

Research on the Formation Mechanism and Competitive Advantage Effect of Enterprise Informatization Leader

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ABSTRACT: With the gradual popularization and maturity of the Internet, the emergence and application of emerging information technologies such as the next generation Internet, Web2.0, mobile computing, cloud computing and the Internet of Things, more enterprises and individuals join in the process of digital value creation. Human society has entered a new century full of data, information and emerging information technology. Today, there is no traditional industry, there is no sunset industry, there is only continuous innovation and the subversion of the old model. There are failures every day, but there are always miracles. Every decision made by the leader determines the success or failure of the company. Based on the formation mechanism of information-based leadership and the influence mechanism of information-based leadership on enterprises' competitive advantages, this paper gives corresponding suggestions on how to improve leaders' information-based leadership and how to better improve enterprises' competitive advantages [1].

KEYWORDS: Information technology, enterprise informatization, informatization leadership, competitive advantage, IT resources, tacit knowledge

1. Introduction

Along with the increasing popularity of the Internet and mature, a new generation of Internet, web, mobile computing, cloud computing, Internet of things, such as the emergence of new information technology (AdvancedInformationTechnology) (1) and the application, make more enterprises and individuals to join to the digital value creation process. It can be said that information technology has completely changed the way people live and work, and created a new era. Many scholars call this new social form, from agricultural society to industrial society, and then to industrial society, the "information society", and emphasize the ubiquitous information, the impact on social productivity and production relations. In modern society, [2] the development of information technology speeds up the generation and diffusion of information, which makes the scale of data in the world reach an unprecedented scale. On the one hand, with the passage of time, the increasing mass data puts forward higher requirements for data storage capacity; The CEO, as the name implies, is the CEO, also known as the "general manager", whose responsibility is to decide all the important matters of the company, and is also

the public face of the company. Generally speaking, CIO and CEO are about the decision of enterprise informatization, CEO must also have a rational view of information, the correct construction of enterprise informatization leadership, therefore, the study of information leadership should also look at enterprise informatization from the perspective of CEO. In terms of improving one's information-based leadership ability,[3] to improve one's information-based leadership ability, one must pay attention to the tacit knowledge of "internal cultivation", pay attention to "learning by doing" and pay attention to learning, so as to improve one's information-based leadership ability. On the one hand, leaders should promote the development of tacit knowledge from both individual and organizational aspects. At the same time, in addition to actively participating in the informatization construction of enterprises, leaders should always adhere to the attitude of "learning" and do "learning". In fact, the knowledge and experience of leadership can only be transformed into real information-based leadership under the dual guidance of theory and practice[4].

2. Review of relevant theories

The theory of information-based leadership is a brand new subject, which is the cross subject of enterprise informationization and leadership science. This paper points out that, as informationized leadership is a kind of leadership, many theories and methods of leadership research can be used for reference to the research of informationized leadership. On this basis, this paper puts forward a leadership theory based on information technology, and on this basis, puts forward a leadership theory based on information technology. This topic breaks through the defect of only focusing on CIO and other single leaders in the past, and theoretically puts forward the concept that "information-based leadership should be reflected in the senior management team including CIO". And regards information-based leadership as a kind of "ability", which requires in-depth research on the theory and literature about ability. In view of the fact that there is no unified definition of information-based leadership (including the use of Chinese and English words) in domestic academia, this project intends to review the existing literature in order to point out the direction for future research. In this chapter, this paper first introduces the basic concept of enterprise information-based leadership, then introduces the formation mechanism of enterprise information-based leadership, and discusses the formation mechanism of enterprise competitive advantage [5].As shown in Table 1:

Table 1: Six characteristics of a leader

Personal characteristics	character	Social characteristics	Social background	Work-related traits	Intelligence and ability
In good spirits	confidence	Interpersonal skills	education	self-motivated	smart
Full of vitality	enthusiasm	Cooperative spirit	liquidity	Sense of responsibility	Cognitive power
	Honesty and integrity			Be tenacious in the face of difficulties	Have knowledge
	Desire to lead				sense
	independence				Decision-making power

It is not enough to explain leadership behavior simply from the perspective of personality characteristics, so people begin to study leadership behavior from the perspective of leadership behavior. The behavioral theory of leadership states that everyone has the potential to be a good leader if they act in the right way. Kurt Lewin and Lippitt Ronald from the University of Iowa were the first people to study leadership behavior, and they divided leadership behavior into Autocratic and Democratic according to its types. Autocratic leaders concentrate all power on themselves and use their positions to gain power; Democratic leadership empowers subordinates, encourages them to participate, and gains influence by earning their respect. Most previous studies divided leaders into "authoritarian" or "democratic" types [6]. However, Tannenbaum and Schmidt's in-depth study found that the power of leaders and the participation of employees may constitute a continuous set, that is, the power of leaders is between "authoritarian" and "democratic" types. As shown in Table 2:

Table 2: List of topics for research on leader behavior

school	human-oriented	Task-oriented
OhioStateUniversity	Consideratestructure	Activestructure
UniversityofMichigan	Employee-centric	Workcentered
UniversityofTexas	Careaboutpeople	Careaboutproduction

In the absence of a universal leadership trait and behavioral trait, researchers have sought new areas of study. Over the years, researchers have tracked leaders and shown that leaders' behaviors change with the changes in their environment. That is to say, successful leaders often adjust their leadership behaviors according to the changes in their environment to adapt to the environment. Only in continuous practice can leaders continuously enhance their adaptability and change ability. So the basis of this theory is: what works in some situations, works in others, but works in others. Contingency refers to the dependence on certain conditions. For leaders, the most important contingency factors are environment and followers. Environmental variables include background, structure, external conditions, etc. Meanwhile, the needs and maturity of followers also have a great impact on leaders. Power change seeks to describe the environment and the characteristics of subordinates, and to explore effective and successful leadership styles [7].As shown in Table 3:

Table 3: Development history of leadership theory and representative scholars

From the late 19th century to the early 20th century	Around the 1940s	Around the 1960s	Since the 1980s
Trait theory of leadership	Leadership behavior theory	Contingency theory of leadership	New leadership theory
Stogdill & Bass Krikpatrick & Locke	Kurt Lewin & Lippitt Ronald Andrew Halpin & Winer James Daniel Katz & Maccoby Nathan Blake, Mouton &Bidwell	Fielder Hersey, Blanchard & Natemeyer Robert House Victor&Jago	Green & Mitchell Warren Bennis & Nanus Burt Hollander Burns Bass Avolio Thompson

Since Joseph Choupette in *Capitalism, Socialism and Democracy* (1942) and Edith Penrose in *The Theory of Firm Growth* (1959) emphasized the importance of firm competence, people's understanding of firm competence has gradually deepened. As for the definition of enterprise capability, there are many definitions such as enterprise capability, organizational capability and organizational capability. In fact, the enterprise competence theory mainly introduces the classical enterprise strategic management theory into the theory and way of thinking of economics, and makes a good explanation and prediction on the source and development of enterprise competitive advantage. Especially in the 1980s, due to the constant changes in the external environment, the role of enterprise competence theory in obtaining competitive advantages has been paid more and more attention by the business community and academia. After nearly 30 years of development, the current enterprise competence theory has gradually formed four different theoretical systems, namely, resource-based theory, core competence theory, knowledge-based theory and dynamic competence theory. Since 2000, the number of related papers has changed greatly, and since 2005, the number of papers has increased. Since 2000, the rapid development of new information technology represented by the Internet has attracted the attention of many scholars. Especially since 2013, there has been a surge of research on information-based leadership, with 48 literatures retrieved in 2013 and 2014 alone. As shown in Figure 1:

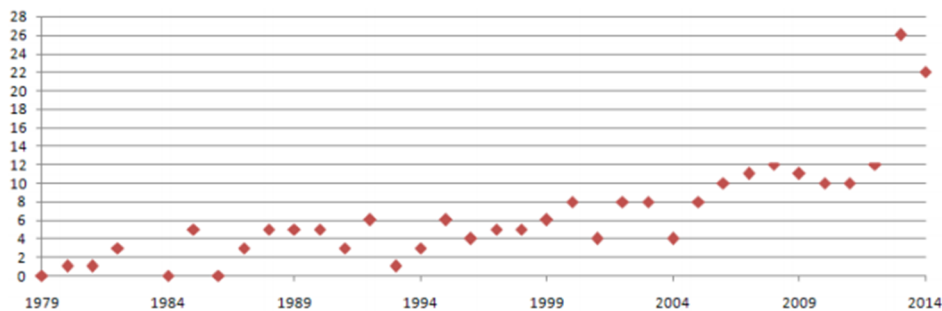


Figure 1: Distribution of literature quantity of foreign journals/conferences from 1979 to 2014

In the early stage of IT application, CIO led IT department, mainly responsible for providing various hardware, software, network and other services for enterprises, its focus is to achieve a specific business management of the electronic, or improve office efficiency. IT application activities are scattered in different departments, forming an "information island". Data specifications among different departments are inconsistent, and unified data reports cannot be formed, which brings challenges to IT application activities. At this stage, it is difficult for the CIO to provide comprehensive, accurate and timely information to the senior management team, or even to participate in the decision-making and budgeting of the senior management team. At this time, the CIO is more to the normal operation of IT equipment played a guarantee role.

3. Empirical research on the formation mechanism of enterprise informatization leadership

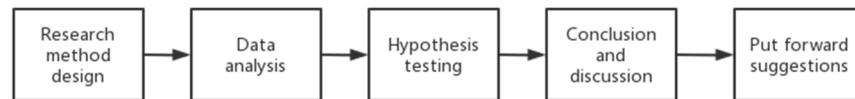


Figure 2: Research ideas of this chapter

As shown in Figure 2, All the variables included in the paper should try to use classical topics that have been proved correct by scholars. If there is no scale for reference, we will use Churchill's scale program (1) and compile it ourselves.

There are 11 variables in formation mechanism model of informatization leadership, including IT technical resources, IT human resources, IT relationship resources, professional background, experience, organizational culture, information literacy and informatization consciousness, informatization strategic decision-making ability, informatization organization coordination ability, informatization promotion and control ability, informatization resource guarantee ability. In Section 3.4.2, the measurement of the last five variables (five dimensions of information-based leadership) is described in detail and the corresponding measurement scale is obtained.

The questionnaire used in this paper mainly includes: the measurement of IT resources, the measurement of tacit knowledge, the measurement of information leadership, the measurement of enterprise basic information. In addition to the job title and company profile of the person who filled out the questionnaire, all responses were made using the Likert - five level scale. "To" very does not comply with the "1", "2" of "is not in conformity with the" to "general", "3" "4" to "meet", "5" to "very accord with". The results showed that the internal consistency of level 5 scale was better than that of level 6 and 7 scale.

4 CONCLUSION

This paper analyzes the role that leadership should play in the process of enterprise informatization, and then defines its connotation. On this basis, the formation mechanism of enterprise informatization leadership and the influence mechanism of competitive advantage are explained and demonstrated by combining theoretical modeling and empirical analysis. Mainly completed the following aspects of work:

- (1) Summarizes the research status of information leadership at home and abroad. After consulting a large number of literature on information-based leadership, the author chooses 231 papers on information-based leadership, and makes an in-depth discussion on these papers.
- (2) The conceptual model of IT leadership is discussed. On the basis of leadership theory and competence theory, this paper explains the concept of information-based leadership, and deeply

analyzes the concept connotation of information-based leadership from the perspective of information-based process and different leaders' perspectives. Finally, it puts forward the concept model of information-based leadership and gives the measurement scale of information-based leadership.

(3) On this basis, the functional mechanism of enterprise informatization leadership is proved. On this basis, this project constructs the functional mechanism model of enterprise informatization leadership from three aspects: antecedent analysis, internal cause analysis and process analysis.

(4) On this basis, it further verifies the influence mechanism of information-based leadership on enterprise competitive advantage. On this basis, this project will take enterprise core competence supported by IT as the mediating variable and environmental dynamics as the moderating variable to build a mechanism model of the impact of enterprise core competence supported by IT on competitive advantage.

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