Corporate Social Innovation: New Integration of Social Responsibility and Innovation

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ABSTRACT

With the rapid development of economy, social problems are becoming more and more complicated. With a better integration of corporate social responsibility and innovation, corporate social innovation has become a new paradigm for contemporary corporate innovation. Corporate social innovation is oriented towards solving social problems, bringing more business and social value to enterprises, and then providing an innovative process of innovative solutions. At present, many factors could affect corporate social innovation; the mechanism of the process link is still in the fuzzy stage. Based on this, this paper draws on the "Diamond Model" of corporate social innovation with reference to the "Porter Diamond Model", combing the six major influencing factors of individual factors, corporate characteristics, technological development, stakeholders, opportunities, and market policies, and further reveals interaction between influencing factors of corporate social innovation. Facing the complicated process of corporate social innovation, this article also proposes an interaction model of corporate social innovation process, which systematically summarizes the process of corporate social innovation and network relationships. Meanwhile, it points out that each stage of corporate social innovation is not linear, but multiple concurrent processes. Studying the influencing factors of corporate social innovation and the mechanism of process interaction will help companies implement corporate social innovation and solve social problems. It also has significance to the further research on the theory of corporate social innovation.

Keywords: corporate social innovation, social issues, influencing factors, corporate social innovation process

I. INTRODUCTION

Since the foundation, China has created many miracles. In the latest 30 years, China's average annual GDP grow with rate of 9.8%. Until now, only 7 countries have continued to grow at an average annual GDP growth rate of more than 7% for 30 years in human history. (Li Jian, Wang Ming, 2015). With the rapid development of China's economy, the mismatch of the speed between economic development and resource regeneration, together with many other factors, have caused various complicated social problems. According to statistics, the current social problems are mainly focused on climate change, aging population, depletion of resources, and health status of residents. These social problems are closely related to everyone's daily life. How to solve these social problems is not only a business of government, but also all human beings. Nature has warned us that tragedies would happen if human only concentrate on economic development. At present, corporate social innovation has become a new way to solve economic development and social issue.

"Social enterprise" was proposed ahead of corporate social innovation. Drucker claimed that the essence of business is to solve problems for society. One social problem is one business opportunity. A bigger issue the enterprise had solved, A better increase of the size and reputation to the company. Therefore, the essence of a social enterprise is an enterprise oriented to solving social problems. Except technological innovations Drucker (1993) had also proposed social innovations. He argued that Social Innovation is not the same as Technological Innovations. Social Innovation transforms social issues to their own opportunities. With the introduction of corporate social responsibility from the West, many Chinese companies are already fulfilling corporate social responsibility. However, many companies only stay in the perspective of charitable responsibilities and do not perform its deep
responsibilities. In today's era when all people call for sustainable development, innovation has become a method to adapt to this changeable environment, and corporate social responsibility becomes a embodiment of corporate social value. However, traditional corporate social responsibility puts more emphasis on compliance rather than innovation. Innovation can bring more efficient communication, marketing, resource integration, and social benefits to the enterprise. In addition, now small and medium-sized enterprises in China, which play a decisive role in economic development, spend a large proportion of their operating costs in social responsibility. Therefore, corporate social innovation formed by corporate social responsibility and innovation is more in line with the current complex situation of social problems.

In the continuous escalation of social issues, Liu Bao (2013) pointed out that corporate social innovation is a new pattern for corporate innovation. Liu Hailong and Qi Qi. (2017) believe that corporate social responsibility innovation (CSR1) refers to enterprises that oriented to social problems, provide innovative solutions to social issue and obtain economic benefits. At the end period of industrial age, innovations of Industrial Revolution made the economy grow exponentially fast, which brought many issue as well. Regarding to this awkward situation, social innovation has replaced technological innovation to become priority. He Zengke (2010) believes that social innovation could be divided into social innovation initiated by individuals, social innovation initiated by society, and social innovation initiated by organizations. Drucker (1999) proposed the concept of entrepreneurial society and thought systematically. Subsequently, Bornatein and Davis (2010) analyzed the process of social innovation and found that the ultimate goal of social innovation is to realize the wonderful life of human beings, to build a new system and to explore innovative solution for poverty, disease, illiteracy, environment, human rights and corruption. Program. Klein et al. (2012) believe that social innovation is an activity that needs citizens' active partecipance. It's a perfect solution in unfavorable situation like financial, economic, social crises and environment problem. Social innovation usually comes from economic activities and it needs to be continue for a long time. It represents a solution to social problems and it can solve problems that social mechanism could not solve. (Moulaert et.al, 2013).

Based on "social innovation", Kanter (1999) put forward "corporate social innovation" ahead of time. He believes that enterprises should take social issues as an opportunity to gain experience, which could identify potential demand and solutions, finally they could find new market. Corporate social innovation, which is differ from corporate social responsibility, is a process of strategically solving social problems to identify business opportunities, develop market space, achieve the purpose of creating business value and social value for individuals and organizations, and then solve social problems. At present, the academic point of view about social innovation is mainly about meeting social needs, solving social problems, providing new products or technologies, new services or solutions and creating a new type of new social network relationship.

From the perspective of stakeholder theory, enterprise social innovation is an innovation activity involves all people based on related beneficiaries. Enterprises could use different kinds of resources to solve social problems in the resource re-integration and innovation process. In the process of multi-participation and interaction, different parts would interact together in interests, values, resources, knowledge and experience. Moreover, enterprise social innovation is to solve social problems under the basis of network structure, which not only requires better communication and cooperation between different parts, but also comprehensive and systematic thought of enterprise social innovation. To sum up, the definition of enterprise social innovation in this paper is based on social responsibility and innovation, which takes the responsibility of solving social problems, involves multiple stakeholders in the process, and finally brings social value and commercial value to organizations and individuals. At present, there are many studies about enterprise social innovation in the academic circle, and the evaluation system of enterprise social innovation is relatively perfect. There are also many scholars who study the influencing factors of enterprise social innovation, but they do not have a systematically analysis to the influencing factors of enterprise social innovation, nor highlight the relationship between different influencing factors. At present, there are many researches on the mechanism of enterprise social innovation, but few researches on the whole process of enterprise social innovation and the mechanism of interaction. In view of this, this paper proposes two models to summarize the influencing factors of enterprise social innovation and the process and mechanism of enterprise social innovation.

II. ENTERPRISE SOCIAL INFLUENCING FACTORS "DIAMOND" MODEL

Enterprise social innovation involves every process of enterprise operation, which would be affected by many factors, from production, marketing to finance and R&D. All these process could provide republic innovation solutions to social problems. Based on social innovation in the academic world, this paper summarizes the influencing factors of social innovation in enterprises.

Porter (1990) proposed the "diamond" model to analyze how a country own overall advantage. This
paper analyze the influencing factors of enterprise social innovation with the help of USES the diamond model of Porter's competitiveness, as shown in "Fig. 1".

Corporate social innovation is a complex, diversified, multi-link dynamic process. Many factors could decide whether enterprise would do social innovation, and they could decide the intensity and dimension of social innovation as well. After studying the existing literature, many other factors like individuality, marketing, institutional, technological development, corporate characteristics etc. could affect corporate social innovation, all of which is under corporate social responsibility factor. And all these factors could affect each other.

A. Individual factors

At present, individual factors are mainly reflected in individual self-efficacy, prosocial behavior, individual innovative spirit, and individual social identity.

1) Self-efficacy of individual innovation: After Bandula put forward self-efficacy in 1997, Tierney & Farmer (2002) put forward innovative self-efficacy under the condition of Innovation scene. He thinks innovation is a belief that they can achieve innovative and get good results. He pointed out that innovation process is to generate creative ideas and solutions in working, which could solve problems. The sense of innovation self-efficacy is not only a belief, but also the whole process of individual innovation behavior. Gu yuandong and Peng jisheng (2010) verified that innovation self-efficacy has a positive effect to innovation behavior. When innovation becomes the driving force to society and organization survival, it becomes vital to inspire individual self-efficacy. Employee innovation is foundation of enterprise innovation, while social enterprises play a dominant role in social innovation. The level of innovator's self-efficacy has different influence on the decision-making process and performance of enterprise's social innovation.

2) Individual prosocial behavior: Peng et al. (2019) pointed out that prosocial behavior in organization refers to the behavior taken by individuals to promote or protect others people, other teams and organizations. It includes prosocial organizational behavior, organizational citizenship behavior, guidance and knowledge sharing awareness. Studies show that individual prosocial behavior not only improves employee job satisfaction (Biagioli et.al,2016), but also promote organizational innovation (Yu et.al, 2016) and reduces employee turnover rate (Park et.al,2016). In addition, Stel (2017) also found that, compare with teams that only focusing only on themselves, teams with strong individual prosocial behavior have a better innovation performance. Overall, individual prosocial behavior promotes the solution of social problems and organizational innovation, which prove that social problem-oriented enterprise more need to stimulate individual prosocial behavior.

3) Individual thinking mode: Schumpeter's innovation theory proposes a double-S curve of innovation. The real leap, that is, discontinuous innovation, is to change from one curve to another. Thomas. Kuhn once pointed out that "breaking the old paradigm is the only way to make new discoveries".The purpose of enterprise social innovation is to urgently solve new complex social problems, which means we need throw away the habitual way of thinking. "General Theory of Object Performance" states that discontinuity is a logical change based on logical misconduct. It need individual self-awareness escalates, breaks the original concept, forms a new thinking model, and creates new
methods to solve social problems, thereby promoting corporate social innovation. Therefore, individual thinking pattern and their value are also an important factor to the social innovation of enterprises (Choi & Majumdar, 2014).

B. Market and system promotion

1) Market push: Schumpeter's innovation theory proposes that "innovation" is the establishment of a new production function based on the recombination of production factors. One of these five factors of production is to expand a new market. Market could promote innovation, and existing empirical research also shows that market promotion is one of the reasons for social innovation (Bultu. Et. Al, 2013). As one of external environmental factors, Ruan pingnan et al. (2016) discover market environment and policy support impact innovation network systems. The more fierce the market competition, the greater the capabilities of enterprises and individuals, which greatly promote innovation. Meanwhile, Schumpeter's innovation theory proposes that innovation is a process of creative destruction. It strengthens market competition and is conducive to the spread of technological innovation fruit. It would greatly promote social innovation when we have a perfect society spread system. Wu MAO et al. (2019) pointed out that three stages of CSI (Corporate Social Innovation), namely, the initial stage of CSI based on insight, the stage of CSI value creation, and the stage of CSI value transmission and transformation, are all involved market push. Therefore, market push influences the enterprises social innovation.

2) System promotion: The first influential factors of corporate social innovation that scholars began to study are external environmental factors, and policies and systems are one of the external environmental factors of enterprises. Ruan et al. (2016) found that in addition to the market environment, policies and institutions can also affect social network innovation. From the perspective of social network, social innovation is the result of social interaction and cooperation between people and the institutional environment, cooperation and construction between people and institutional environment. Cajaiba-santana (2014) shows that corporate social innovation only make sense on a contextual institutional environment. (Tao et al.,2019) It points out that the system is divided into formal system and informal system. The lack of or incomplete system between the two will cause social problems and social innovation. Formal systems usually refer to the constraints of laws and regulations, social norms, etc. At present, scholars usually discuss the impact of the system on social innovation from an antagonistic perspective. When the early institutional environment is very complicated, avoiding and surmounting the lack of institutions is a key factor affecting social innovation(Tao et al., 2019). At the same time, social innovation will also affect system improvement. Based on the national innovation system, Ranicholson et al. (2017) points out that social innovation is a top-down collective innovation process, and provides a new mean to improve and arrange the system. While informal systems usually refer to deep-seated things such as values, social culture, ethics, etc. Corporate social innovation is superficially oriented to solving social problems, it is essentially a process of transforming and changing deep-seated ideas. The definition of social innovation taken by Bridgstock et al. (2010) is that "Social innovation is a cultural prejudice that emphasizes the importance of ideological status". Therefore, absence or imperfection of informal institutions like value belief, social culture, moral ethics, collective consciousness also play an important role in group social innovation (Tao et al., 2019).

C. Technological development

Technology itself is cyclical. Technology development can emphasize the results of technological development and innovation, and it can also emphasize the process. From this perspective, corporate social innovation can also explained that company takes social issues as a process of learning and practice, and it can also be the result of corporate social issues. No matter which angle, corporate social innovation is closely related to technological development. Rogers (2003) pointed out that the characteristics of technology mainly include the comparative advantage, compatibility, complexity, display degree and error tolerance of technology. These characteristics have different effect on decision-making, process and performance of innovation (Dong, 2013). Hong (2013) pointed out that Innovation-driven as a development strategy itself is a problem of transformation from exogenous to endogenous, that is, a mode of transforming technological progress. In order to realize enterprise social innovation. To achieve corporate social innovation, it is necessary to coordinate and match social innovation-driven development and various resources. (Cui et al, 2017). Adam Smith mentioned in The Wealth of Nations that the wealth of a country lies in the division of labor, and the division of labor promotes economic growth precisely because it can help "the invention of machinery" that could reduced labor inputs and increased labor productivity. The invention of machinery is, in a sense, an indication of innovation driven by technological development. Knowledge innovation, technology innovation and corporate social innovation usually present a synergistic effect. Therefore, technological development has an
important and irreplaceable impact on corporate social innovation.

D. Enterprise characteristics

Corporate characteristics usually refer to the characteristics of corporate innovators involved in social innovation. Every stage of company, especially the growth stage, the size of the company, the position of the company in the social network, the ability to acquire resources, and the stage of the company's technology will all affect the degree of social innovation, decision-making and performance of the company, which could mainly summarize into corporate social goals, corporate strategic orientation and corporate resource capabilities.

1) Corporate social objectives: Tao (2019) points out that non-profit organizations (such as NGOs, charities) and for-profit organizations (such as commercial enterprises) are the main participants in social innovation. The main body of enterprise social innovation is mainly aimed at for-profit organizations such as commercial enterprises. Since the introduction of CSR from the west, more and more enterprises begin to attach importance to CSR. Gipaldas (2015) and Aguilera (2007) demonstrate that the evidence shows that the main role of non-profit organizations is to protect the increasingly scarce social and nature resources, shift the focus to public interest. They participate in social innovation with altruistic moral. Social enterprises in the form of profit-making organizations are generally regarded as profit-making organizations that participate in public welfare activities with the orientation of solving social problems (Li jian et al., 2015). Wu (2019) shows that although leading companies expect to improve corporate efficiency, in the process of turning to corporate social innovation, they work with stakeholders to provide business solutions to society. Social enterprises are negation and transcendence to these non-profit organizations and commercial enterprises. In the final analysis, corporate social innovation is an innovative movement in which social enterprises target to solve social issues.

2) Enterprise strategic orientation: Based on strategic interaction perspective, Shi junwei et al. (2009) proposed a framework for analyzing the interaction of corporate social responsibility, social capital and organizational competitive advantage. Empirical evidence shows that Chinese enterprises should based on social capital to win corporate competitive advantages with a strategic transformation that surpass "charity-oriented corporate social responsibility" with "strategic-oriented corporate social responsibility". Corporate social innovation is a business pattern that

E. Stakeholders

Sheng and Yu (2018) introduced the stakeholder theory into the study of social innovation, dividing the stakeholders of social innovation according to the "interests-power" and summarized their attributes, and then chose the network governance model to balance the interests and power of all stakeholders to promote
social innovation. Since the introduction of CSR from the west, enterprises begin to pay more and more attention to CSR. The fulfillment of CSR is not only related to the internal personnel of enterprises, but also related to stakeholders. Freeman (1984) defined stakeholders as "all individuals and groups that can directly affect the realization of the organization's goals or are affected by them in the process of achieving the goals". Sheng and Yu (2018) also pointed out stakeholders determine the enthusiasm of stakeholders for social innovation attitudes and behaviors, the innovation of social innovation, and the performance of social innovation because of their different interests and power requirements, that is, the level of interests and power and their symmetry. Corporate social innovation requires multiple parties to participate, and it requires organizations to closely cooperate and innovate across enterprise boundaries and stakeholders. According to the social network theory, the formation of a local network structure among stakeholders, such as customers and suppliers, is more likely to trigger social innovation of enterprises. Enterprises even could better solve social problems under the pressure from stakeholders.

F. Opportunities

With the advent of technological ages such as digital, "Internet + " mode, artificial intelligence, etc. the social problems need to be solved by human community have become increasingly complex. At present, these problems include differences between the rich and the poor, climate change, population aging and so on. The increasing complexity of social problems and the continuous development of science and technology are both challenges and opportunities for us. Facing a uncertain future society, how to seize the opportunity to solve social problems is the core problem we have to deal with. There are a lot of researches on how the organization will develop in the future, for example, Chen Chunhua proposed "water sample organization" It adjusts the cooperation relationship among organizations according to the real needs of users. "Reshape Organization" proposes that enterprises should transform into cyan organizations in the future, whose characteristics are mainly evolved life forms, and human self-realization is the driving force and ceiling of organizational development. In additional to that, it points out that the true ceiling that affects an organization is defined by the least self-aware people in the organization. With the complexity of social problems, the uncertain would increasing in future. Organization break through disruptive innovation and become an evergreen enterprise is factors that affect social enterprise innovation.

These influencing factors that influence corporate social innovation do not exist independently, but affect each other, which could be proved from a large number of empirical studies.

III. INTERACTION MODEL OF ENTERPRISE SOCIAL INNOVATION PROCESS STYLING

Rogers (1983) believes that the diffusion of innovation has four key elements: innovation, communication (communication) channels, time and social system. Tao Quiyan et al. (2019) summarized that the current mechanism of corporate social innovation mainly focuses on knowledge sharing, innovation interaction, resource integration and stakeholder participation. Sawhney Liu Bao (2011) for reference, put forward the "innovation radar" distinguish the 12 dimension of social innovation, are as follows: product innovation, brand innovation, network innovation, channel innovation, supply chain, channel innovation, value for innovation, process innovation, organizational innovation, customer experience, customer innovation, platform innovation and solution. Among them, product, customer, channel and process are the four key dimensions of enterprise social innovation. Norgaard (1984) used the co-evolution paradigm to define the subsystems of innovation: the complex feedback mechanism between social and institutional innovation systems. Liu bao (2011) summarized the two stages of innovation of Zaltman et al. (1973), Axtell et al. (2000), and the three stages of Tiwari & Buse (2007), and divided the process of social innovation into four stages: creative generation, creative evaluation, design and development, and implementation. It also emphasizes that this process will have multiple loops and feedbacks, and that multiple activities will be crossed and parallel. Kline & Rosenberg (1986) proposed the "chain connection" model of multiple feedback loops, which represented each step of research, existing scientific and technical knowledge, potential market, invention and production process. Mei (2007) created a general stage model of innovation diffusion with overlapping and interactive stages on his basis.

Based on the above existing research and the basic characteristics of enterprise social innovation, this paper proposes the interaction model of the diffusion process of enterprise social innovation, as shown in "Fig. 2":

![Fig. 2: Interaction Model of Enterprise Social Innovation Process Styling](image-url)
Faced with existing and potential social problems, enterprises propose creative and perfect solutions. Firstly, it is necessary to analyze the twelve dimensions of enterprise social innovation to form new ideas. After that, detailed design and development need carried out, the existing resources are integrated and the initial test is conducted to see whether it is effective or not. After the initial creative scheme is proposed, an optimized scheme should be proposed based on the feedback of the preliminary test, and then the optimal scheme should be selected after evaluation. The final stage is implementation stage, and "lean innovation" can be carried out continuously based on the existing feedback iteration. In the whole process, the enterprise cannot do without the multi-stakeholder participation, innovation interaction, knowledge sharing between the implementation of enterprise social innovation. In the process of enterprise social innovation, an organization can generate creativity based on existing research, or break away from existing research and thinking, and use critical thinking to rethink the existing logical structure. In the present era of technological development and knowledge updating, it is necessary to keep alert to the identification of enterprise social opportunities. In this process, each stage is not linear and isolated, but should be overlapped and carried out at the same time and influence each other. Under such an interaction model of enterprise social innovation process, the process of enterprise social innovation is more perfect and the function mechanism of enterprise social innovation is clearer.

IV. CONCLUSION

Corporate social innovation has now become a new mechanism for solving social problems. To increase corporate social innovation needs to explore its influencing factors and mechanism. However, the current academic research focuses on the dimensions of enterprise social innovation and performance evaluation. The introduction of models is of great significance to the understanding of the influencing factors and processes of enterprise social innovation.

Based on deep analysis of the literature on corporate social innovation, this article summarizes the influencing factors of corporate social innovation, which are mainly divided into internal and external factors. It states the six promotion factors of individual factors, corporate characteristics, technological development, stakeholders, opportunities, and market policy in detail and comprehensively. Based the Porter masonry model, it construct a diamond model of corporate social innovation influencing factors, which further explained that there is also a mutual relationship between different influencing factors. In addition, in the literature review of the corporate social innovation process, this article establishes a comprehensive corporate social innovation process interaction model, explaining the various stages of corporate social innovation, and deeply exploring the relationship between each stage, that is not linear and isolated, but overlapping and parallel in multiple stages, which is of great practical significance to study the process and mechanism of corporate social innovation. The theoretical framework proposed in this paper may lacks empirical research and it need to be optimized in the
future. Corporate social innovation is an advanced version of corporate innovation + corporate social responsibility, but until now, most China's research is expand from foreign research. Therefore, it is necessary to study the origin, mechanism, status and effectiveness of corporate social innovation of China and the interaction and influence mechanism between influencing factors in Chinese. In addition, in the future, it is necessary to compare the corporate social innovation carried out by leading companies in Western countries, explore the differences between Chinese and western corporate social innovation, based on which a theoretical system of corporate social innovation with Chinese characteristics could be built.

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