Platform Design and Algorithm Tracking for Empirical Analysis of Team Cognition and Enterprise Performance in the Background of Big Data

Jin Xiaolei

Shanghai Jianqiao University
Shanghai,China,

201306

Abstract:As an important form of organizational decision-making, team decision-making has always been the focus of academic circles. This article discusses the relationship between cognitive characteristics, decision-making process and decision-making performance of team decision-making, and the explicit human capital and implicit human capital of the executive team, which are reflected in the two research levels of external representation and internal drive, affect the formation and development of corporate performance. improve. Combining the two research levels, taking team cognition as a bridge and creatively dividing it into rational cognition and perceptual cognition, a more comprehensive theoretical model of the relationship between human capital and enterprise performance of the executive team is established.

1. INTRODUCTION

Since the reform and opening up, my country's private enterprises have developed rapidly, and their status in the national economy has become increasingly important. It has changed from a supplementary position in the past to an important component and an important force, but a considerable number of private enterprises have developed to a certain stage. The research on the relationship between the human capital of the executive team and enterprise performance has always been paid much attention by the academic circles. Existing research differs according to the level of research on the human capital of the executive team. Psychologists and behaviorists believe that even though the importance of the environment is recognized, it is people, not other entities, who ultimately make decisions in a business. Based on the research results of related theories such as high-level echelon theory, environmental cognition, dynamic competition, and team fault, this study analyzes the intermediate process and external impact of environmental cognition of the senior management team on enterprise performance.

at the boundary conditions. The domestic research on the theory of top management team is based on and. On the basis of the research on the "Top-level Echelon Theory" proposed in 2009, the research on the top-level management team in my country is still relatively lacking. In the decision-making process of the senior management team, the discussion among the members enables the team members to better understand the decisions made, which helps to improve the sense of identity and responsibility for the implementation of the decisions. At the same time, a brand-new intermediary variable, team cognition, is introduced to establish a complete and stable relationship model between human capital, team cognition and enterprise performance of the executive team, in order to fill the research gap in this field. ,.

The information distribution types are divided into three categories: complete, organized and unorganized. But under these three conditions, the sum of the task information held by the individuals in the team is complete. The research found . Wei Liqun and Wang Zhinian summarized the characteristics as members' average education level, average tenure, average age, and the heterogeneity of these variables. Wu Jianqin has proved that the tenure of the top management team has an impact on corporate performance through surveys and data analysis. Starting from the integration framework of the senior management team's environmental cognition and competitive behavior, and in-depth analysis of the internal mechanism and boundary conditions of the senior management team's impact on enterprise performance, it can not only theoretically clarify the impact of senior management's environmental cognition on enterprise performance. [14]. .

The impact of corporate actions and instruments. Although team members will have conflict of views and differences of opinion in their understanding of the problem, which will lead to cognitive conflicts, but will also obtain more information, be more likely to accept collective decisions, and improve their ability to make decisions. positivity in execution. At the same time, it provides theoretical inspiration for how the senior management team can comprehensively improve their own human capital, from the perspective of the team, so as to improve enterprise performance. Cognitive ability refers to the ability of decision-making teams and individuals to identify and use information useful for decision-making from complex and changing environments. [19].

Therefore, the composition characteristics of different team members and the different interaction methods between members will have an impact on the efficiency and effectiveness of team decision-making. Following this logic, many scholars have attempted to explore the impact of the composition of the executive team and its operation process on organizational output. This paper firstly states the practical background, theoretical background, research content, and

research significance of the research, and systematically sorts out the relevant domestic and foreign literature and research results, and proposes on the basis of clarifying and also commenting on existing research results. Out of the senior management team environmental awareness.

2. THE PROPOSED METHODOLOGY

2.1 The Platform Design and Algorithm Tracking

The size of the team, the average age of the team, the average education level of the team, the average annual salary of team members, and the average team tenure of team members. Many scholars have found through empirical analysis that the individual attributes of managers can indeed stimulate enterprises to implement diversification strategies and contribute to the improvement of performance. However, with the in-depth research, scholars' research results have gradually appeared inconsistent. In this study, the principal component analysis method was used to evaluate the scale of decision quality, and the rotation method of maximizing variance method was used.

It is believed that the human capital of the senior management team is to serve the needs of the enterprise, including innate qualities and acquired by the joint investment of the enterprise and individuals, which can create lasting benefits for the enterprise and has economic value. Cognitive conflict causes teams to discuss more, apply more strategies, explore more solutions, and think about problems from multiple perspectives. Decision-making performance is generally better than teams that lack cognitive conflict. Among them, explicit human capital is defined as the external knowledge, work ability and political orientation condensed in the personal and organizational relationship formed by members of the senior management team through acquired investment, which can be materialized into goods and services, and thereby obtain benefits the value of it.

2.2 The Empirical Analysis of Team Cognition and Enterprise Performance

Democracy of decision-making mainly means that decision-making members have equal opportunities to obtain relevant information, have equal status in the discussion process, and bear the same important responsibility for decision-making results. After statistical analysis, this paper obtained the path coefficients in the research model, and all passed the test, which further confirmed the causal connection between the variables. At the same time, it can be seen from the path coefficient shown in Figure 2 that in the impact of cognitive conflict on enterprise performance, the two variables of decision-making commitment and decision-making quality play a mediating role. In order to obtain the data required for the research of the thesis, this paper selects the listed companies in the power industry as the sample.

The data required in this paper include the performance of listed companies and the basic information of the senior managers of listed companies. Qualitative research mainly analyzes the diversity of team members' age, tenure, educational background, and professional experience. This research field has achieved fruitful results through the painstaking research and efforts of many scholars. However, different scholars have achieved great results. The inconsistency of the research results of this theory has led to a bottleneck in the related research on this theory. This paper uses the senior management team of 89 private enterprises as a research sample to explore the relationship between

cognitive conflict and corporate performance, and introduces two mediating variables, decision quality and decision commitment, to explain the impact of private enterprise executive team cognitive conflict on cognitive conflict.

2.3 The Considred Backgrounf of Big Data

To be able to clearly understand the current status of research on the heterogeneity of senior management teams, this paper, on the basis of reviewing relevant literature, sorts out the existing research in this field from the age, tenure, educational background and professional experience of the senior management team. □ and show. Design and measurement of cognitive characteristics. To measure the characteristics of decision-making information distribution, we measure information load, degree of information sharing, team size, and discussion style (structured and unstructured). The relationship between explicit human capital and team cognition. The main difference between rational cognition and perceptual cognition lies in the different processing methods for input, which is actually an extension of the perspective of the cognitive faction of the executive team. Scholars have drawn different conclusions based on different theories on the impact of team.

Observing the correlation analysis table between the above variables, we can see that most of the correlation coefficients between the variables are greater than 0.3. Based on this, rational cognition is obviously important to the long-term performance of enterprises, such as the improvement of market share and the improvement of social influence. It is more obvious than the short-term performance of the enterprise. While perceptual cognition can make up for the deficiency of rational cognition in timeliness. This paper mainly examines the relationship between the cognitive characteristics of team decision-making, decision-making process and decision-making performance. The statistical results show that the distribution characteristics of decision-making information have a positive and significant impact on the interaction between decision-makers in the decision-making process.

3. CONCLUSION

The main contribution of this study is to explain the relationship between the cognitive characteristics of team decision-makers, decision-making process and decision-making performance from an empirical point of view, making up for the lack of previous studies that only focus on theoretical and conceptual models. This study is limited to the method of mathematical statistics.

4. REFERENCES

[1]Meng Xianhang. The influence of TMT environmental cognition on competitive behavior and corporate performance [D]. Fuzhou University, 2017.

[2] Kong Jiarong. Research on the relationship between transformational leadership and corporate performance in the context of big data [D]. Northwestern University.

[3] Shi Shenglin, Chen Qi, Zhang Jing. The influence of executive team's cognitive style on technological innovation: An empirical study based on Chinese manufacturing enterprises [J]. Science Research, 2011, 29(8):7.

[4] Guo Feng, Zou Bo, Guo Jinyu, et al. Research on the mechanism of corporate behavior on innovation capability and corporate performance in the big data environment [J].

Science and Science and Technology Management, 2017(4):11.

[5] Xing Junbo. An Empirical Analysis of Human Capital, R&D Investment and Enterprise Performance of Enterprise Management Teams [J]. Managers, 2017(21):192.

[6] Yu Qiuju, Shen Yuanyuan. An empirical analysis of China's digital economy and e-commerce under the background of big data [J]. Journal of Shangqiu Normal University, 2022, 38(6):4.

[7] Chen Xueguang, Yu Hong, Fan Lijun. Overseas embedded characteristics, knowledge search and innovation performance of R&D teams: An empirical study based on Zhejiang high-tech enterprises [J]. Science Research, 2010(1):10.

[8] Xue Jie. Human capital characteristics of senior management team, R&D investment and corporate performance [D]. Shanxi University of Finance and Economics, 2015.

[9] Yuan Qiao. An empirical study on the relationship between individual-team fit, team atmosphere and team performance [D]. University of Electronic Science and Technology of China, 2016.

[10] Kong Jiarong. Research on the relationship between transformational leadership and corporate performance in the context of big data [D]. Northwestern University.

[11] Mu Gang, Yuan Xianzhi. An empirical study on the internal credit rating of enterprises under the framework of big data [J]. Chinese Journal of Systems Engineering, 2016, 031(006):808-815,849.

[12] Long Huanyu, Zhong Liping. High-quality development of the online fitness industry: Opportunities, Practices and Approaches——Based on the double case analysis of SCP paradigm.

[13] Li Shu, Huang Hao, Ge Chong, et al. Analysis of the current situation of the new economic development situation of "live broadcast with goods" under the background of "Internet +" - taking the citizens of Chaohu City as an example [J]. Progress in Applied Mathematics, 2022 , 11(6):8.

[14] Liu Yingzhen. Research on the relationship between social capital, knowledge sharing and knowledge innovation performance of R&D team——Based on the empirical evidence of high-tech enterprises in central Jiangsu [D]. Yangzhou University.

[15] Zhai Wenjuan. An empirical study on the relationship between team leader empowerment behavior, team psychological empowerment and team performance [D]. Inner Mongolia University of Finance and Economics.

[16] Guo Yunwu. Research on the relationship between two-dimensional capabilities and performance of digital transformation of small and medium-sized enterprises [D]. Zhejiang University, 2018.

[17] Li Yuan. Research on the effect of TMT heterogeneity and ownership concentration on corporate performance of small and medium-sized enterprises on the Growth Enterprise Market. Inner Mongolia University of Finance and Economics, 2019.

[18] Zhou Yanlin, Liao Junyu. Exploring the effect of ASEAN information dissemination based on Weibo platform under the background of big data--Empirical analysis of five official Weibo platforms for ASEAN information dissemination [J]. Journal of News Research, 2015 (4): 2.

[19] Fu Ting. Research on algorithm "black box" and algorithm accountability mechanism.