharing knowledge with colleagues increases the knowledge base of other employees and increases the possibility of the emergence of innovative ideas. "Idea generation is a process of knowledge creation that requires recombining internal and external knowledge into new forms," Radaelli et al. (2014) defined (p. 401). The ability to amass knowledge is essential for developing new solutions. According to Radaelli et al. (2014), the knowledge recombination and re-elaboration embedded in knowledge sharing promote idea generation and application. As a result, tacit knowledge sharing boosts team creativity (Kucharska & Kowalczyk, 2016).

## 2.8 Reward and Employee Innovative Behavior

Reward is one of the most influential factors that motivate employees to contribute to organizational performance (Aktal et al., 2012), and it is divided into two types: intrinsic and extrinsic rewards. Intrinsic rewards are those derived from the job, such as passion, autonomy, and accomplishment, whereas extrinsic rewards are the perceived importance of rewards that are not derived from the job, such as income and security. Employees are highly motivated to perform well following the system reward-performance, according to expectancy theory (Aktal et al., 2012).

De Spiegelaere *et al.* (2013) stated that installing performance related incentive systems would increase the attention of the employees to the rewards whether in terms of intrinsic and extrinsic rewards. Ramamoothy *et al.* (2005) findings were similar to Eisenberger & Rhoades, (2001) as they find empirically that rewards stimulate creativity and the innovativeness of the employees. This is supported by expectancy theory which explained that people are motivated for better work performance when the job promised worthy rewards (Malik *et al.*, 2015). Furthermore, the effect of rewards on the creative performance of employees also depends on their personal traits, which play significant role in the interpretation of the rewards (Malik *et al.*, 2015).

## 2.9 Employee Competency and Employee Innovative Behavior

Roshayati (2020) identified competency as a person required characteristic in performing a given task and it could be a capability, knowledge, skills as well as personal qualities. Therefore, employees must know what skills are defined for the tasks given and be able to match with the competencies they owned. In

relation to innovation, employee competence is a key factor in the development of new products and in adapting to market changes.

Recent studies extend the existing knowledge in employee participation by examining the moderating effect on the relationship between employee participation and outcome variables (Rafiei & Pourreza, 2013). Although there are conceptual and empirical reasons to expect that employee participation will be positively related to the employee innovative behavior. Furthermore, according to (Roshayati, 2020), employee competency is among the internal tools that support employee participation and empowerment. Hence, when considering the moderating effect of employee participation, it is assumed that the high level of employee competencies will result in a stronger relationship between employee participation and employee innovative behavior than when there is a lower level of employee competency.

## 2.10 Conclusion

In the face of dynamic, competitive pressures and the rapid development of the knowledge economy, today's organizational competitiveness demands employee innovation in processes, methods, and operations. Fast becoming a common expectation for performance, particularly in fast-growing and competitive industries, employee innovative behavior, along with its contributing factors, has become a research imperative for both scholars and practitioners.

Moreover, Innovative work behavior is embedded in factors such as motivation, trust, culture, management support and involvement. Previous studies have shaded the light on the mediating effect of innovative work behavior on knowledge management and organization performance. Consequently, the research was guided by diffusion innovation theory which agreed that new ideas are knowledge assets that needs to be adopted to enhance performance in an organization.

## 2.11 Future research

According to previous research, jobs with a certain level of complexity may present some challenges to employees, prompting them to innovate. Meanwhile, jobs with lower complexity are more efficient for employees. Thus, challenging jobs encourage employee innovation at the expense of efficiency. As a result, future research needs to investigate whether employee innovation behavior mediates the relationship between job complexity and performance.

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