

Literature Review Regarding Corporate Innovation

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Abstract:

This paper systematically reviews the determinants and consequences of corporate innovation. The main findings are as follows. From a micro-level perspective, the diversification of the gender structure of the board of directors, the improvement of the welfare of employees, the corporate social responsibility performance, the external competitive environment, and the choice of innovation strategy can positively promote the company's innovation and ensure the quality, efficiency, and success rate of innovation. From a macro perspective, judicial independence stimulates innovative activities, while the promulgation of the monopoly law and the uncertainty of the economic policy will dampen the incentives to innovate. As for the consequences of innovation, it helps enterprises transform and upgrade, brings efficient management mode more in line with the operation of enterprises, creates differentiated products for enterprises, helps enterprises reduce costs, and improves the efficiency of employees, etc. This literature review focuses on several latitudes and multiple aspects to elaborate their comprehensive impact on innovation so that readers can understand faster and more conveniently. Moreover, it provides direction for innovation for companies and can also make countries more aware of the importance of innovation. Collectively, this survey is a supplement to the existing literature and has practical implications.

Keywords: corporate innovation, determination, consequence

1. Introduction

Throughout history, innovation has constantly brought earth-shaking changes to human society. The first industrial revolution ushered the world into the steam age. The second industrial revolution led the world into the electrical age; the third industrial revolution led the world into the information age (Taalbi, 2019), and the fourth industrial revolution will also bring new opportunities and challenges to human society (Xu et al., 2018). Human beings are advancing to a higher stage in innovation after innovation. For a country, innovation can increase productivity, employment opportunities, promote industrial upgrading, and is an important engine of economic development; at the same time, it can improve people's living standards and change society and people's lifestyles. In addition, innovation can have the longer-term impact of enhancing national competitiveness and national and international discourse power. For a company, innovation also has a significant impact on its various aspects; for example, it can bring superior services or differentiated products to enterprises, attract more customers and, improve the loyalty of original customers, increase the market share of enterprises; at the same time, innovation can also improve the organizational management model of enterprises, improve their operational efficiency, etc. Therefore, innova-

tion always has high research value.

The research questions of this literature review are divided into two aspects: the factors influencing innovation and the economic consequences of innovation. Research has found that the factors influencing innovation can be divided into the corporate level and the macro environment. Among them, gender diversity of the board, good employee treatment, innovation strategy, external competitive environment, corporate social responsibility, and judicial independence positively impact innovation. However, the uncertainty of government economic policy and anti-monopoly law hurt innovation. Given the economic consequences of innovation to enterprises, the research finds that innovation will bring good results to companies in three aspects: corporate structure, corporate governance, and corporate efficiency.

This study makes several important contributions to the existing literature. First, most of the existing studies on the influencing factors of innovation focus on the analysis of the influence of a certain factor on innovation, and this paper diversely starts with the internal and external factors of the company. At the core of the basic elements that constitute the company's innovation, such as the key subject of innovation: employees (Chen et al., 2016), the subject leading innovation: board of directors(Griffin et al.,2021) etc., combined with the influence of macro-legal and po-

litical environment on innovation, the paper systematically studies the factors influencing innovation from many aspects, and integrates the scattered research literature. At the same time, this review integrates the existing research with the author's further thinking, which provides a new perspective for the original research and is a supplement to the existing literature.

Second, there are few studies on the economic consequences of innovation in the existing literature, and few papers also reflect the two-way influence relationship between innovation and the subject and object of the company. Most of the literature deals with the one-way effects of corporate subject and object on innovation. Still, this review intentionally looks for the economic consequences of innovation on the corporate side of the factors that influence its conduct. For example, innovation can change the structure of a company, enhance its ability to resist risks, and even break through the traditional board structure to attract more talents from different backgrounds to the board. Contribute to realizing the company's strategy(-Genin et al., 2023) and the positive economic consequences of innovation on corporate governance and efficiency. Therefore, this paper supplements the literature on the economic consequences of innovation and establishes the causal relationship between innovation and the elements of the company itself.

Third, some of the factors involved in this literature review are the inherent problems that most companies have been facing for a long time, such as the board structure still being dominated by men and the enthusiasm of employees not being stimulated. There are also some relatively new influencing factors in recent years, such as the acceptance of CSR (Ullah and Sun, 2021). Therefore, this literature review can provide the direction for enterprises to innovate in certain aspects, reduce their trial and error costs, strengthen their confidence in innovation, and encourage enterprises to solve long-term solidified thinking. The creation of a new structure to lead the operation of the enterprise will be of great significance to the development of the enterprise. For the country, the uncertainty of the government's economic policy involved in this literature review will increase enterprises' financing risk and capital cost. This discourages companies from financing innovation (Xu, 2020), and the independence of the judiciary can combat local protectionism, protect companies' patent rights, and thus promote macro-environmental factors such as corporate innovation (Lai et al., 2023). Therefore, it can also enable the state to be more cautious before promulgating policies, better understand the market environment and laws, and make correct market supervision decisions. It can also enable the State to create targeted measures in the judicial and legal fields more suitable for

stimulating the vitality of enterprise innovation.

2. Literature review

Reviewing the literature on corporate innovation, I found various firm-level determinants of innovation, such as gender structure of leadership, corporate social responsibility, innovation strategies, employee treatment, competitive environment, etc.

2.1. Firm's Internal Characteristics

Successful corporate innovation is influenced by several internal aspects of a company: innovation strategies play a decisive role in the direction of innovation, leadership structure impacts innovation efficiency and effectiveness, and employees drive innovation execution. These elements make up a system to ensure innovation success.

Griffin et al. (2021) use a novel database of firm patents and board characteristics across 45 countries, examining the relationship between board gender diversity and corporate innovation. The survey finds that a company has more tolerance to accept innovation projects and long-term-oriented CEO incentives if there are more female leaders on board, and a diverse gender board could also positively affect corporate innovation practices through their promotion of decision-making. This is because men and women think differently. Innovation requires as many different solutions as possible to have a satisfactory outcome. Still, if the proposers are all men and in the same company environment, then it is likely to lead to the hardening of thinking and the bottleneck of innovation. Still, the addition of female leaders can provide a new perspective, so it can bring more innovation power to enterprises when making decision. In addition, because of the personality differences between men and women, female leaders are more careful and have stronger empathy than men. They value collective interests more than individual interests. Therefore, they will focus on the long-term development of the company, they will not invest excessively when investing, and not abandon investment in innovative projects because of short-term benefits.

Besides, Khushk and Zhang (2022) find that organizations with gender-diverse leadership teams perform better than other firms on innovative accomplishment because when firms have female directors, they invest more in innovation, receive more patents and citations, and spend less on research and development(Khushk and Zhang, 2022). In addition, female leaders are good at using trust skills and can behave flexibly. If a company has more female leaders, it will have greater risk tolerance and access to information when dealing with the uncertainties of innovation. At the same time, it can unify opinions faster, seize

opportunities, and innovate successfully.

At the same time, the employee is the key part of the innovation process; they are the backbone of innovation, especially those who are engineers and highly skilled researchers. Chen et al. (2016) find that improving employee treatment has a favorable impact on innovative success. Innovation requires employees' proactive participation and teamwork (Dougherty, 1992; Van de Ven, 1986), and employees are those who are in direct contact with the company's products and most familiar with the company's product performance, sales situation and direct contact with the market, therefore, if employees are treated better, for example, by involving them in decision-making, they will be more proactive in offering advice on product innovation, thus facilitating the flow of new ideas and knowledge across different departments. Innovation activities will also improve production enthusiasm, and teamwork will also improve so as to drive the company's innovation. Besides, innovation is a long-term, multi-stage, and complex process that requires talented employees with long-term commitment (Holmstrom, 1989); by improving the treatment of employees, enterprises can enhance the loyalty, satisfaction, and self-worth of employees so that more capable employees can stay for a long time. Companies also can innovate more, such as acquiring more patents so that their goals are met, and the value of the company increases.

Innovation strategy is also an important factor influencing the success of innovation. According to the Journal of Business Finance & Accounting (2017), two main types of innovation strategies influence innovation: exploratory and exploitative. Once the former leads the innovation success of the company, it will bring breakthrough success to the company, such as gaining an absolute market share and competitive advantage. Still, the company will also bear a high risk of failure. On the other hand, the latter allows the company to gather more information and obtain more reliable innovation results when innovating but does not bring significant economic benefits and cross-stage changes to the company. Therefore, a company's chosen strategy is crucial to its innovation activities.

2.2. Firm's External Characteristics

To survive and develop in the face of changes in the external environment and gain a competitive advantage in the industry, enterprises need to innovate constantly. Therefore, the external environment, such as the competitive environment and the social responsibility of enterprises, have an important impact on enterprise innovation.

According to HUSE et al. (2005), research the relationship between three external competitive environments and corporate innovation and find different kinds of competi-

tive environments will lead to different innovation speeds, frequencies, and levels. At the same time, different stages of the environment will allow enterprises to focus on different areas of innovation. In addition, innovation is a necessary means for enterprises to gain competitiveness in international competition activities so that international competition activities can urge enterprises to innovate, so that the cost of enterprises can be lower than the cost of enterprises in other countries, and thus can achieve economies of scale, occupy the market and achieve competitive export conditions. At the same time, the external environment of the enterprise affects the managers' economic decisions and the strategic choices of the enterprise, which in turn affects the attitude of the enterprise towards innovation and the choice of the object of innovation to choose the appropriate measures to achieve innovation. In addition, changes in the external environment will bring innovation opportunities to enterprises, so enterprises can also profit from innovation.

In addition, Ullah and Sun (2021) find that enterprises assuming social responsibility positively affect enterprise innovation. When companies take on social responsibility, especially the interests of stakeholders, they are willing to share external information with the company, which is often the key information to support enterprise innovation. Furthermore, it also affects the formulation of enterprises' overall innovation strategy. In addition, when enterprises decide to assume social responsibility, they will also innovate some production management schemes, enabling enterprises to use their resources more effectively and lower their production costs. With stronger market competitiveness, enterprises will eventually achieve sustainable growth.

2.3. Institutional Environment

Country-level institutional quality positively affects R&D investment through a high level of government effectiveness, the rule of law, regularity quality, political stability, and a low level of corruption (Alam et al., 2019); the policy and legal environment are of particular concern.

Xu (2020) finds that the high cost of capital, influenced by government economic policy uncertainty (GEP), negatively impacts corporate innovation. Enterprise innovation requires high capital investment, which internal funds cannot support, and often requires financing, and financing is essential for developing, implementing, and commercializing new technologies (Rajan, 2012; Kerr and Nanda, 2015), if the government changes economic policies frequently, causing greater uncertainty, enterprises may often borrow money from banks or issue stocks and bonds when loan or market interest rates are low and have to bear higher repayment rates in a few days. GEP

will cause higher capital costs to enterprises and make enterprises feel that innovation will increase their burden, so GEPU will bring a lower innovation rate. At the same time, changes in the cost of capital brought about by changes in economic policies will affect the normal judgment of enterprises on investment projects, especially investments that take a long time to see results, such as research and development investments. Being more vulnerable to uncertainty will invest in innovation projects more cautious or even delay innovation, which is not conducive to enterprise innovation.

Besides, Yu et al. (2022) use the samples of A-share listed companies from 2003 to 2013 and find that the inhibition effect of anti-monopoly law on the innovation of monopoly enterprises, especially in state-owned enterprises, is very prominent. Because the anti-monopoly law will weaken the market position of monopoly enterprises, reduce their market share, and reduce the inflow of funds to monopoly enterprises. One of the purposes of enterprise innovation is to improve the company's competitiveness to gain more market share. Therefore, the antitrust law will likely turn the innovation cost invested by the monopoly enterprise into a sunk cost. As a result, their patent output will be greatly reduced, and innovation will be suppressed. However, the government does not have "selective law enforcement" against private enterprises in the process of law enforcement (Yu et al., 2022), so the government intervention is neutral to the innovation of private enterprises.

In addition, Lai et al. (2023) use a sample of Chinese A-share listed firms from 2007 to 2019 to examine how the staggered establishment of Circuit Courts in China affects innovative corporate activities and find that firms located in cities covered by Circuit Courts have significantly higher innovation output, in particular, where there is strong political interference, weak legal systems and enterprises that do not have links with the government and banks, the effect of innovation after being governed is very significant. Therefore, the independence of the judiciary has a great impact on corporate innovation. Because independence can combat local judicial protectionism, it can stimulate the interests of unprotected and foreign enterprises, improve their winning rate in property disputes, and let them dare to innovate. In addition, judicial independence can also protect the interests of shareholders and other stakeholders, such as increasing their success rate as plaintiffs, reducing their investment risk, and thus increasing their investment confidence. It will be easier for enterprises to raise funds and finance when they innovate, thus reducing their burden of innovation and encouraging enterprises to innovate.

3. Economic consequences of corporate innovation

Indeed, suppose a company is successful in innovation. In that case, innovation results will affect all aspects of the company to different extents, bring better benefits, enter a new stage, and even bring the company back to life. This review addresses the economic consequences of innovation for companies in three areas: corporate structure, corporate governance, and corporate efficiency.

3.1. Corporate Structure

Innovation can change the structure of a company, which cannot remain unchanged due to uncertainties and risks in the market and economy. Therefore, enterprises will innovate by integrating internal and external factors. For example, start-ups generally adopt centralized structures. Still, to further develop and better deal with market risks, they will innovate the company's structure and try to move to a decentralized structure. In addition, innovation can adjust the structural focus of an enterprise. When an enterprise carries out technological innovation, its technical personnel will become the core of the enterprise. When the innovation is over, as the company has newer technology, those employees who cannot learn and adapt to the new technology will be fired. The enterprise structure will gradually change from labor-intensive to technology-intensive, let enterprises better adapt to the development trend of the times. Besides, once noting the benefits of diverse experiences in the boardroom, corporate executives can search beyond the traditional director pedigree (e.g., Ivy League-educated financiers), where female and minority individuals remain underrepresented. In doing so, the firm can find more qualified candidates to assemble a demographically and intellectually diverse board, thus cultivating an inclusive corporate culture conducive to shareholder and stakeholder value creation; this type of innovation can create substantial economic and social value. (Genin et al., 2023)

3.2. Corporate Governance

According to Jia et al. (2019), innovation activities are limited by agency risk, so when an enterprise conducts innovation activities, it will find ways to improve enterprise management tools, including better alignment of agents' private incentives and stronger monitoring, and high-quality public governance, and then, as a result of innovative activities, enterprises have a higher level of public management, agency risk will be reduced, and their operations will be more aligned with the enterprise strategy. Contributes to the achievement of business goals. In addition, innovation aimed at the governance system can diversify the corporate governance system and widely ab-

sorb talents from different backgrounds, experiences, and skills to bring broader resources and market opportunities for enterprises. At the same time, it can also enhance the inclusiveness and competitiveness of enterprises and promote the comprehensive development of enterprise operation systems; for example, the Ministry of Justice in Japan revised the Commercial Code to legitimize different systems, which led to the emergence of diverse corporate governance practices (Yoshikawa et al., 2007).

3.3. Corporate Efficiency

Innovation can improve the company's overall operating efficiency by influencing the different subjects and objects of the company, such as improving process efficiency, promoting product quantity, performance, style, etc., so enterprises can be more competitive based on stable market share.

3.3.1. Production Process Optimization

An important reason enterprises cannot make profits is that they cannot achieve or maintain economies of scale, often caused by the lack of good production technology. If an enterprise is innovative and successful in production technology, product production costs can be reduced by reducing the waste of raw materials, shortening production time, reducing labor costs, etc. Therefore, enterprises can get a competitive advantage with lower prices or get more profits. Furthermore, suppose the enterprise pursues green innovation in production technology, although it may spend more on innovation costs in the early stage. In that case, it will gain better social benefits and corporate image. Meanwhile, as this concept is in line with the trend of the times, it will gain more government support and contribute to the company's sustainable development. According to Chang and Hsun (2011), green innovation performance can positively affect green product and process innovation and enhance companies' competitive advantages.

3.3.2. Form Product Features

The result of most companies' innovation is on products, which are the most direct and fastest source of revenue for a company. As the homogenization of products and services in the market becomes more and more serious, enterprises innovate on products and services, such as optimizing product performance, developing products of different styles or tastes, research and development of the company's brand can improve product differentiation, improve the threshold for entering the company's field, and reduce the entry threat of potential entrants. To establish or stabilize the market position of the enterprise. At the same time, the research and development of new products can keep the old customers interested in the products,

reduce the customer turnover rate, increase the customer buyback rate, and attract a certain number of new customers. Increase customer base and revenue. According to Hull et al. (2008), innovation can drive firm differentiation and the level of differentiation in the industry.

3.3.3. Employee Behavior

According to Tong et al. (2018), when a company innovates, it will consciously make more advanced employee protection; this will increase employees' trust and loyalty to the company and will also attract new technical personnel to a certain extent, then the company will have stronger innovation ability, and the risk of its being limited by technology will also be reduced. Besides, when a business innovates, it needs to spend more on employee education to support skills training, and in general, employee education accounts for only a small portion of a company's investment, so innovation can force companies to shift more resources toward employee training. Employees will also have stronger employment ability because they can receive training, their self-confidence will be enhanced, and they will be encouraged to work hard so that the company's overall operation level and efficiency will be improved. The company's profitability will be strengthened.

4. Conclusion

To sum up, the essence of innovation is to change the old mode of production and management and build a new economic model with higher efficiency, high quality, and low consumption. It will always be the primary productive force driving economic development, so innovation can lead to the formation of new economic models, such as e-commerce, Internet Plus, and other new models, and provide new development engines for the country, promote the transformation and upgrading of the country's economy to achieve higher quality economic development; At the same time, from the history of national innovation, we can see that once a country takes the lead in innovation and achieves certain achievements, its overall strength will lead other countries. Its international status, influence, and international competitiveness will certainly be greatly increased, and it will also be more conducive to the country's international activities and expand the international market; for an enterprise; the competitiveness of an enterprise depends not only on the control of products and costs but also on its brand value, market foresight and the ability to constantly push the past and bring forth new ones. Therefore, successful innovation can increase the enterprise brand's influence and enhance its market competitiveness. Therefore, as innovation can bring about all the important functions mentioned above, the motivation of this literature review is to further explore the signifi-

cance of innovation.

Therefore, based on the above motivations, this review puts forward two research issues, the influencing factors of innovation and the results of corporate innovation, and elaborates on them in detail in the second and third parts. From the factors influencing innovation, this literature review studies in detail from the micro (company level) and macro levels and finds that some influential factors at the company level, for example, the gender diversity of the board of directors, will directly affect the innovation enthusiasm of the innovation subjects, thus determining whether innovation can be conducted and the quality of innovation. Other influencing factors, such as innovation strategy, external competitive environment, and corporate social responsibility, will affect the direction, risk, speed, frequency, level of innovation, etc., thereby affecting innovation results. Besides, macro-level factors influence the company's innovation, from the innovation's input and output. For example, the uncertainty of government economic policy will increase the financing cost and risk of the company, making enterprises unwilling to invest in innovation; antitrust laws weaken monopolies' market share, reducing the amount of money they have to innovate and the impact of their innovation output; judicial independence protects the output of corporate innovation, thus encouraging it. As for the consequences of innovation, it has been found that the economic consequence for enterprises is a qualitative change. Successful innovation can bring direct economic benefits to enterprises, such as enabling enterprises to obtain more advanced production technology, then costs can be reduced; improve product visibility, companies will have more customers and a stable inflow of funds; it can also indirectly improve the operating efficiency of the enterprise, such as bringing new management mode to improve the operating efficiency of the enterprise, attracting more management talents to reduce the risk of department docking, and making the distribution of resources and tasks fairer; it can even enable enterprises to transform and upgrade, have stronger competitiveness and vitality, and move to a higher stage of development.

However, this literature review has some limitations. First, innovation is influenced by a wide range of factors: micro-level factors, such as a company's tolerance of failure, and macro-level factors, such as company law and national culture. However, this literature review only focuses on the impact of some factors on innovation, and the coverage may not be so extensive and systematic. Second, the literature cited and based on this literature review is the literature of the last ten years; some may be outdated. Third, because this literature review does not need a large number of literature as theoretical support, the way

of collecting papers is not through precise scientific and technological means such as big data-oriented classification screening. Rather, it is a manual search, so it may have some subjective color and professional limitations, making the elaboration less comprehensive.

At the same time, gaps in the study of the impact of specific periods on innovation provide new directions for future researchers. For some specific periods, such as the epidemic, there is very little literature of this type. Still, the epidemic has a significant impact on the economy of any country, and economic downturn and market downturns will make enterprises have different attitudes toward innovation. For example, some enterprises want to burn their bridges and invest money in innovation to reposition, transform, or upgrade and find a new way of life, and some companies will think that investing capital in innovation will speed up bankruptcy and choose to maintain the status quo. Therefore, the epidemic is also a new factor with great research value affecting enterprise innovation. If we can conduct in-depth research to find out how different types of enterprises can make use of innovation to survive in the epidemic era, getting out of the crisis and moving forward will not only save industries that have been depressed by the epidemic but also revitalize businesses and restore the orderly functioning of markets. It can also make a country's economy rebound from the bottom and achieve sustainable development. In addition, with the development of information technology becoming more and more mature, a lot of data analysis software has been produced, so in the future, when researching the influencing factors of innovation, you can take full advantage of the analysis software to find out exactly which factors can affect innovation most at this stage and in which aspects innovation can bring significant effects. Let enterprises solve the problem, allocate resources effectively, reduce capital waste, and increase the success rate of innovation.

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