

A Review of Employee Innovation Behavior

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ABSTRACT

Firstly, by tracing and combing the research literature related to employee innovative behavior, this paper condenses the employee innovative behavior based on the two dimensions of formation mechanism and influencing factors, and outlines the definition and formation stages of employee innovative behavior. Then this paper clarifies the influencing factors of employee innovative behavior from the individual, organizational and social dimensions, and finally summarizes the research reflections and puts forward some future research suggestions for the existing research limitations.

KEYWORDS

Employee Innovative Behavior; Formation Mechanisms; Influencing Factor

1. INTRODUCTION

Over the past 20 years, China has moved from a scientific and technological catch-up mode to a scientific and technological innovation mode, and from the second to the first scientific and technological front in the world, realizing leapfrog development. In this process, it has become a consensus that great importance should be attached to innovation-driven development. From the 18th CPC National Congress put forward the "implementation of innovation-driven development strategy", to the 19th CPC National Congress put forward the "innovation is the first driving force to lead the development", to the 19th CPC Fifth Plenary Session emphasized the "adhere to the central position of innovation in the overall situation of China's modernization and construction", to the 19th CPC Central Committee emphasized the "innovation in the modernization and construction of China". To the Fifth Plenary Session of the 19th CPC Central Committee emphasized "insisting on the core position of innovation in the overall situation of China's modernization and construction", and even the development of the "14th Five-Year Plan" period and the longer period, which put forward more urgent requirements for scientific and technological innovation. The report of the 20th Party Congress puts forward that innovation is the first driving force, and we should speed up the implementation of the innovation-driven development strategy, accelerate the realization of high-level scientific and technological self-reliance and self-reliance, and at the same time adhere to the core position of innovation in the overall situation of China's modernization and construction. Innovation is the driving force of enterprise development and the fundamental means for enterprises to improve their competitiveness. The strongest vitality of the enterprise lies in scientific and technological innovation, and the key to scientific and technological innovation in the people, in essence, the main body of the people, by proposing new ideas for the development of the enterprise and then put into practice the process. Employees are the micro subject of enterprise innovation [1], employee innovation behavior is the source of enterprise innovation, development and competition [2], affecting the overall innovation effectiveness of the enterprise, how to stimulate the innovation behavior of employees has become the focus of the community.

In the past domestic and foreign studies on employee innovation behavior, from studying the characteristics of employee innovation (Barron, 1955), gradually penetrating into the social psychological dimension of employee innovation behavior (Amabile, 1983), and then combining with the social environment, enterprise environment, social interpersonal relations [3, 4] and other aspects, further explaining and studying the employee innovation behavior. Scholars' research on employee innovative behavior basically centers on the dimensions of influencing factors and formation mechanism. For the research on influencing factors, some scholars point out that employee innovative behavior is jointly contributed by the resources, skills and work environment owned by employees [5], which is affected by individual innovative quality, i.e., self-cognition, personality traits, internal drive, etc., as well as external situational factors, i.e., leadership style, organizational identity, incentive mechanism and so on. Employee innovative behavior is the result of the combined effect of external situational factors and internal individual factors [6], both of which play a role together in order to effectively promote the occurrence of employee innovative behavior. Although the current research has analyzed the innovative behavior of employees from the aspects of organizational atmosphere [4], corporate environment [7], and employee personality [8], and pointed out the mediating effect between some influencing factors and their mutual regulation, it has not formed a systematic theoretical system. In addition, most of the existing research on the mechanism of employee innovative behavior, from the perspective of influencing factors, explored the influence mechanism of different factors on innovative behavior, but the internal formation mechanism of employee innovative behavior at the micro level still needs to be further studied. In summary, based on the existing literature, this paper focuses on the formation mechanism of employee innovative behavior, recapitulates the definition of employee innovation from a more comprehensive perspective, then classifies and synthesizes the influencing factors of employee innovative behavior, and finally summarizes the research conclusions and puts forward suggestions for future research.

2. ANALYSIS OF THE CONCEPT OF EMPLOYEE INNOVATION BEHAVIOR

The concept of Innovation Behavior began in the 1970s, and from the perspective of the innovation subject, Innovation Behavior includes individual innovation, team innovation and organizational innovation. Employee Innovation Behavior (EIB) is a concept related to employee creativity, which refers to the generation of novel and potentially valuable things or ideas, including new products, services, manufacturing methods, and management processes, etc. (Amabile, T. M. 1988), and Employee Innovation Behavior is a behavioral combination of discontinuous activities related to innovation, including individual cognition of problems and generation of new ideas, efforts to seek innovative ideas. The employee innovation behavior is a behavioral combination of non-continuous activities related to innovation, including the individual's perception of the problem and the generation of new ideas, efforts to seek support for the innovation idea and the establishment of an innovation alliance, and the practice of the innovation idea, and other phases.

The definition of employee innovative behavior in existing research is broadly differentiated into two categories. One is "process" oriented, such as Kahn that employee innovative behavior is the process of making creative changes in employees' feelings, perceptions, and behaviors; Drazin et al. [9] focus directly on individual behaviors, and summarize the definition of employee innovative behavior as the process of employees' innovative practices; George & Janssen et al. [10, 11] consider EIB as the process of generating or implementing new ideas to improve self-performance or to improve the performance of the employees. Amp & Janssen et al. [10, 11] believe that EIB is the process by which employees generate or implement new ideas in order to improve their self-performance or to solve work problems; Shin et al. [12] believe that employees' innovative behaviors refer to the behaviors of generating innovative ideas or solutions to problems in the course of their work, and trying to put them into practice. The other category is "result"-oriented, such as Shalley & Gilson [13] that employee innovation is a new idea for the organization's products, services, etc.; Susanne G et al. [5]

that employee innovation is the behavior of putting innovative ideas into practice to form products or services. ESCRIBÁ-CARDA N et al. [14] believe that the innovative behavior of employees is to produce, promote and practice novel and meaningful ideas, products, processes, services or methods at work; ESCRIBÁ-CARDA N et al. [14] believe that it is the behavior of generating creative ideas or proposing innovative solutions to solve the problem, and creating new products and new services in practice. At present, the academic community is mostly from the process perspective to define employee innovation behavior, while the domestic definition of the definition of employee innovation behavior is not clear, from both perspectives definition can be used as a presentation of innovative behavior.

Domestic and foreign scholars still disagree on the division of the formation stages of innovative behavior. Shirley Wang et al. [15] Most scholars divide innovation into two stages: idea generation and idea implementation; Kheng & Mahmood (2013) divide individual innovation behavior into four stages, namely: generating ideas, seeking support to realize ideas, producing innovative products, and commercializing products; Kleysen and Street (2001) divide employee innovation behavior divided into five levels: seeking opportunities, generating new ideas, evaluating new ideas, supporting new ideas, and applying new ideas; Zhao Bin et al. [16] made a more detailed delineation of the mechanism of generating employee innovative behavior, which can be divided into motivation generating and behavior generating in terms of the formation stage; and can be divided into internal value-driven and external value-driven in terms of the formation path; George et al. [10] further pointed out that employee innovative behavior is not only the most important factor of employee innovation, but also the most important factor of employee innovation, which is also the most important. [10] further pointed out that employee innovation behavior is a multi-stage process, the first is to recognize the problem, and then is to generate ideas to proactively seek paths to solve, and ultimately will be the productization of the ideas; Zhang Hui-Qin et al. [17] summed up the innovative behavior of the employees into three stages, namely, innovative idea generation, seeking organizational support and innovative idea implementation, and the final product launched to complete the innovative behavior.

Comprehensive scholars at this stage of the definition of employee innovation behavior and structure of the definition, this paper based on the analysis that: employee innovation behavior refers to the employees in the specific work in order to solve problems, generate new ideas and put them into practice in the process, and the final formation of the product or service is also an embodiment of the form. Its specific structure can be summarized into two stages, namely, generating innovative ideas and implementing innovative ideas.

3. FACTORS INFLUENCING EMPLOYEE INNOVATION BEHAVIOR

Scholars have conducted a great deal of research on how to stimulate employees' innovative behavior mainly based on the theoretical foundations of social exchange theory, role theory, social cognitive theory, self-determination theory, and dynamic ability theory. By analyzing the existing related research literature, this paper combs and classifies the factors affecting employees' innovative behavior into individual, organizational and social factors.

3.1. Individual Factors

Existing studies mainly include individual cognition, personality, and individual motivation, value orientation, etc., and specifically study the influence of such relevant factors as individual efficacy, self-differentiation, identity, and work motivation [18, 19]. Employee innovative behavior is considered to be an extra-role behavior, which is a spontaneous behavior of the employees, therefore intrinsic factors have a great influence on innovative behavior [20]. Research in this field has achieved certain results, specifically: Wang Shenghui and Yi Ming [8] analyzed the mutual influence role of the five factors of personality in the process of generating innovative behavior of employees;

Mom et al. [21] believe that the higher the initiative of the employee, the more active they are in learning new things, and the more they can solve the work problems in a creative way; Individual motivation is the intrinsic motivation of employees' innovation, and Lu Xiaojun et al. [22] found that internal motivation plays an important role in the generation and implementation of innovative ideas, while external motivation is mainly reflected in the implementation stage; Social cognitive theory suggests that different levels and ways of cognition will lead to cognitive differences among employees, and individual cognitive differences will bring about innovative activities at different levels; Individual efficacy refers to the measurement of employees' results in completing a certain task. When employees engage in creative activities, a high level of innovative self-efficacy can help them better find solutions to problems [23] ; Some scholars have used fuzzy set qualitative comparative analysis (fsQCA) to explore the complex driving mechanism of creativity, innovation self-efficacy, constructive responsibility perception, performance pressure, leadership creativity rejection, and game dynamics on the complex driving mechanism of employees' innovation by matching the linkage effects of multiple antecedent conditions [24] . In recent years, there are also studies combined with Chinese contexts, such as Zhang Yamin et al. [25] studied the relationship between medieval thinking and employee innovation behavior, pointing out that there is an inverted "U"-shaped relationship between medieval thinking and employee innovation behavior.

3.2 Organizational Factors

At the level of organizational factors, scholars have focused on exploring the influence of leader type, organizational culture and organizational structure characteristics. Specific influencing factors include factors such as leadership style, organizational climate, and job characteristics, and some scholars have proposed factors such as impression management motivation from the perspective of social psychology. Self-determination theory points out that when an individual's basic needs are satisfied in the external environment, the internal motivation will be stimulated to produce innovative behaviors, thus organizational factors are important influences on employees' innovative behaviors, which are analyzed as follows:

First, leadership styles mainly include servant leadership[6], authentic leadership[26], ethical leadership[27] and coaching leadership[28], transformational leadership[29], inclusive leadership[30], and self-sacrificing leadership[31] styles. Current researchers have studied numerous organizational level influences and most of them believe that effective leadership behavior in an organization is one of the most important influences on motivating employees to innovate [3]. The role of corporate leadership style in stimulating employees' innovative behavior is getting more and more attention. Leaders are the important relations of employees in the organization, and different leadership styles will affect the individual employees' cognition and emotion, which will have an impact on employees' innovative behavior [32]. Secondly, organizational climate is the overall perception of employees on the degree of support for innovation in their work environment, which will have an important impact on employee attitudes, abilities, behaviors and performance[33]; Organizational climate for innovation is also an important antecedent variable for employee innovation behavior, which has an impact on innovation behavior by enhancing employees' psychological empowerment [34] , and the sense of organizational support [4] , and so on, and when the employees are making choices for innovation behavior, the team's support and trust will have an impact on their innovative behavior. When employees make innovative behavioral choices, team support and trust can play the role of "catalyst" and promote employees' innovative behavior [32]. Third, different job characteristics have different impacts on employees' innovative behaviors, which are reflected in different types of work tasks [35], work styles [36], work autonomy and complexity [37] and so on. Chen Hao [38] believes that moderate work pressure and complexity will promote innovative behavior to a certain extent, and work autonomy will bring employees flexible workspace, so that employees can find their own way of problem solving, thus promoting innovative behavior; Zhang Mengtao et al. [39] from the "challenging" and "threatening" aspects constructed a dual-

mediation model of expected workload affecting employee innovation from the perspectives of "challenging" and "threatening", and explored the relationship between expected workload and employee innovation behavior.

3.3 Social Factors

From the perspective of social factors, current scholars mainly put forward social networks and interpersonal relationships, government policies and other related factors. Employee creativity cannot be generated without communication and interaction with others. Based on the social exchange theory, scholars have explored the intrinsic connection between leader-employee relationship, social network and employee innovation. Existing studies indicate that social networks provide employees with broader opportunities, which in turn have a certain impact on employee innovation behavior. Network relationships within employee organizations largely determine the emergence of individual innovative behaviors, and these network relationships provide the necessary inspiration, information, resources, and support for innovation, which help employees develop promote and realize new ideas [40]. Some scholars have also explored how employees' exposure to AI anxiety affects the innovative behavior of new generation employees based on the current context of digital intelligence development [41]. In addition, there are also some studies on the impact of the social environment, such as economic policies and regional complexity, on the innovative behavior of employees.

In summary, the theoretical research on the factors influencing employees' innovative behavior is very rich, and the research on the influencing factors of employees' personal factors, team factors, external factors of the enterprise and internal factors, etc., and most of them are concentrated in the group influence and the internal organization, especially the comparative research on the rich study of variables such as: motivation to innovate, the organizational innovation atmosphere, and the leadership factors, etc., but for the intrinsic correlation and the mutual influence relationship between the various factors are still However, there is still a need to explore the intrinsic correlation and mutual influence relationship between the factors, and there are fewer studies that analyze the interaction effect between multiple influencing factors across levels, and need to pay attention to the comprehensive influencing mechanism between the factors at different levels.

4. RESEARCH CONCLUSIONS AND RECOMMENDATIONS

By combing the existing research literature on employee innovative behavior, this paper starts from the formation mechanism of employee innovative behavior, outlines the definition and formation process of employee innovative behavior, and reviews and summarizes the influencing factors of employee innovative behavior. First of all, there are still disagreements in the current research on the definition and formation mechanism of employee innovative behavior. Whether it is a process-oriented perspective or a result-oriented perspective, it cannot be separated from its essence, i.e., the generation of innovative ideas and the implementation of innovative ideas. Secondly, by sorting out the factors influencing employees' innovative behaviors, it is found that most of the research focuses on the three levels of individual factors, organizational factors and social factors, with individual factors including personality, personality traits, and motivation, organizational factors including leadership style, organizational innovation atmosphere, and work characteristics, and social factors including social network relationships and government policies.

Current research topics mainly focus on popular research points such as leadership style, organizational climate, individual motivation, etc., and there are fewer studies on other factors such as time pressure, workplace gossip and AI development. At the same time, most of the existing studies on the interaction mechanism of individual and contextual variables are not sufficiently justified, and further research can be carried out to increase the persuasive power. In addition, most of the current research is based on the positive perspective, and more attention should be paid to the negative effects. Janssen et al. [11] have suggested that employee innovative behavior may have some negative effects

on the workflow of the enterprise or other employees, so research can be conducted on the negative effects. Finally, the future should be further strengthened in the basic research, from a more refined micro perspective to study the mechanism of employee innovation impact, which can be combined with big data to make the literature research more rich and three-dimensional. Currently, foreign studies are relatively mature, but whether they are applicable to the Chinese context of the workplace needs to be further verified, and it would be more representative if the relevant studies are combined with Chinese contextual variables such as kinship exchange employee-organization.

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