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Top Executives' Experience and Corporate Innovation: A Literature Review

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ABSTRACT
Corporate innovation is a vital factor in promoting the development of the capital market. This study examines the association between top executives' early life experience and corporation innovation behaviour. First, the paper stores the existing literature relating to the impact of CEO characteristics on corporate governance and market performance. Second, the paper analyses the factors which may influence corporate innovation behaviour. Then, the study enumerates the studies concerning the link between top executives' early life experience and corporation innovation behaviour. Finally, based on the above literature review and organization, this study summarizes the shortcomings of the existing literature and give some possible future research directions.

Keywords: *CEO's early experience, Corporate innovation, Corporate development, Top Executives.*

1. INTRODUCTION

Currently, the world is witnessing the tendency of economic globalization and regional economic integration. Relatively speaking, globalization in the world is closely related to the financial background, just like a fuse. And it is a great opportunity and another challenge for enterprises, among which enterprise innovation is a breakthrough. The development of the world economy and the improvement of the level of enterprises themselves are inseparable from enterprise innovation. It is crucial to occupy the leading position of market competition by distinguishing organic and unfavourable factors. More importantly, science, technology, and innovation play an important role in improving social productivity and the comprehensive strength of a country, while enterprises are an important support and centralized embodiment of high-quality development. The technological progress and innovation of the enterprise can reduce the individual labour time of its products and improve economic benefits. At the same time, it can also contribute to promoting the improvement of labour productivity in the whole society and improving the overall quality of the national economy. In addition, the basic meaning of corporate innovation is to create more new systems, which is to have the ability to break through the restrictions of the enterprise itself and remove the one-day system and one-day method in the current situation to realize enterprise innovation and new opportunities in the new era. More, many of the sudden changes in enterprises are realized by scientific and technological innovation strategies to adapt to the challenging economic market. Specifically, through a survey of more than 500 senior managers, Kuratko et al. find that more than 50% of people are not good at the innovation process of the enterprise [1]. In contrast, less than 18% insist on their innovation strategy to provide a substantial competitive advantage for the development of the enterprise. Moreover, the differences between those enterprises with innovative strategies and those without previous action have been found. Secondly, Huse et al. study the closeness of the competitive environment and enterprise innovation. Through the characteristics of the competitive environment of American enterprises, they analyze the Norwegian manufacturing enterprise environment, which shows that competition and internationalization have an incentive effect on enterprise innovation [2]. Finally, by comparing rudimentary start-ups with large enterprises in existing markets, Weiblen et al. show how large technology-based enterprises use start-ups to promote the process of enterprise innovation and think about how to achieve the connection between the two markets at lower cost, faster speed, and agility, which are committed to breaking through enterprise innovation [3].

Based on the existing literature, this article explores the influence of the directorate's early experience on firm innovation. Specifically, it concludes that early board knowledge of the macro environment and professional work experience. Then disaster experience has a notable impact on the subsequent evolution of the firm. Suppose senior managers who have experienced significant and deadly disasters are more radical in making decisions about the enterprise, or directors with higher education know better about investing in and managing the enterprise. However, few pieces of literature have systematically analyzed the relationship between the early experience of the board of directors and enterprise innovation. In summary, the relationship between the above two in the existing literature can be roughly divided into the following two aspects: on the one hand, the CEO's early positive experience has a significant impact on enterprise innovation, which can be divided into personality, academic qualifications, and early careers. Hou et al. find that CEOs who have gone through a higher stage of market-oriented transformation have more ideas for enterprise innovation [4]. Trento finds that CEOs with an academic background are more likely to drive enterprise innovation [5]. Similar to it, Shen et al. declare that people with high education are more likely to have an innovative mind [6]. Otherwise, through a large amount of existing literature, it finds that when CEOs have some negative experiences, they will inhibit the innovation and development of enterprises. Cummings finds that under the leadership of CEOs who lack expertise in their product fields, the R&D efficiency of enterprises will decline and Bernile finds that CEOs who have experienced fatal disasters in the early stages are more likely to have made conservative decisions rather than choosing innovation [7]. This shows that a company's ability to innovate is inextricably linked to its CEO.

2. RESEARCH ON THE EARLY EXPERIENCES OF MANAGEMENT

The previous paper has explored the influence of early management experience with companies' governance or market performance of firms in terms of Nation policy, early-life disaster experience, career experiences, etc. Currently, studies related to early management experience can be broadly classified into the following categories.

2.1 The Impact of The Surrounding Context

Zhang tests the hypothesis of a positive stock premium due to economic policy uncertainty (EPU) in China using evidence from the Chinese famine [8]. He finds that stocks with higher EPU bets get higher returns and portfolios which mimic the EPU factor earn vital excess returns as well. In addition, he finds that EPU factor loadings have a positive predictive effect on the return cross-section of kinds of investment portfolios or stocks, controlling for macroeconomic and stock market uncertainty, traditional risk elements, and company features. His discovery complements the recently reported evidence of a negative U.S. bonus. Additionally, CEOs' military service will also impact their management. Gao et al. draw upon the insights of imprinting theory, through the investigation of the impact of high-level military service on experience on enterprise investment [9]. Especially in terms of environmental protection, because of different service areas, such executives have different views on environmental protection, which is as to achieve certain enterprise development. In addition, using Tobit regression models for private companies in China, they find that military service motivates CEOs to adopt pro-environmental behaviours, i.e., investing more money in protecting the environment. Further, Jiang and Murphy's analysis of 215 Close Matches companies in North American shows that executives with professorships are more prominent as vice presidents [10]. At the same time, the former has more advantages than the chairman who withdrew from school in the early and late stages of their careers, which shows the importance of academic education. Furthermore, Kaspi-Baruch use demographic statistics and psychoanalysis to research manager's early backgrounds [11]. The research results show that parents' careers are related to their children's career choices. The study also found that the difficult experiences of childhood are related to managers' views on management, which are discussed based on demographic and psychoanalysis models.

2.2 Disaster Experiences in The Early Life Of A CEO

Chen et al. who use a longitudinal sample of U.S. firms examine the impact of CEOs' early-life disaster experiences on the risk of stock price collapse [12]. They showed that executives who experienced disasters in their early years were more likely to accept the bad news that would lead to the stock price crash, and they were more risk-receptive to achieve the role of risk prediction. In addition, when such people have more power to achieve equity pay incentives or get more bad news, their perception of disasters will be magnified from cross-sectional analysis, thus affecting the investment decisions of enterprises. And they have more advantages over the company's manipulation, which is reflected in high cash flow volatility and stock yield volatility, which are highly consistent with the high-risk acceptance characteristics of executives with disaster experience. It's worth mentioning that a study records more terrible disaster experiences of CEO. The study, authored by Bernie et al, shows that the degree of strength of some CEOs who have experienced deadly disasters and the company's risk tolerance is not monotonous [7]. On the one hand, executives who have not experienced a strong and deadly disaster have not had obvious negative effects, so they will make more radical investment decisions. Compared with executives with deep negative catastrophic effects, they are more moderate in investment operations for the company's future development. What is more, Sanghak Choi studies the relationship between the CEO's war experience and corporate information transparency using the Korean War as an exogenous shock [13]. He finds that firms managed by CEOs who experienced the war had greater information transparency than firms managed by CEOs who did not experience the war. At the same time, information symmetry and transparency became particularly important during the financial crisis, just like directors who live in areas more seriously than those far away from or who have never experienced the economic crisis. The former is more eager, and they have a stronger sense of the post-disaster crisis. In the same vein, Xu and Ma examined whether the poverty experience of chief executive officers (CEOs) has an outcome on a firm's corporate social responsibility (CSR) [14]. They declare that the social responsibility of corporate executives will increase or decrease with their different levels of poverty experience. In other words, corporate social responsibility compliance and performance can make big fluctuations on corporate investment, and then reflect the altruism of social responsibility. In particular, the compassion of executives who have experienced poverty and are more sensitive to investing in long-term social responsibility activities can be realized well. They all have a certain pro-social mentality, which affects the company's development direction and investment concept. Similarly, Zhang and Huang discuss the innovative investment of enterprises from two new perspectives: CEO overconfidence and early famine experience and compares the impact of the two to verify which one is more important [15]. Select the information technology and manufacturing enterprises listed in Shanghai and Shenzhen from 2002 to 2013, panel regression based on static perspective and DID model based on CEO change events and conclude from a dynamic perspective that CEO overconfidence is conducive to promoting innovative investment in enterprises. The CEO's early famine experience inhibited the increase in innovative investment, which was more obvious in the CEO's childhood and adolescence.

2.3 Management's Early Career Experience

Hu and Liu based on the effect of CEOs' professional experience on firms' investment decisions [16]. companies with more diverse professional experience found by CEOs exhibit less investment cash flow sensitivity and use more external funds, including bank loans and trade credits. These effects are more pronounced in fiscally limited firms, where rich external experience helps CEOs build social connections. Similarly, Dittmar and Duchin follow the histories of employment of over 9,000 senior executives to study the impact of professional experience on firm policy [17]. The identified strategies exploit exogenous CEO turnover as well as employment in other firms and non-CEO positions. Compared with other companies, companies operating by troubled CEOs have less debt, and the results show that policies vary according to the manager's experience and the whole manager's career. Moreover, Hu and Cready according to their impact on company disclosure decisions by investigating the employment history of more than 3000 CEOs and their past litigation experience, find that companies managed by these CEOs with litigation experience provide guidance more frequently than companies not managed by such CEOs [18]. It also finds that the market's response to its disclosure was low. This evidence is consistent with the view that past litigation experience has led CEOs to increase the frequency of voluntary disclosures, but the surprising content of such disclosures has decreased.

3. STUDY ON THE IMPACT FACTORS OF CORPORATE INNOVATION

A related study of factors influencing corporate innovation builds on the existing literature by examining the impact of factors other than the early experience of top officials on corporate innovation. Among them, it is mainly divided into the internal management characteristics of the company, the external governance factors of the enterprise, and the influencing factors of the macroeconomic or macro-environment for analysis.

3.1 Characteristics of the Internal Management

First, Yuan and Wen studied the key to foreign management experience and enterprise innovation through manually collected data of listed companies in China [19]. They find that foreign experience has an important impact on the innovation market. Senior managers with foreign experience can influence enterprise innovation better than juniors, especially foreign experience managers in the United States who are more influential than other countries. And then based on the importance of employee compensation plans to the innovative performance of enterprises, Chen et al. find that treatment of employees is more conducive to company growth, which increases employee satisfaction and teamwork, and more importantly, they are encouraged to create intellectual property [20]. In addition, Lin et al. explain the two comprehensive indicators to measure the diversity of development boards, internal diversity and acquired diversity, which can achieve the diversification of board members in different aspects [21]. In addition, their research also proves that there is a positive impact on the diversification and multi-change of boards and companies. Even more, based on comparing 124 stand-alone high technologies entrepreneurs with 112 business entrepreneurs involved in the development and introduction of high technology innovations in Canada. Knight through investigating common management contradictions and technical problems encountered by most executives, shows that most independent entrepreneurs tend to defend their territories and ideas within the company and stick to their investment decisions fiercely without systematic management training or previous management experience [22]. Specifically, when encountering obstacles, independent entrepreneurs perform more diversely than those with systematically trained executives, and they all face certain difficulties in creating new products due to a lack of management training or experience. The last research is that Gompers discusses the detailed history of enterprise venture capital in the past two decades and analyzes the history and motivation of enterprise venture capital projects, who finds that enterprises play an important role in the investment of emerging enterprises in the development of new technologies [23].

3.2 External Governance Factors

For the external governance factors, it finds that Chu et al. study the impact of supplier-customer geographical location on supplier's enterprise innovation by recording that feedback channels and demand channels may be potential ways for suppliers and customers to influence supplier innovation [24]. In addition, based on adopting different methods to carry out empirical research on three types of Taiwan parks with particularly prominent economic development and industrial cluster characteristics, Lai et al. through investigation, regression analysis, etc., discuss the importance of special resources and relationships in industrial clusters for enterprise knowledge management and enterprise innovation and development [25]. Then, taking advantage of the changes in U.S. anti-acquisition legislation, Amore and Bennedsen study the corporate governance and enterprise environmental innovation, showing that there are fewer green patents than companies with poor innovation and governance and they find that ineffective corporate governance may constitute a major obstacle to environmental efficiency [26]. In general, Peng et al. conclude that country risk of overseas investment promotes firms' strategic innovation behavior [27]. Mechanistically, country risk of overseas investment promotes firms' strategic, innovative behavior by increasing access to government subsidies. However, the mediating effect of media attention on the country's risk of overseas investment on firms' strategic innovative behavior is a masking effect. In other words, country risk of overseas investment inhibits firms' strategic, innovative behavior by increasing media attention, and this indirect inhibition weakens the direct promotion of country risk of overseas investment on firms' strategic innovative behavior.

3.3 Analysis of Influencing Factors of Macroeconomic Policies or Macro-Environment

As for macroeconomic policy factors, by exploring cross-sectional differences in the effect of ATP on innovation and looking for cross-sectional identification evidence, Chemmanur and Tian find that the success rate of enterprise innovation is low, but the resources required are very large and accompanied by a long period of the development process. Among them, the impact of ATP is more obvious and plays an important role in pharmaceutical industry innovation, and companies in such areas are more innovative and have broader development prospects in the future. It can be said that ATP plays a positive role in innovation [28]. Then it's the profound study of Xu and Yano on the impact of anti-corruption on innovative financing by using the detailed data set of listed companies in China from 2009 to 2015, they find that as a result of the large-scale anti-corruption campaign launched by President Xi Jinping in 2013, companies in large anti-corruption provinces and regions will have more funds to invest in research and development, thus testing the two mechanisms of false taxes and rent-seeking hypotheses [29]. Based on the personal data of senior managers or board members of the company, Su et al. find that a comprehensive political linkage index has been developed to study the contribution of political linkages to firm innovation and the channels of this relationship [30]. The findings suggest that politically connected firms tend to innovate more than unconnected firms and that government subsidies play a mediating role in this relationship. Additionally, He et al. study the impact of economic policy uncertainty (EPU) on firm innovation in China from 2000-2017 [31]. They judged economic added value by formulating China's monthly economic value-added indicators. Finding that the EPU before the 2008 economic crisis was a low-tide period, accompanied by active innovation activities, and then proves that the overall positive impact of EPU and enterprise innovation development was positive. Relatively speaking, of course, higher economic policy uncertainty inhibits enterprise innovation.

4. ANALYZING THE IMPACT OF EARLY BOARD EXPERIENCE ON CORPORATE INNOVATION

There are several studies on the connection between CEOs' early life experiences and firm innovation. From this, it divides this existing literature into facilitating and inhibiting.

4.1 The Role of Early Board Experience in Promoting Enterprise Innovation

By studying the cultural revolution from 1966 to 1976, Kong et al. find that the level of trust of executives plays an important role in both enterprise development and shows a positive impact on enterprise innovation, which declares that directors' early life experience is also Innovation is positively related to the future development of the company [32]. Compared with formal and informal systems, it is showing that there is some alternative effect, and business trust is more important for innovative implementation without formal regulations. In addition, they analyze the agent database of China's enterprise survey system in 2000 and found that trust at the enterprise level was also highly positively related to enterprise innovation. Incidentally, Hou et al. study the relevance between the early experience of executives and the company's marketing transformation, it points out that there is a positive impact on the early transformation experience of CEOs of some small and medium-sized companies and the internal R&D intensity of the company [4]. Through data processing, it finds that the processing level of R&D-enhanced technology is evenly distributed, accompanied by a not significant increase trend. In addition, executives with high marketing transformation experience are stricter and more proactive in the implementation of company development and enterprise innovation. Moreover, Trento et al. use the upper-class theory published by Hambrick and Mason in 1984, it is proved that the age of CEOs is not very important in a family's corporate inheritance, but systematic education and accumulated experience can promote corporate innovation [5]. More importantly, they used data from 251 Italian family enterprises to test the impact of executive population structure on corporate innovation and reached a highly consistent conclusion on the importance of education for corporate innovation. Furthermore, Zhang et al. find that CEOs' experience of flying aircraft was related to innovative achievements [8]. And this is related to patents and references, innovation efficiency, more diversified and original patents. Research has proved that the characteristics of CEO pilots can capture the personality characteristics of seeking feelings, especially desires i.e., adventure and pursuit of excitement, which play an important role in creativity. Besides, Wang et al. according to the data of listed companies in China from 2008 to 2015, through the influence of CEOs with some science and engineering backgrounds on enterprise innovation, find that the science and engineering background has a positive effect on enterprise innovation [33]. Although some non-technical CEOs of state-owned enterprises have a low vision of future return on assets, it still illustrates the important role of technical training and job accumulation in innovation. In addition, Shen et al. tracking on the data of Chinese enterprises from 2008 to 2017, Shen and Lan and others have studied whether the academic experience of senior managers has an impact on enterprise innovation [6]. It also finds that academic experience has a strong positive incentive for enterprise innovation, especially when enterprises are growing rapidly or non-state-owned enterprises. Moreover, innovation can be promoted by improving internal controls and information asymmetries.

4.2 The Inhibiting Effect of Early Board Experience on Enterprise Innovation

Based on the inhibitory effect of early board experience on firm innovation, first, Zhou et al. use a unique early life political event in China, they find that the Chinese chairman's rural activities could control their risk aversion [34]. At the same time, this can avoid risks and reduce the cost of innovative investment, so that the chairman can be more conservative and careful, and the efficiency of investment decisions can be improved, but enterprise innovation is suppressed because executives dare not take big steps to implement new strategies. Besides, using data on company R&D productivity, Cummings and Knott conclude that according to an advantage for external CEOs over internal candidates, they believe an unintended consequence is a diminished ability to innovate, which argues that external CEOs are more likely to experience this shift because they may lack the technical domain expertise needed to effectively manage R&D [35]. Their results are consistent with this argument that a company's R&D productivity declines under an external CEO.

5. CONCLUSION

As a conclusion, this paper mainly studies the importance of enterprise innovation arising from the impact of the early experience of senior managers on corporate governance and market performance based on the existing literature. Secondly, first, this paper studies the relationship between the early experience of management and enterprise development based on the existing literature, which is mainly divided into the impact of the general environment, the sequelae of disaster experience, and the role of professional experience. Then it is based on the impact of various factors on enterprise innovation and the early experience, especially the company's internal characteristics, the external governance factors of the enterprise, and the macroeconomic impact. Finally, the early experience of senior management has contributed to enterprise innovation. Finally, based on the review and collation of the above literature, this paper summarizes the shortcomings of the existing research and the possible future research directions.

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