

Continuous Optimization of Enterprise Production Business Process: A Perspective of Information Empowerment

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Abstract: Based on the empowerment perspective, this paper explores the mechanism of information technology on the continuous improvement of enterprise production business processes, using the grounded theory to conduct a vertical case study of a production-service enterprise. The results show that: (1) Informatization empowerment includes three core dimensions: structural empowerment, leadership empowerment, and psychological empowerment, and presents the evolution path from structural empowerment to leadership empowerment and then to psychological empowerment. (2) The mechanism of the three core dimensions of informatization empowerment on the continuous improvement of production business processes is progressively different. Those are from the closed-loop detection improvement under the influence of structural empowerment to the authority struggle under the influence of leadership empowerment, and finally, form the empowerment consensus under psychological empowerment.

Introduction

With the development of the knowledge-based economy, empowerment has become a hot topic in human resource management research in recent years. The development of manufacturing enterprise informatization brings new vitality to empowerment [1]. Enterprise leaders should let employees work actively rather than passively. Nowadays, with the development of organizational management mode, the connotation of empowerment has been changing. Empowerment has evolved from an early focus on employee involvement in management [2] to an emphasis on the impact of leadership empowerment on employee and organizational performance [3]. Empowerment can be regarded as a multi-dimensional concept, including institutional structure empowerment, leadership behavior empowerment and employee psychological empowerment [4]. Empowerment can be regarded as a management method to activate individual employees, release their potential and improve innovative ability [5]. With the in-depth development of informatization in enterprises, the process of empowerment will inevitably be affected by informatization. There is little research on the information enabling in the production business process of enterprises. Especially in the process of the transformation from traditional manufacturing to information-based enterprises, the main contents of the business process of information-based enabling industry and how to influence the continuous improvement of the production business process of enterprises are not clear. Based on this, we use the grounded theory to conduct a vertical case study of a production and service-oriented enterprise, summarizes the main dimensions and evolution path of information enablement, and constructs the theoretical framework of the mechanism of information enabled enterprise production business process by discussing the different impact of each dimension on the improvement of production business process.

Three Empowerment ways are structural empowerment, leadership empowerment and psychological empowerment, and thus can produce different manifestations of empowerment [6]. Structural empowerment refers to the change of organizational structure and system, and the official empowerment of employees [7], to create a good atmosphere for empowerment mechanism to influence employees' management behavior [8]. Leadership empowerment is the management behavior that leaders grant employees power [9]. Leadership empowerment can enhance employees' self-efficacy to enhance their initiative and autonomy in [10]. Empowered leadership plays a better

role when employees are able to accept and use autonomy, or when employees are eager for self-control or self-management [11]. However, studies have found that sometimes employees do not perceive the established empowerment atmosphere, which leads to research on psychological empowerment. Psychological empowerment focuses on the psychological state and cognition of individual feelings.

Empowerment is influenced by decision-making, information sharing, skills development and innovation performance guidance [12]. Under the condition of perfect organizational structure and empowerment, the leader's attitude towards empowerment also determines the result of empowerment and affects the psychological perception of employees.

Based on the current theoretical research on empowerment, the frequency of information enablement is low, and there is no relevant literature on the research of information enablement and enterprise production process, and the integration of enablement theory and enterprise practice is still lack of discussion [13]. This paper deeply studies the typical enterprises in terms of informatization empowerment, tries to analyze the dynamic evolution process of informatization empowerment, and refines the core dimensions and evolution sequence.

At present, the research on empowerment theory mainly focuses on the connotation of empowerment. There are a lot of researches on the concept of different dimensions. Empowerment theory includes three dimensions: structural empowerment, leadership empowerment, and psychological empowerment. However, the specific performance of the dimension of empowerment theory in the actual process of enterprise operation is still in the theoretical discussion stage, which fails to reveal the relationship between the core dimensions of empowerment theory and the relationship between empowerment and business processes. Grounded theory is suitable for this study to explore the relationship between empowerment and core dimensions of business processes.

Method

Research Design

Without enough induction of informational empowerment knowledge, the grounded theory research method is a very necessary and suitable inductive case study method. The grounded theory is a bottom-up inductive research method, and the theory represented by the existing data is the embodiment of the final results of this method [14]. After obtaining empirical investigation data, this paper makes an inductive analysis of these data, summarizes the experience, that is, labeling, puts forward the concept of reflecting existing phenomena, summarizes categorization, understands the relationship between categories, and finally abstracts the theory [15].

Sample and Procedure

This study is an exploratory study on the core dimensions of informatization enablement and enterprise production business processes and their relationship, so the research object must be enterprise informatization and business processes have a great degree of fit. First, select a paper manufacturing enterprise in Tianjin Youyuan office alliance as the research object, focusing on the specific performance of the enterprise in different stages of information technology development production mode and business processes. As a case enterprise, Youyuan Office Alliance has the following reasons: (1) Youyuan as a highly informationized manufacturing and modeling enterprise is representative. In the decades since its founding, the company has upgraded its information systems several times, especially in late 2017, when it upgraded the latest and highest version of the Kindee K/3 Cloud system and became a benchmark user for the company. (2) The development process of informatization of friends and the integration process of informatization and industrialization is typical of two. The process of information repeated and constantly embedded in the production process of enterprises is the process we want to study, which can better help us refine the evolution process of informational empowerment and abstract the core category through the grounded theory research paradigm.

In order to improve the validity and credibility of the case study, the researcher uses triangulation method to understand the case in an all-round way, collects data and data by using a variety of techniques, and uses a variety of data sources to analyze the case. First-hand information is mainly collected by on-site observation, one-to-one semi-structured interviews, field surveys and other in-depth understanding of the internal information of enterprises. At the same time, through the understanding of partners, we collect third-party information.

Analysis based on Grounded Theory

Based on grounded theory, NVIVO11 is used to process the data and information obtained. The grounded theory has three coding processes: open coding, spindle coding, and selective coding.

At last, this article obtains seven core categories. By combing the storylines of the seven core categories and comparing them with the existing theories, this paper finds that “structural empowerment”, “leadership empowerment” and “psychological empowerment” reflect the content of information empowerment, and these three dimensions are summed up in “information empowerment” Category. “Empowerment Consensus”, “Competition for Jurisdiction “, “Closed-loop Business Detection” and “Process Improvement” belong to the content of business process improvement. Repeated these four steps form the process of continuous optimization, and ultimately achieve management innovation.

The paradigm model of “Causal Conditions-Strategies-Results” in the core category of selective coding is summarized as follows: Youyuan Office Alliance helps employees to establish the self-drive of “empowerment consensus-authority striving-business closed-loop detection-process improvement” by means of “structural empowerment-leadership empowerment-psychological empowerment”. Self-testing, self-improvement cycle, and ultimately achieve a win-win situation for enterprises and employees, the formation of management innovation.

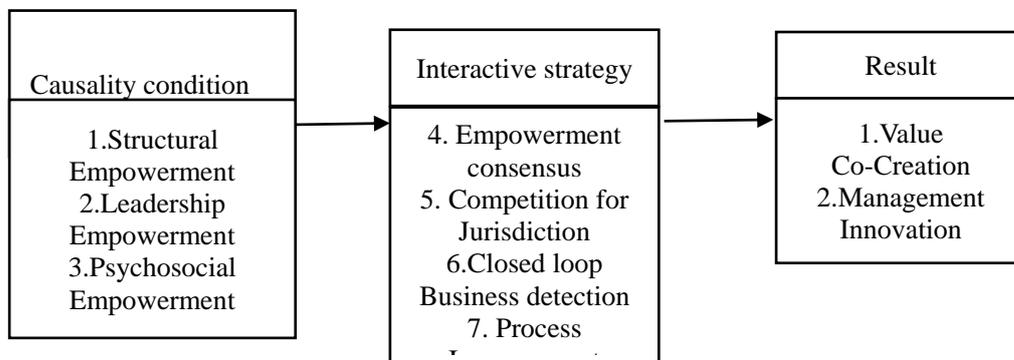


Fig.1 A paradigm model of core categories

Theoretical Saturation Testing: The person in charge of the information system has a comprehensive understanding of the development process and production process improvement of Youyuan Informatization. In the case study, firstly, the interviews of information system managers are analyzed by grounded coding, and the basic framework of the model of production business process of information-enabled enterprises is preliminarily obtained; then, the same coding analysis is carried out on other interviewees, third-party information and internal information of enterprises. There is no new category after coding, indicating that the category is saturated.

Results

Core Dimensions of Informational Empowerment

Through the grounded theory and NVIVO’s coding, it is concluded that informatization empowerment has three core dimensions, namely, structural empowerment, leadership empowerment, and psychological empowerment.

Proposition 1: Information-based empowerment includes three core dimensions: structural empowerment, leadership empowerment, and psychological empowerment. In the process of information-based empowerment, the order from structural empowerment to leadership empowerment to psychological empowerment should be followed.

Function Mechanism of Informatization and Energy Production Business Process

Case data analysis found that when the enterprise from top to bottom to establish an information-based empowerment mechanism, employees and enterprises will form a consensus on information-based empowerment, and then employees will start from bottom to top process improvement.

Therefore, it can be concluded that in the process of continuous optimization of the production process, the three dimensions of informatization empowerment act on the improvement of production process respectively. Structural empowerment acts on the closed-loop business detection and process improvement process, leadership empowerment acts on the fight for the authority of employees; psychological empowerment enables employees and enterprises to reach a consensus on empowerment, and a profound understanding of the importance of information empowerment for production process optimization. When informatization empowerment acts on the enterprise production process and ultimately achieves continuous optimization and management innovation of the enterprise production process, the win-win situation of value for employees and managers, in turn, acts on Informatization empowerment so that employees and leaders pay more attention to informatization empowerment.

Proposition 2: The business process of information-based endowment industry is represented by process improvement and closed-loop inspection under the influence of structural endowment, authority struggle under the influence of leadership endowment, and endowment consensus under the influence of psychological endowment.

In summary, it can be concluded that informatization enablement presents a dynamic evolutionary path of continuous deepening. In the process of building enterprise informatization platform and perfecting system functions, the degree of integration of enterprise business and IT is deepening, which is manifested by the role of structural enablement to process improvement needs to information system changes, and then the working of employees is generated. In order to change, it will promote the closed-loop improvement process of continuous optimization of the production process, stimulate the leadership ability to produce the strengthening of staff training, and further form the psychological ability to strengthen the effect of self-inspection and self-correction of employees for production process control nodes. As shown in Figure 2.

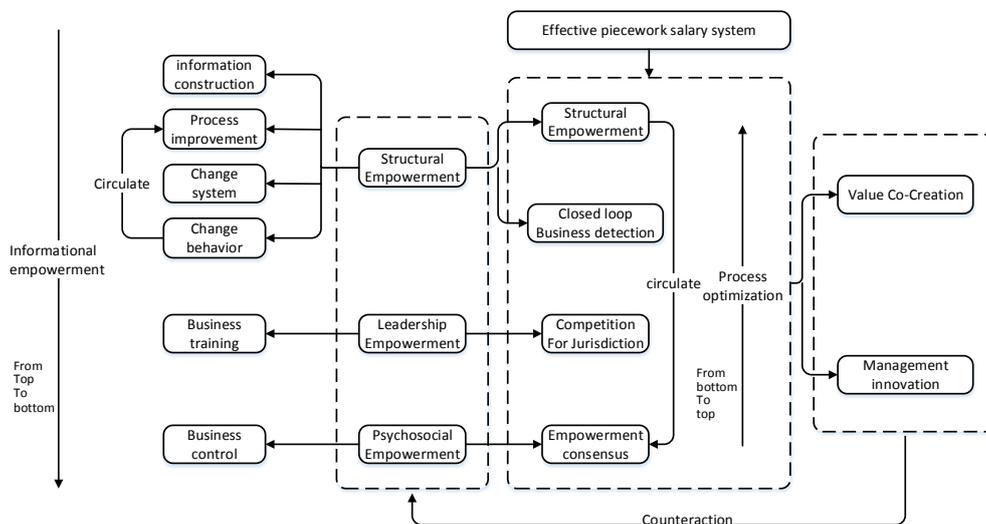


Fig. 2 Continuous optimization of the production process of informationized energy enterprise

Discussion

Through the analysis of the continuous improvement of the business process of the informatization endowment industry of Youyuan office alliance, we find that the informatization endowment has an effect on the production business process and employee behavior in turn through three aspects: structure endowment, leadership endowment, and psychological endowment. Structural empowerment establishes employee empowerment mechanism, then leadership empowerment gives training support, and finally, psychological empowerment promotes employee perceived rights, and enterprises reach empowerment consensus. This process is from top to bottom. Empowerment consensus triggers bottom-up process optimization needs, a new round of information empowerment changes employee behavior, information empowerment, and process optimization is a cyclic dynamic process. Process improvement and business Closed-loop Detection under the influence of structural empowerment, authority struggle under the influence of leadership empowerment, and empowerment consensus under the influence of psychological empowerment jointly form a situation of continuous process optimization and management innovation. The new management model gives employees more rights and options, which in turn acts on employees' psychology. Empowerment forms a new cycle.

This research obtains the core dimension of empowerment and business process through the study of Friends and analyzes the relationship between the core dimension, initially establishes a complete theoretical framework of empowerment, and guides the organizational practitioners to understand the connotation and significance of informatization empowerment, which is of reference significance for the practical application of informatization empowerment in enterprises. Due to the limitation of the subjectivity of the coding process of the grounded theory, and because this paper only selects one enterprise for research, it is necessary to select several enterprises for verification in the future research, and to compare the research data repeatedly and code comparison, to further improve and test the conceptual model.

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