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**INNOVATION STRATEGIES IN CHINESE SMES:
AN EXAMINATION OF THE ROLE OF FAMILY
OWNERSHIP, AND THE SOCIAL IDENTITY AND
REGULATORY FOCUS OF CEOS**

FAN TIEJIONG

SINGAPORE MANAGEMENT UNIVERSITY

2022

Innovation Strategies in Chinese SMEs: An Examination of the
Role of Family Ownership, and the Social Identity and Regulatory
Focus of CEOs

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Submitted to Lee Kong Chian School of Business
in partial fulfillment of the requirements for the Degree of
Doctor of Business Administration

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2022

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I hereby declare that this Doctor of Business Administration dissertation is my original work and it has been written by me in its entirety.

I have duly acknowledged all the sources of information which have been used in this dissertation.

This Doctor of Business Administration dissertation has also not been submitted for any degree in any university previously.



Fan Tiejiong

14 April 2022

Innovation Strategies in Chinese SMEs: An Examination of the Role of Family Ownership, and the Social Identity and Regulatory Focus of CEOs

Fan Tiejiong

Abstract

Innovation of small and medium-sized enterprises (SMEs) is the eternal theme and inexhaustible driving force to realize enterprise development. Since the reform and opening up, family firms have developed rapidly, and after nearly 30 years of development, some family firms in China have entered the period of intergenerational inheritance. After intergenerational inheritance, family firms may experience organizational turbulence and face great uncertainty due to the lack of management authority of family descendant CEOs. Most of the previous studies examine large enterprises, that is, the innovation of large enterprises. However, the characteristics of innovation of large enterprises are not universal; their innovation activities, innovation ability, and innovation form are not necessarily suitable for SMEs. Therefore, the level of research in China is slightly inferior to that in developed countries. A review of the relevant domestic literature reveals that research on the innovation of family firms and the intergenerational inheritance innovation of family firms is even scarcer, and theoretical breakthrough is generally lacking.

By using the qualitative research methods of multi-case study and grounded theory, this study selects seven representative SMEs to explore the relationship between CEOs and innovation strategies of family and non-family SMEs. Through interviews, field observation, online documentaries, periodical literature, newspaper reports, and other sources, a large amount of data has been

collected on seven cases. The wide range of sources provides a multiple evidence basis for the formation of concepts and the development of theories. By conducting the coding program of grounded theoretical research method, through the triple coding program of open coding, axial coding, and selective coding, the category, category relationship, and core category of each case are analyzed. Among them, the canonical model established in the coding process of each layer is verified by data. Through the development of evidence chain and triangular identification, the research conclusion is drawn:

Owing to their personal growth environment, their own abilities, and personalities, CEOs of non-family firms tend to adopt promotion focus and have a positive correlation with the exploratory strategic orientation. Family descendant CEOs are affected by family loyalty, family reciprocity, and altruism. Moreover, the tenure of professional CEOs who work for family firms is longer than that of family descendant CEOs. A series of experiences will deepen the emotional bond between professional CEOs and family firms. The deeper the emotional bond, the more likely professional CEOs are to adopt prevention focus and exploitative strategic orientation. Given that family founder CEOs are influenced by entrepreneurial motivations and family emotional ties, their innovative decision-making and management behavior are characterized by contradiction and opposition. They are likely to think and act from the perspective of integrating contradictions, and will tend to adopt a combined regulatory focus, exploratory innovation strategy, and development innovation strategy at the same time. Hence, social identity theory was seen to operate influencing the innovation strategies of the family business CEOs in varying degrees.

Keywords: ambidextrous innovation, family ownership, social identity, regulatory focus theory

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Last but not least, learning makes me happy and makes me progress!

Fan Tiejiong

14th April, 2022

Chapter 1 Introduction

1.1 Research Overview

1.1.1 Research Background

A family business, defined by the family's ownership and control of the business, and the vision of how the business benefits the family, may span several generations. As one of the oldest organizational forms in human history, the important position of family business in the world economy cannot be ignored. Family firms account for about 80 percent of the total number of global enterprises, and the business performance of family firms is generally higher than that of other enterprises. Many family firms are successful. About 40 percent of the world's top 500 enterprises are controlled and operated by families, such as Walmart, Siemens home appliances, and Mars Food. Moreover, many large companies grew from small and medium-sized family firms, such as Procter & Gamble, Johnson & Johnson, and Disney. According to the 2021 Global Family Business Index released by Ernst & Young, the top 500 global family firms generated a total revenue of US \$7.28 trillion, distributed in 45 jurisdictions, and employed 24.1 million employees in 2020. In terms of revenue, the sum of these enterprises forms the world's third-largest economy.

In China, due to the far-reaching influence of family culture, Chinese family firms have their own characteristics. Chinese family businesses are an ingenious combination of Chinese traditional culture and modern enterprise system, and such combination has its unique competitive advantage. The profitability and growth ability of Chinese family firms are even better than that of Chinese state-owned listed companies and private listed non-family firms. With the deepening of the reform and opening up, family businesses in China have achieved great progress and have become an important force in China's economy. According to the *Development of Chinese Family Enterprises Report in 2021* released by PwC, family firms account for 55 percent of the global total. Family firms in mainland China account for 51 percent and 28 percent of the growing investments in innovation and R&D, respectively, in the world. Moreover, family firms in mainland China account for 49 percent and global family firms account for 50 percent of new products and innovative services introduced in the world. New Hope Group, Midea Group, Country Garden, and Wahaha Group are some of the top family

firms in China. Hence, they have made outstanding contributions to China's economic development and play an important role in promoting China's economic transformation.

Chinese family firms have developed gradually after the reform and opening-up. After nearly 30 years of development, some family firms in China have entered the period of intergenerational inheritance. After this stage, family firms may experience organizational turbulence and face great uncertainty due to the lack of management authority of family descendant CEOs. Compared with the previous generation of entrepreneurs, the second generation of enterprises have better education and cultural quality. Influenced by Western modern enterprise management, their educational background and growth experience provide them with unique perspectives on the future development direction and development mode of the original enterprise. In fact, the smooth succession of family firms is not only the premise for their sustainable growth, but also the basis for the continuation of family spirit and the preservation of social wealth. Moreover, successful intergenerational inheritance is not only the premise of the sustainable development of family firms, but also ensures the stable development of the national economy. However, how to inherit family businesses effectively has become a major problem of family firms and scholars. According to the 2020 Chinese Family Business White Paper released by Deloitte, family members still manage 50 percent of the family business, but up to 30 percent of family members said they were unwilling to contact the family affairs management. As successors of inherited enterprises, a growing number of second-generation successors are losing interest in taking over family firms. They are more inclined to engage in work related to their interests but to pursue their own businesses. Owing to the particularity of the era of the rise of family firms in China, the time gap between the transfer of power of most family firms is small. Hence, the succession problem within family firms has changed from individual cases to group events with the same characteristics.

Innovation is important for the development of family firms. Since 2020, the COVID-19 pandemic has forced family firms to make major strategic decisions for innovation not only to survive the crisis, but also to achieve long-term business development. The *Global Family Business Survey* in 2021 (as shown in Figure 1-1) released by PwC presents some innovation strategies of family firms:

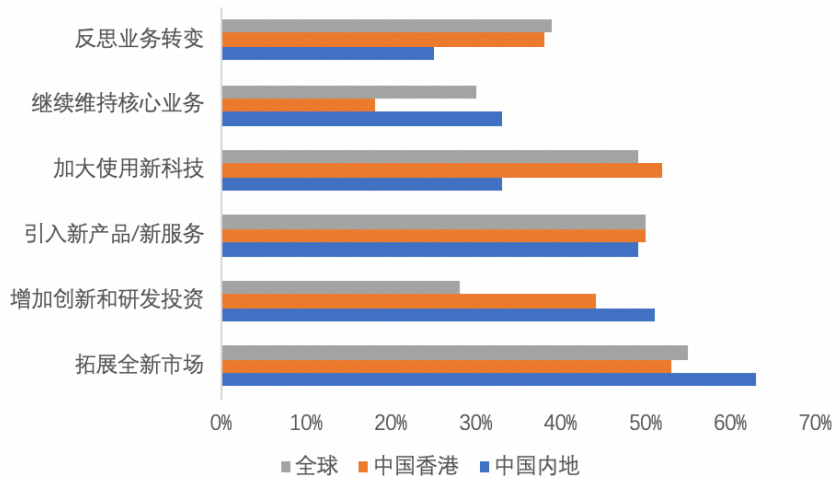


Figure 1-1 2021 Global Family Business Strategic Goals

The strategic focus of family firms in mainland China in the next two years is to expand new market customer base (63 percent; global: 55 percent), increase innovation and R&D investment (51 percent; global: 28 percent), and introduce new products/innovative services (49 percent; global: 50 percent). In recent years, due to the impact of external factors such as the tense trade situation between China and the United States and the recent pandemic on the global supply chain and distribution channels, the importance of “dispersing risks and avoiding mutual loss” is self-evident. In addition to market expansion (53 percent) and product/service diversification (50 percent), 52 percent of Hong Kong enterprises will increase the use of new technologies as the strategic focus, and 45 percent of enterprises will take survival or maintaining their core business as their primary goal.

Since 2020, due to the economic impacts of the COVID-19 pandemic and the adoption of the “new normal,” economic growth has slowed down and the economic structure has been escalating. The traditional innovation strategy of relying on foreign mature technology or moderately updating the existing production path by purchasing advanced equipment no longer meets the needs of China’s enterprise development and industrial upgrading. Moreover, with the advent of the digital economy, the development advantages of the Internet+ economic paradigms such as big data, cloud computing, artificial intelligence, and blockchain have gained prominence. With the increasing popularity of industrial informatization, the increasingly fierce technical

competition, and the rapid shortening of commercialization cycle, enterprises will face even more challenges. Most family founder CEOs have aged, and most family firms have to face the challenges of succession, transformation, and innovation. Reasonable formulation of innovation and development strategy and effective technological innovation are the key to ensure the long-term development of enterprises. Especially in today's increasingly complex market environment, enterprises must respond to the challenges brought about by environmental change. To realize long-term prosperity, they must implement diversified technological innovation. What factors affect the innovation performance of enterprises? Do family firms and non-family firms have different preferences for innovation strategies? What is the impact of family business inheritance on innovation?

1.1.2 Research Questions

The innovation of small and medium-sized enterprises (SMEs) is the eternal theme and inexhaustible driving force to realize the development of enterprises. Its innovation is an important part of China's national innovation system, the main body of technological innovation, and an important source of technological innovation. Most of the previous studies on firm innovation examine large enterprises, that is, the innovation of large enterprises. However, the characteristics of innovation of large enterprises are not universal, and their innovation activities, innovation capabilities, and innovation forms may not be suitable for SMEs. For family businesses, the particularity and complexity of the family are important factors affecting the strategic innovation of the enterprise. Under the background of the implementation of innovation-driven strategy and the transformation and upgrading of family firms in China, innovation will be a major issue among family firms in China. Thus, domestic academic circles must promote theoretical research on family firm innovation.

However, the literature on the innovation strategy of Chinese SMEs, especially family SMEs, has gaps. Therefore, this study selects seven enterprises, including Company A and Company C, as samples for in-depth and rooted research. This study mainly explores the relationship between CEOs of family and non-family SMEs and innovation strategy.

The influence of CEOs on the decision-making involved in and the implementation of technological innovation has always been the focus of academic research. Both family and non-family firms need innovation, and CEOs can influence firms' innovation performance to a great extent. For family firms, their uniqueness can also affect the CEOs' choice on innovation strategy. However, only a few relevant studies discuss such influence. For the CEOs of enterprises, their influence on the strategic decision-making of enterprise technological innovation is important. However, under the influence of enterprise ownership, the identity characteristics of the CEO in an enterprise will have an important impact on the choice of enterprise innovation strategy. Research has pointed out that CEO cognition is an important factor affecting enterprise technological innovation and strategic decision-making. Moreover, most of the previous studies are conducted from the perspective of upper echelons theory, mainly from the individual characteristic dimensions of CEOs, such as education level, gender, age, work experience and other demographic factors. From the existing research results, combined with the influence of enterprise ownership, research on the choice of enterprise innovation strategy from the characteristics of the enterprise identity represented by CEO is lacking. Therefore, this research studies how the CEOs of family firms and non-family firms choose innovation strategies by using grounded theory and investigating different enterprise types.

1.2 Research Significance

The choice of innovation strategy is one of the important contents in the current research on innovation theory. Academics have studied family firms for decades, but the research on the innovation of SMEs, especially small and medium-sized family firms, is only emerging. In recent years, the research on enterprise innovation in Western literature is concentrated. By contrast, although China has more research in the field of innovation, research on distinguishing enterprise ownership, especially in the field of family firm innovation, has only started. Therefore, the level of research in China is slightly inferior to that in developed countries. A review of the relevant domestic literature reveals that research on the innovation of family firms and the intergenerational inheritance innovation of family firms is even scarcer, and theoretical breakthrough is lacking. Therefore, the theoretical angle and case study of this research

are of great significance to improve the research on innovation and R&D of family firms.

1.2.1 Theoretical Contribution

From the ownership perspective of family firms and non-family firms and by using grounded theory and investigating different enterprise types, this study discusses how the CEOs of family firms and non-family firms choose innovation strategies. Previous studies on enterprise innovation model mostly focus on the models under other classification standards, such as subversive innovation and maintenance innovation, product innovation and process innovation, management innovation and technological innovation, breakthrough innovation and gradual innovation. Although Western literature has discussed the variables of type of innovation and development, they tend to be separate, that is, from two different antecedent variables. Hence, this study investigates its influence on the above two kinds of innovation, rather than starting from the different dimensions of the same variable to investigate the prepositive relations with these two kinds of innovation model. This study discusses in depth the formation mechanism of the innovative strategic model adopted by the CEOs of family firms and non-family firms, thereby supplementing existing theory. This study makes a theoretical contribution to the choice of enterprise innovation strategy. Two key points are involved in the choice of enterprise innovation strategy: one is the different innovation modes according to the type of enterprise and the other is the CEO's identity, which affects the choice of innovation strategy.

1.2.2 Practical Implication

First, the research results of this study enhance the understanding of family firm CEOs and the decision-making involved in enterprise innovation strategy. Under the guidance of social identity theory, this study distinguishes CEOs of family firms from CEOs of non-family firms. From the perspective of exploratory innovation and development innovation, this study discusses how the CEOs of family firms and non-family firms choose innovation strategies. The insights provide new theoretical support for CEOs to review and evaluate their own enterprise innovation models. According to the findings of this research, CEOs should not only have a deep understanding of the innovation status and existing problems of enterprises under different types of ownership; they

should also have an insight into the causes of the existing innovation model, so as to form a comprehensive and scientific understanding of the enterprise innovation model.

Second, the results of this study can help CEOs in choosing the optimal innovation model to improve enterprise performance. CEOs identify the innovation mode applicable to enterprises according to their own enterprise types, find the gap when comparing with the current innovation mode, and scientifically adjust the current innovation mode, so as to determine the suitable innovation mode for a specific type of enterprise.

Finally, according to theory, the CEOs of family and non-family firms have a deep understanding of the preferences of their innovative orientation. They can take measures to adjust the company's innovation strategic orientation, such as improving their educational level or working with professional managers, which may also help CEOs find ways to choose the most suitable innovation strategy and enhance the company's competitiveness. The case analysis in this research provides valuable reference for enterprise CEOs. Although the subject of the case analysis is only seven companies, their innovation model can provide experience and lessons for other enterprises. In addition, on the basis of the research results, this research puts forward a series of feasible and scientific suggestions, which are of value to enterprise managers.

1.3 Research Design

The Figure 1-2 illustrates the research design of this study.

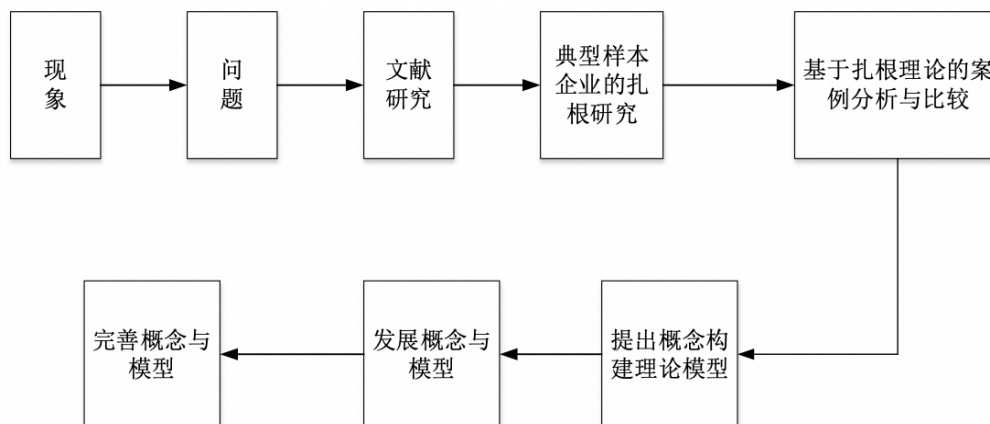


Figure 1-2 Research Design

Despite these comparisons between family and non-family firms in innovation process and performance, few studies have taken a closer look to see whether family and non-family firms have their own preferences toward exploratory or exploitative innovation, and how their CEOs make different decisions based on their different firm and personal backgrounds.

In order to more accurately reflect the influence of family ownership and CEO types, this study selects two non-family firms in addition to family firms. By comparing the choice of innovation strategies of family and non-family SMEs, the role of family ownership can be better revealed and the conclusion drawn from the case analysis can be more objective.

On the basis of in-depth observation, in-depth investigation, literature review, and data from CEOs and the innovation strategies of family and non-family SMEs, this study presents the specific academic problems to be studied in this research. By using the case study method, a representative family and non-family SME is selected as the research object, and then in-depth interviews and first-hand data collection are carried out. However, as a check on the findings from the study of family firms, two non-family firms are included for comparison and contrast to see if family firms are indeed unique.

Through the triple coding process (open coding, axial coding, and selective coding) of grounded theory, the category, category relationship, and core category of each case are analyzed. Among them, the canonical model established in the coding process of each layer is verified by data. Through the development of evidence chain and triangular identification, we draw the theory rooted in data, and obtain the preliminary conclusion of the case study around the comparative analysis of core categories.

On the basis of the comparison of case categories, this study puts forward the common elements of “innovation strategy choice.” Moreover, on the basis of the comparison of case category relationships and core categories, this study uncovers their mutual relationship, constructs the innovation strategy selection model of family and non-family SMEs, and expounds the action mechanism of the model in detail. In this process,

case independent coding, cross case comparative analysis, and integration are used to increase the persuasiveness and scientificity of the conclusion.

By conducting cross-case analysis, this research appropriately introduces relevant literature to enrich the extant studies, realizes effective research on the innovation strategy choice theory of family and non-family SMEs, and obtains valuable conclusions.

Chapter 2 Literature Review

2.1 Concept and Characteristics of Family Firm

2.1.1 Concept Definition of Family Firm

The reasonable definition of family firm is the basis of all relevant research. Although the importance of studying family businesses has been recognized, the academic community has not reached a consensus on the definition of family business. Generally, the current research defines family business from the perspective of participation factors, mainly including ownership, management rights, and intergenerational inheritance (Fahed, 2009).

From the perspective of enterprise ownership, scholars believe that the proportion of shares held by family firms is the standard to define family firms (Lansberg, 1988). Specifically, most scholars define 10–60 percent of family shareholding as a family firm (La Porta et al., 1999; Faccio & Lang, 2002). This definition has been widely recognized in the early stage of the research on family businesses because it is conducive to quantitative research. However, the standard of shareholding ratio has not been finalized: in decentralized enterprises, even if the equity owned by a family is less than 10 percent, the family has control of the enterprise. A family must have more than 50 percent of the shares in a family firm to have absolute control. With the development and growth of the enterprise, the shares held by the family may be gradually diluted; nonetheless, they remain in charge of the management of the enterprise. Therefore, using shareholding ratio alone to define family firms may be biased.

From the perspective of management rights, some scholars define a family firm as an enterprise in which at least two generations of family members participate in the operation and management of the enterprise (Ward, 1987). Chinese scholar Sun Zhiben (1995) believes that in family firms, family members should be able to manage the enterprise directly by serving as senior managers, or the family indirectly masters the management rights of the enterprise by hiring professional managers. This definition does not consider the enterprise equity held by the family, but only whether the family members manage and control the strategy, operation, and culture (Fahed, 2009). This

definition is not easy to quantify and does not take the situation into account in which the family shareholding ratio is too small and the enterprise changes owners.

According to the two definitions above, most scholars believe that an enterprise with ownership and management rights owned by one or more families is a family firm (Lansberg & Astrachan, 1994; Chu Xiaoping, 2004). Ye Yinhua (1999) believes that family firms should meet the following requirements: (1) the proportion of family holdings is higher than a certain share; (2) family members hold the positions of the main managers of the enterprise, such as chairman or general manager; (3) more than half of the company's board seats are held by family members. Pan Bisheng (1998) classifies family firms according to the different degrees of family ownership of enterprise management and control: (1) family ownership and management rights in enterprises; (2) the family holds the main management rights and partial ownership of the enterprise; (3) the family owns only part of the ownership, but hardly controls the management rights of the enterprise.

Although the above definition combines management power and control power to study family businesses, it ignores another important attribute of family businesses heritability. Therefore, Aronoff et al. (1995) emphasizes the inheritance of the two powers among family members. Daily and Thompson (1994) point out that the definition of family business must meet the condition that an intergenerational inheritance has been completed. Most of China's family founder CEOs have not been replaced because their firms have been established only for a short time. Therefore, on the basis of previous studies and China's national conditions, Chinese scholar Dou Junsheng (2008) comprehensively considers a number of criteria such as family participation, family's operation and strategic control over the enterprise, and whether to retain the enterprise in the family when defining the family firm, and comprehensively defining and classifying the family firm. On the basis of these considerations, this study believes that a family business refers to the organizational form in which the ownership or management rights of the enterprise are controlled by one or more families, and these rights would be reasonably and legally passed on to the family's descendants.

2.1.2 Definition of Family Business Intergenerational Inheritance

Intergenerational inheritance of a family business is the focus of family business research. This aspect is also the foundation of family businesses, and important challenges are encountered in the process of inheritance. However, researchers have many disputes about the definition of intergenerational inheritance of family firms. According to Dou Junsheng (2008), the intergenerational inheritance is roughly divided into six types: (1) the replacement of enterprise leaders; (2) the leadership of the enterprise is transferred from the previous generation to the next generation; (3) the ownership of the enterprise is transferred from the previous generation to the successor; (4) the management or control of the enterprise is transferred from the previous generation to the next generation; (5) the management rights and ownership of the enterprise are transferred from the previous generation to the next generation; (6) enterprises pass from the previous generation to the next generation. Despite slight differences in the views listed above, in essence, the purpose of intergenerational inheritance of family firms is to ensure the continuity of wealth, reputation, and power of families and enterprises. Intergenerational inheritance is the process in which the incumbent of the family business transfers power and position to the designated family successor. The starting point is the successor's entry into the firm and the end point is the successor's exit from the firm (Chao Shang, 2002). The intergenerational inheritance of family firms is not simply a power transfer event, but a long-term process with different stages. Longenecker (1978) proposed the concept of inheritance process, which has been recognized by researchers. Therefore, models based on process view have been proposed successively, including Handler's (1989) three-stage model, Longenecker and Schoen's (1991) seven-stage succession model, Dunn's (1999) anxiety analysis model, and Bruno's (2002) relay race model. These models divide the process of family intergenerational inheritance in great detail and consider the interaction and role adjustment process between inheritors and heirs in the model, which has certain guiding significance.

2.2 Innovation Strategy

2.2.1 Innovative Duality Theory

The theoretical connotation of innovation duality is recognized, that is, under the same research framework, enterprises realize exploratory innovation and exploitative

innovation at the same time (Gibson & Birkenshaw, 2004). Both exploratory innovation and exploitative innovation are innovation activities with knowledge as the core. However, the two have essential differences. Exploratory innovation reflects the flexibility and experimentation of innovation activities, involving search and discovery, R&D innovation, technological change, and risk-taking (March, 1991). Exploratory innovation emphasizes the pursuit of new knowledge and often uses divergent thinking to produce new innovative ideas and research results. In the process of such innovation, fundamental or breakthrough changes will take place in technology. Innovation generally requires a large amount of investment and is accompanied by high risks. However, once successful, the new innovative output will win a wider market share and more competitive space for enterprises, and is expected to continue to make profits (Gibson & Birkenshaw, 2004; Lavie et al., 2010). Exploitative innovation is an innovation activity with the basic purpose of improving efficiency, including product upgrading, technology upgrading, structural improvement, and channel renewal (Tushman & O'Reilly, 1996). Unlike exploratory innovation, exploitative innovation focuses on the exploitative and development of existing knowledge resources. Such innovation activities tend to use focused thinking to improve and upgrade existing products or technologies according to the demand characteristics of the product and technology market (Jansen et al., 2006). Compared with exploratory innovation, exploitative innovation generally requires less investment, has low risk, and clear market prospect, so it is often conducive to the short-term growth of enterprise income.

Studies have confirmed that exploratory innovation and exploitative innovation are indispensable for enterprises to achieve sustainable development (Lubatkin, 2006; O'Reilly & Tushman, 2008). If enterprises excessively pursue exploratory innovation, then they may easily form radical behavior and fall into the “failure trap,” that is, the reciprocating cycle of exploration and failure (Levinthal & March, 1993). This path stems from the following characteristics of enterprises: most innovative ideas are unrequited. Given that a few effective new ideas cannot match with existing experience or technology, they may perform poorly due to lack of relevant experience in the early stage of application. Being keen on exploratory activities such as experimentation and reform will increase the opportunity cost and sunk cost of enterprises. Without sufficient financial support, the cash flow of an enterprise is unlikely to be turned

around before its innovative achievements win market recognition, and even bankruptcy is a risk (Andriopoulos & Lewis, 2009). Similarly, the excessive pursuit of exploitative innovation will make the behavior of enterprises too conservative and form path dependence, which is not conducive to the long-term development of enterprises (Levinthal & March, 1993). Exploitative innovation mostly refers to the improvement and upgrading of technologies or products that have been recognized by the market. The cost of innovation is small, the cycle is short, and the income is determined, so enterprises tend to pursue immediate interests and give up the exploration of technological change (March, 1991). Once the market environment changes, these enterprises are likely to fall into a passive situation and lose their competitiveness, that is, the “success trap.” The permanent prosperity of enterprises must take short-term efficiency and long-term flexibility into account. Therefore, the sustainable development of enterprises must depend on the duality of innovation. Short-term benefits are obtained through exploitative innovation, whereas exploratory innovation wins future technology market competitiveness (Smith & Tushman, 2005; Lubatkin, 2006).

2.2.2 The Realization Mechanism of Innovative Duality

Relevant studies mainly explore the realization mechanism of innovation duality from three aspects: organizational structure, organizational situation, and senior management team. In terms of organizational structure, relevant studies mostly use the perspective of separation to distinguish exploratory innovation from exploitative innovation in space or time. Specifically, scholars that hold the spatial separation view tend to put exploratory innovation and exploitative innovation into different business units for organizational design (Jansen et al., 2009; Raisch & Birkenshaw, 2008). Exploratory innovation and exploitative innovation have different requirements for thinking structure, ability composition, task objectives, and other factors. Dealing with this conflicting task framework leads to operational inconsistencies and practice conflicts. Therefore, individuals in the same business unit cannot produce exploratory behavior and exploitative behavior at the same time (Kauppila, 2010). The research on the concept of time separation holds that enterprises should separate exploratory innovation and exploitative innovation in time, that is, exploratory innovation in one period of time

and exploitative innovation in another period of time, so as to achieve the sequential balance of the two types of innovation (Simsek, 2009). According to theory of power change, the concept of time separation emphasizes the matching between organizational strategy and external environment. In a dynamic environment, exploratory innovation is suitable for improving the potential competitiveness of an organization; whereas in a stable environment, exploitative innovation is suitable for obtaining short-term benefits. Whether it is space separation or time separation, the research on organizational structure is based on the “distinction” mechanism, and explores the realization path of innovation duality through the analysis of factors in an organization. This kind of research is usually accompanied by the analysis of “integration” mechanism, which holds that the separate innovation activities must be unified under the same strategic intention and behavior framework. For example, Jansen et al. (2009) divide the integration mechanism within the organization into executive team level and organizational level. They believe that the reward mechanism and behavior integration of senior management team, organizational connectivity, and cross-functional interfaces unify the separated exploratory innovation and exploitative innovation, and play a mediating role between the separation of organizational structure and the duality of innovation.

The literature from the perspective of organizational context puts forward different views from the perspective of organizational structure, which holds that enterprises should carry out exploratory innovation and exploitative innovation in the same business unit at the same time (Simsek, 2009). Scholars point out that the traditional concept of structural separation is often designed from top to bottom. This approach is not conducive to stimulate employees’ enthusiasm for innovation (Kauppila, 2010). Especially when the external environment changes greatly, enterprises must constantly explore new business opportunities while ensuring business efficiency. Under such conditions, promoting exploratory innovation and exploitative innovation through organizational context design is in line with the needs of enterprise development (Gibson & Birkenshaw, 2004). This view holds that the fundamental driving force of organizational innovation comes from the innovation ability of organizational members. To realize the duality of innovation, organization members need both exploitative ability and exploration ability, and the appropriate organizational situation provides a guarantee for this process. In particular, organizational culture shapes specific

organizational situations. Exploring the formation mechanism of duality from the perspective of organizational culture has become the focus of this kind of view. For example, on the basis of empirical research on Chinese high-tech enterprises, Yang et al. (2014) find that collectivism-oriented culture enhances the sense of collective responsibility of organization members, reduces the social passivation effect, coordinates exploratory innovation and exploitative innovation in the process of knowledge creation, retention, and transfer, and achieves duality. Lin and McDonough II (2011) point out that organizational culture with knowledge sharing and organizational learning as the code of conduct effectively resolves the conflict between explorative and exploitative. However, no unified conclusion has been obtained on which type of organizational culture effectively promotes duality.

Whether designing a separate organizational structure or creating a suitable organizational situation, the senior management team plays a fundamental role (Lin & McDonough II, 2011). A growing number of studies have begun to pay attention to the impact mechanism of senior management team on innovation duality. The cognitive resources of the top management team and the internal and external behavior process of the team enable the top management team to have a sufficient information base and strategic reference, which are conducive to solving organizational conflicts and challenges effectively (Tushman & O'Reilly, 1996). Studies have found that heterogeneous and diverse senior management teams are conducive to realize the importance of the two innovation activities and balance the relationship between them. However, the heterogeneity of senior management team is mostly regarded as a double-edged sword. The increase of differences among executives may easily cause cognitive conflict and relationship conflict, which will hinder the formation of unified decision-making. In this scenario, shaping effective motivation or goals in the team is necessary to enhance the connection and trust among members (Auh & Menguc, 2005). In essence, the fundamental effect of team heterogeneity on innovation duality is that heterogeneous performance effectively expands the knowledge reserve and cognitive scope of the team. The differentiated cognitive framework and balanced and unified behavior model in the top management team enable the organization to overcome shortsightedness, clarify the needs of future development, achieve decision consistency

in different strategic directions (Lubakin, 2006; Smith & Tushman, 2005), and actively promote the formation of duality.

Over the years, scholars have continuously explored the formation mechanism of innovation duality and achieved fruitful research results in corresponding fields. However, at the senior management team level and from the perspective of organizational structure and organizational context, only the impact of internal factors on innovation duality is considered. With the increasingly fierce market competition, enterprises can no longer “divorce oneself from reality and act blindly.” They must strengthen knowledge exchange with the outside world and promote diversified innovation activities through brainstorming. Therefore, scholars call for considering the relevant factors inside and outside the organization at the same time, so as to improve and deepen the understanding of the realization mechanism of innovation duality.

2.3 Social Identity

2.3.1 Background of Social Identity Theory

Social identity theory mainly explains the discrimination between inner groups and outer groups. It is an important theory that explains group behavior by exploring the problems of enterprises, special groups, and individual health. The theory originated from psychology and was first put forward by psychologists Tajfel et al. in the 1970s on the basis of the research on the simplest group paradigm.

Social identity theory points out that individuals form their identity in their own group through classification, and then produce their identity to their group and prejudice to their external group. When an individual identifies with his group, he will think that his group is better than other groups; hence, prejudice and conflict between the two groups will arise. By contrast, when individuals cannot identify with their group, they will develop a higher tendency of leaving their team, and the idea of finding a team that they can identify with will increase.

2.3.2 Dimensions of Social Identity Theory

In essence, social identity belongs to psychological identity, which is regarded as the degree of consistency between group members and themselves after perceiving the group. Through this cognitive process, the matching between group goals and individual goals is improved to a certain extent. In this process, individuals usually have a certain emotional relationship with their own group. To some extent, this association shows emotional dependence. In addition, it produces positive or negative views toward the group. Therefore, social identity generally includes three parts: cognition, emotion, and evaluation.

(1) Cognitive Social Identity

Tajfel (1978) points out that an individual has an overall perception of the characteristics and attributes of his own group, for example, what kind of material, spiritual or psychological satisfaction the group can bring to itself, or the similarities or differences among the group members. Self-classification theory points out that comparing multiple groups is an important part of cognitive identity. Through comparison, individuals classify themselves into a certain group, so as to form emotional contact with the group.

(2) Emotional Social Identity

Ellemer (1999) points out that emotion is an important aspect of social identity. An individual's emotional dependence on a group provides a driving force for the communication and exchange of members in the group. Through communication, the intimacy between members will increase, a good trust relationship will be established, and psychological comfort will be obtained. These characteristics enhance the loyalty and sense of responsibility to the group. Emotional social identity directly promotes the behavior of members, and makes members regard the group goal as their own goal.

(3) Evaluative Social Identity

Tajfel (1978) defines evaluative social identity as "the positive or negative value connotation of the concept of individual's group or group membership." In addition to the cognition and emotional connection with the group, individuals put forward their

own views on the behavior, phenomena, and relationships in the group. If the group brings a sense of insecurity and oppression to its members, then the members will have a negative evaluation of the group. By contrast, if a group brings dignity, growth, and happiness to its members, then the members will have a positive evaluation of the group.

The cognition, emotion, and evaluation of social identity are closely related and different from one another. Cognition is the basis for members to classify themselves into a group, emotion is the driving force for members to show various behaviors in the group, and emotional identity and evaluation identity are produced in the interaction among group members. The higher an individual's satisfaction in the group, the stronger the emotional dependence on the group, and the stronger the preference behavior within the group.

2.3.3 Basic Process of Identification

Social identity theory has three parts: social classification, social comparison, and positive distinction.

(1) Social Classification

The first process of social identity theory is social classification. Social classification shows the emergence and operation process of social groups, which is the basis of group cognitive behavior (Hogg & Terry, 2000). Social classification reflects the similarities between internal groups and differences between external groups, such as nationality, interest, religious belief, and group category. Once individuals are socially classified and put themselves into this group attribute, they will self-label the attribute of the internal group. Through this classification, established resources are effectively allocated to group members.

(2) Social Comparison

The second process of social identity is social comparison. It plays an important role in social identity theory. Specifically, when individuals regard themselves as belonging to a group, they will compare the group with other groups. If the members of a group are in a low position for or have a negative evaluation of the group for a long time, the

members of this group may change their position in the group. If this method fails, they will seek to leave their current group. Therefore, social comparison has evaluative and differential value.

(3) Positive Differentiation

The third process of social identity is positive distinction. The behavior of individuals or groups is stimulated by the need of self-motivation, which is an important hypothesis of social identity theory. Once an individual's self-motivation is satisfied, his expertise in the group will be displayed. This display will show that he is superior to other team members in the group. However, this display also leads to resentment and prejudice among external groups, which makes it possible for internal groups to divide into smaller teams.

2.3.4 Theoretical Review

Since social identity theory was proposed nearly 40 years ago, it has been gradually accepted by theoretical and academic circles, and has undergone continuous development. In the research and development of social identity theory, it is used to explain collective behavior, enterprise research, special groups in society, consumer behavior and other groups. In enterprise research, social identity theory is used to explain the problems in organizations. The rationale is to explore the optimal operation mechanism of enterprises and create a good team atmosphere and working atmosphere for organization members, so as to ensure the profitability of enterprises and the realization of organizational objectives. Until now, the localization research of social identity theory is still in its infancy. In the future, using social identity theory to explore and explain the innovation decision-making of SMEs in China is an emerging topic worthy of attention.

2.4 Regulatory Focus

2.4.1 The Concept of Regulatory Focus

The concept of regulatory focus is based on the principle of hedonism. In the process of seeking happiness and avoiding pain, individuals have two different motivation systems for self-regulation, namely, promotion focus and prevention focus (Higgins, 1997). Promotion focus reflects an individual's needs for growth and self-realization, that is, "what will I gain if my goal is achieved?" Prevention focus reflects an individual's need for security and stability, that is, "what will I lose if the goal is not achieved?" Regulatory focus has two existing states, namely, chronic regulatory focus and situational regulatory focus. Long-term regulatory focus is a relatively stable individual difference, which is mainly affected by the early growth experiences of individuals (Keller & Bless, 2006). In the research process, the self-report scale is generally used for measurement, including the general adjustment focus scale (Higgins et al., 2001) and the adjustment focus scale suitable for work situation (Neubert et al., 2008). The focus of situational regulation is short-term temporary state, which is mainly activated by situational elements and will change with the change of environment (Higgins, 2001). Experimental manipulation is generally used in the research process. The commonly used experimental manipulation includes three forms: autobiographical memory task, task description framework, and self-guidance type (Jin et al., 2016).

2.4.2 Opposition between Promotion Focus and Defense Focus

The different characteristics of promotion focus and defense focus determine that they are in opposition in terms of action mechanism and effect. Promoting focus encourages individuals to achieve their goals by "approaching," individuals pay more attention to growth and breakthrough (Higgins, 1997), pursue the ideal state through exploration, experiment, and innovation (Freitas et al., 2002), and improve the possibility of success (Tuan Pham & Chang, 2010). In terms of its impact on leadership, promotion focus makes leaders tend to participate in exploratory activities (Ahmadi et al., 2017), pay attention to the efficiency of decision-making (Gamache et al., 2015), make acquisitions easy to carry out, and the number and scale of acquisitions are larger. Moreover, promotion focus enables leaders to motivate subordinates to change constantly, makes breakthroughs, and pursues new visions, which lead to

transformational leadership behavior (Hamstra et al., 2014). Accordingly, it stimulates the promotion focus of subordinates, thereby improving their emotional commitment (Delegach et al., 2017), enhancing creativity, reducing their deviant behavior, and increasing their knowledge sharing behavior (Li et al., 2014). With high promotion focus, obtaining the positive leadership evaluation of subordinates becomes easy.

Defense focus enables individuals to achieve their goals by “avoiding.” Individuals pay attention to rules and responsibilities (Higgins, 1997), and achieve the “should” state by emphasizing responsibilities and avoiding risks (Kark & Van Dijk, 2007). In terms of its impact on leadership, defense focus makes leaders tend to participate in development activities (Ahmadi et al., 2017), pay attention to the quality of decision-making (Gamache et al., 2015), and the number and scale of acquisitions are small (Gamache et al., 2015). Defense focus also enables leaders to impose strict requirements on subordinates, restrict subordinates by implementing rules through negative feedback and punishment, set clear codes of conduct for subordinates, and supervise and correct subordinates’ behavior and performance, which show exception management and contingency punishment in transactional leadership (Johnson et al., 2017). Accordingly, it stimulates the defense focus of subordinates, so as to improve their normative commitment (Delegach et al., 2017), reduces their creativity, and reduces their deviant behavior and knowledge sharing behavior.

Therefore, although promotion focus and defense focus are the motivation to meet individual needs, they represent individual different goals and behavior tendencies, and finally bring opposite effects to leadership behavior, leadership decision-making, and leadership’s influence on subordinates.

2.4.3 Promoting the Coexistence of Promotion Focus and Defense Focus

Although most of the current empirical studies on regulatory focus study the influence of promotion focus and defense focus separately, scholars have recognized the possibility of the coexistence of these two regulatory focuses when this concept was first proposed (Higgins, 1997). They believe that promotion focus and defense focus are two orthogonal self-regulation systems that exist at the same time at any time. Only

when triggered by different situational elements will a specific regulatory focus be dominant, which will affect individual behavior preferences (Crowe & Higgins, 1997).

The biggest challenge to the application of contradiction perspective at the individual level is that the traditional psychological view holds that individuals have a strong tendency to maintain consistency (Heine & Buchtel, 2009). Especially in Western society, tension is likely to cause individual cognitive disorder. To alleviate the state of imbalance, individuals will eventually choose to retain only one side of the tension. Therefore, for a long time, contradictory views have not been accepted. However, in recent years, people have begun to find indirect evidence supporting the contradictory perspective. For example, in the research on the field of negotiation, negotiators who adopt win–win strategies show both egoistic and altruistic motives (Nauta et al., 2002). According to this logic, the promotion focus and defense focus of the same motivation, although the content is opposite, should also exist the possibility of coexistence. The latest research on cognitive dissonance theory provides new evidence for such inference. Scholars have found that inconsistency does not always lead to imbalance and even individual discomfort. Individuals sometimes do not realize inconsistency, or they do not necessarily perceive imbalance. For example, when a positive self-image is less important or inconsistency may bring potential benefits (Cooper, 2007), people will choose to maintain “inconsistency” rather than adjust or give up the side of tension to maintain consistency.

In empirical research, scholars found that the same leadership behavior may bring high-level promotion focus and defense focus at the same time. For example, moral leadership cannot only improve the focus of promoting moral regulation, but also improves the focus of defensive moral regulation. Most of the results of empirical studies show that the promotion focus and defense focus are not statistically correlated (e.g., Neubert et al., 2008) or weakly positively correlated (e.g., Ahmadi et al., 2017). The meta-analysis of Gorman et al. (2012), which was based on 11,765 samples, shows that the correlation coefficient between the two regulatory focuses was only 0.09. Therefore, both theoretically and empirically show that the promotion focus and defense focus are independent and orthogonal to each other. Thus, combining the two and exploring their joint action from a contradictory perspective is possible and necessary (Lanaj, Chang, & Johnson, 2012).

2.5 The Impact of Family Ownership, Social Identity, and Regulatory Focus of CEOs on Innovation Strategies of Family Firms

Family ownership will influence family firms through the ownership shares of the family owners. It cannot be assumed that all family owners are aligned with the businesses' set goals. Some family members might be inclined to prefer dividends as opposed to innovation and deferring of immediate returns. Ownership interests would thus impinge on CEOs of family firms. While they might wish to steer the enterprise towards greater innovation, social identity theory suggests that should the CEOs be more included into the folds of their families, they might be swayed by the interests of the families. Their social identification with the families, if they see themselves as part of the families, their regulatory focus could be influenced. To tease out the possibilities, we consider the cases of how the family ownership, social identity and regulatory focus could influence different types of CEOs. In this discussion, we include the CEOs of non-family firms for contrast.

2.5.1 Family Founder CEOs

Family founder CEOs shoulder the important task of making the company achieve a breakthrough from 0 to 1. These CEOs' individual characteristics, manner of doing things, and life experiences convey the strategic orientation they want for the company. Given that these CEOs play a complex role in the enterprise, they will take the breakthrough development of the enterprise as their main mission in the early stage. At this stage, they have a sense of identity to expand and fortify the enterprise. In the later stage, with the continuous development and growth of enterprises, they will face the problem of intergenerational inheritance. At this stage, they identify more with the company than with the family (Miller & Breton-Miller, 2011; Miller, Breton-Miller, & Lester, 2011).

These founders will be affected by multiple cultures and have dialectical thinking, and their strategic orientation is often multi-level and comprehensive. They will weigh whether to innovate products and technologies with improvement or fundamental breakthrough depending on the different stages of the company and the needs of the

family. This type of leadership is characterized by contradictory opposition, takes the needs of different stakeholders into account, and stimulates a combined regulatory focus in the company (Gorman et al., 2012).

Family founder CEOs play multiple roles and have a different logic. On one hand, they establish and develop their own enterprises, play the role of entrepreneurs, take pride in their achievements, and are responsible for the development of the enterprise. On the other hand, as family members, they have close emotional ties with other family members in the enterprise, and consider more about the family inheritance. Under the influence of these multiple identities and their multi-level thought process and dialectical thought, they are likely to think and act from the perspective of integrating contradictions. To be responsible for the enterprise and the needs of family inheritance, the family founder CEO will pursue both exploratory innovation strategy and exploitative innovation strategy (Lubatkin, 2006; O'Reilly and Tushman, 2008).

2.5.2 Family Descendant CEOs

Family descendant CEOs have the desire to surpass their predecessors. They identify the family enterprise as a new starting point, and they are hungry for change. As family descendant CEOs are driven by the need for change when making decisions, they tend to focus on promotion.

They can fully mobilize employees to maximize their potential and thus achieve exploratory innovation (Vera and Crossan, 2004). Through idealized influence and heuristic inspiration, they can make subordinates associate their identity with the collective organization (Jansen, Vera & Crossan, 2009) and link the interests of the collective with their own vital interests, thus generating strong internal motivation to achieve exploratory innovation.

2.5.3 Professional CEOs in Family Firms

Professional CEOs have professional knowledge and rich management experience. When they are hired as CEOs of family businesses, they value financial data and long-term growth more than the interests of the family. They identify with the business as a

vehicle for fulfilling their personal ideals. Thus, they tend to change in order to realize their personal ideals and tend to focus on promotion.

They will constantly demand more investment in innovation and technological change. Hence, they will adopt an exploratory innovation strategy.

2.5.4 CEOs in Non-family Firms

CEOs of non-family firms mainly refer to the independent founder CEO or professional CEO of an enterprise. The CEO of a non-family firm may also be symbolically identified as the builder or creator of the business.

Given that the CEO of non-family firms is good at proposing new ideas, likes a variety of choices and creative working methods, has strong subjective initiative, is not afraid of risks, and has exciting ideas, he will be braver even after multiple attempts (Brockner et al., 2004). This kind of leadership is characterized by flexibility, exploration, attempt, and innovation, which will enhance the overall creativity of the company and awaken the promotion focus in the organization (Crowe & Higgins, 1997).

Non-family firm CEOs are more likely to have an independent self-concept. Their views on innovation are defined by unique attributes and characteristics. Compared with other types of CEOs, CEOs of non-family firms have more desire for success. Research shows that individuals with a strong independent self-concept tend to pay more attention to promotion, and they will be encouraged to pursue ambitious goals without worrying about potential risks. Therefore, they are more likely to engage in future-oriented exploratory activities.

Chapter 3 Research Design

3.1 Grounded Theory

3.1.1 *Fundamental Principles of Grounded Theory*

(1) Principle Analysis

The purpose of grounded theory is to build the final principle from scratch with the original materials. Therefore, when using grounded theory for scientific research, researchers will not have deterministic theoretical assumptions; rather, they will start from widely collected original materials, gradually carry out scientific discussion and summary, and finally refine the overall and general scientific theory.

Grounded theory is popularly interpreted as a bottom-up principle research method. After collecting the original materials of science, we find the concepts that reflect the internal essence, and finally re-connect these concepts through careful logical thinking and comprehensive demonstration to build the relevant principles. When using grounded theory, full and comprehensive data are particularly important. The main characteristic of grounded theory is that it supports experience, summarizes sufficient data, directly and abstractly integrates and discusses new concepts.

Grounded theory involves multiple rounds of comparison, and then a complete principle is refined from the materials. Researchers initially rely solely on the analysis of the collected materials, and then only gradually sort out the scientific principle framework. Grounded theory is a practice of continuous summary in which the initial materials are continuously refined from bottom to top. Unlike the macro principle in the traditional sense, grounded theory cannot be carried out according to the principles assumed by researchers in advance, but directly refined from the initial materials. The application of the principle requires researchers to be able to trace back to all the original materials related to the theory, and at the same time, according to the views of researchers related to grounded theory. Only the principle that is extracted from the material is robust, so it should have a real and practical use and provide due help for practical activities in society.

(2) Core Tasks

The most direct task of grounded theory is to build a bridge between the principles of macro theory and micro theory. The form of bridging only builds substantive and tests principles on the basis of the reality of sufficient original materials, whereas the principle of bridging is slowly built from multiple interrelated substantive principles. Advocates of grounded theory believe that knowledge should complete the transformation process from quantitative change to qualitative change through accumulation, which is a continuous and gradual process of exploring the real principle through factual analysis. The principle of construction is basically extracted from the original materials. If we construct a complete principle directly from a single independent original material, then the demonstration span will appear weak and may have many potential loopholes.

In addition, the composition of the principle is not single. It integrates multiple unrelated concepts or viewpoints, then refines and summarizes and finally reorganizes and merges them to become a complete principle of integrity. Compared with principles refined through a single or a class of ways, their connotation is richer, and they evolve into a wider range of theories, and provide a more detailed and careful interpretation with the further expansion and exploration of the original data.

3.1.2 The Procedure of Grounded Theory

Classical grounded theory is generally a non-static research process with relatively standardized research steps and research methods, and makes timely adjustments according to the specific situation of scientific research. The research steps of classical grounded theory are generally divided into four steps.

(1) Generalization of Research Questions

This step is a prominent point in classical grounded theory. It is the major difference from other social research methods that is reflected when the research problem arises. Other research methods always have deficiencies in the process of research or existing theoretical research or review, and then they put forward questions for research. By contrast, classical grounded theory pays more attention to the self-discovery of problems, that is, researchers enter the research state with vague interest. Through the comprehensive and key observation of the research scene and the multi-level interaction with various scene groups, the problems are found naturally.

(2) Data Collection

When the research problems are found, the researchers need to select the research samples. Classical grounded theory also differs from other methods in the treatment of sampling. Other methods will obtain hypotheses on the basis of existing theories on a quantitative basis, and then take samples according to unique assumptions. This approach is likely to be carried out to ensure the effectiveness of samples, so the extracted samples have many specific requirements. Classical grounded theory is a process sampling method in sample selection, that is, obtaining samples through iteration in the process. First, the preliminary concepts and assumptions are obtained as the basis for guiding researchers to sample further, which is controlled by the emerging theory. Therefore, in classical grounded theory research, the sample constantly changes and increases. The theory formed by data processing has reached a dynamic balance in the whole practice process of grounded theory. The sample in the previous step affects the conclusion of data processing, and the conclusion will further affect sampling. Therefore, the cooperative work of fully diversified and open data collection methods ensure that classical grounded theory deduces a reasonable principle.

(3) Data Processing

At the end of each data collection process, researchers need to process the data through specific coding analysis in time, which is the key to classical grounded theory. In classical grounded theory, coding refers to the comparison between different data and existing theories, so as to obtain accurate categories or features, as well as the abstraction of the obtained data. Classical grounded theory focuses on theorizing and abstracting in continuous comparison, rather than simply relying on the extraction of special concepts from samples.

(4) Theoretical Construction

Classical grounded theory mainly relies on theoretical coding to build the theory, that is, to build the theory by integrating the core concepts or categories obtained in the selective coding of data. At this stage, what is needed is to integrate the core concepts or categories obtained in series, which naturally appear in the whole research process and finally form a complete theory by extracting concepts. Of course, researchers also

need to go back to the whole process, integrate the final complete theory into the whole analysis process, especially in the process of literature review, and rearrange and verify. If new concepts and categories cannot be found in the comparison and exploration with the literature, then the resulting theory has reached saturation. Otherwise, the whole general research process must be repeated to reintegrate and reanalyze the data.

3.1.3 Research Design

Applying quantitative research methods to analyze problems requires quantifying the research object and measuring the correlation between them with the help of quantifiable variables, so as to find the factors affecting each other. This influence relationship is one-way; thus, quantitative research may easily fall into the repeated work of data statistical analysis. SMEs are unlikely to reveal information in surveys; hence, face-to-face conversations are essential because much insights are obtained from such method. As such, we employ this approach. A qualitative approach allows for the collection of rich data. Qualitative research is an in-depth and detailed research method through the interaction between researchers and subjects, which can obtain comprehensive explanatory understanding of the subject. Therefore, qualitative research methods are more suitable to explore the research problem of innovation strategy of Chinese SMEs.

In the current research scope, only a few studies have been conducted on the innovation decision-making of enterprise decision-makers, especially the literature and materials for the innovation strategic decision-making of family firms. As a result, finding materials that could be directly referenced and relied on is difficult, and quoting relevant concepts and theories or learning from relevant research methods are impossible. Grounded theory method is an exploratory scientific research method that is suitable for new scientific research fields or topics that have not yet developed a complete theory. The purpose of grounded theory method is not to prove the contrary through the existing or clear conclusions or principles, but to emphasize the continuous analysis and research of the materials from the original materials themselves, to conduct multiple comparisons, systematic analysis, and finally draw new principles and conclusions. Therefore, this research selects grounded theory method as the main methodology. Figure 3-1 shows the process of grounded theory.

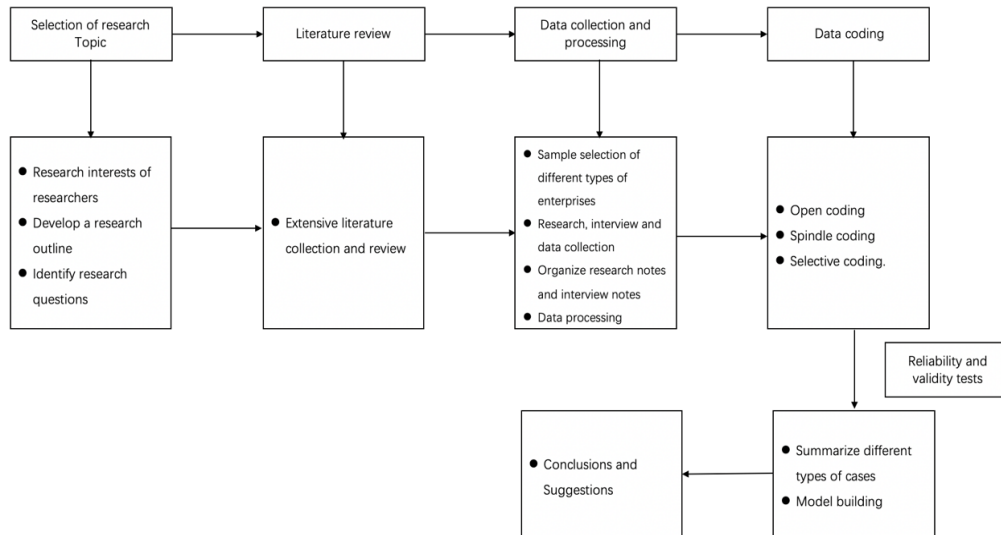


Figure 3-1 Process of Grounded Theory

Starting from the strategy of CEOs of SMEs, this study collects the original materials about decision makers' innovation strategy decisions through interviews. The collection and analysis of materials are carried out simultaneously, and the content of materials is divided and standardized through continuous comparison to extract relevant concepts. These concepts are further sublimated through axial coding until the theory is saturated, so as to analyze the correlation between categories and to form final concepts and theories (as shown in Figure 3-2).

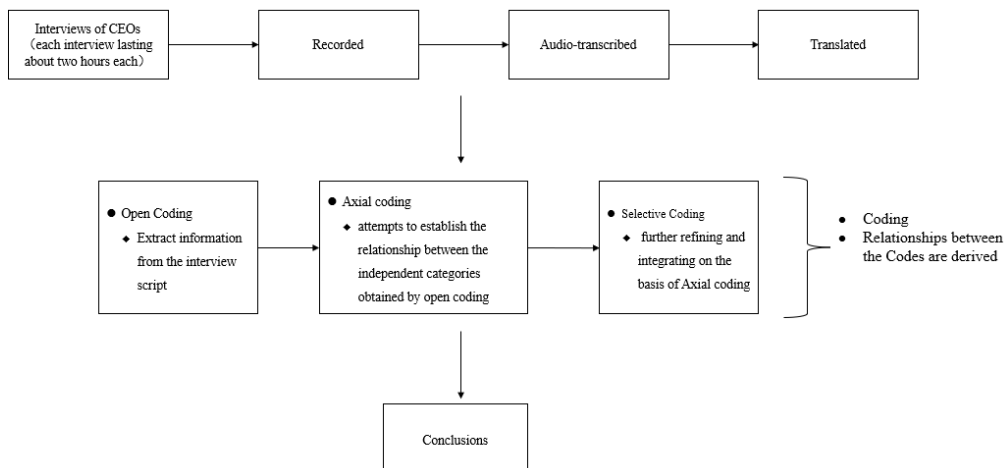


Figure 3-2 Process of Coding

3.2 Case Studies

3.2.1 Multi Case Study

Case studies are divided into single case studies and multi case studies. In order to draw common conclusions from the process of repeated induction, this study adopts a multi case study design according to the suggestions of Yin, Eisenhardt et al. Multi case studies allow us to verify the findings obtained from different cases and confirm common features. It also accurately describes the relationship between different constructs and effectively establishes definitions and constructs through multiple cases. The purpose of multi case study is to find a series of evidence, provide a solid basis for internal and external validity, or develop a novel viewpoint and research framework. This study adopts multiple cases for six specific reasons.

Multi case study allows us to explore the nature of the problem. The research on the choice of technological innovation strategy of SMEs is still in the early research stage, and the existing research results have not explained and answered the mechanism of innovation strategy choice of SMEs. Hence, this field lacks theoretical construction. Summarizing and refining the conceptual model and theoretical framework from the phenomenon is necessary. Researchers often need to adopt the process of theoretical construction rather than the process of theoretical verification. Given that the research on the innovation decision-making factors of SMEs is in the early exploration stage, the multi case study method is suitable for this research topic.

Multi case study allows us to examine the complexity of the problem. Innovation strategic decision-making is a complex phenomenon. The explanation of a single factor is one-sided, and not one or two factors drive the innovation decision-making choice of SMEs, especially the innovation decision-making choice of family firms. To grasp the research problem fully, it needs to be analyzed comprehensively from a holistic and systematic analysis perspective.

The case study process is modified. The choice of innovation strategy for SMEs is a dynamic process. One of the requirements of the case study method is to pay attention to the process. Researchers interact well in the research process. Researchers also suggest that case studies focus on the process rather than the results. The exploration of

the process is the advantage of case study. The process of theoretical construction is based on the combination of interview materials and second-hand materials such as literature, documents, and reports, so as to establish a persuasive theory.

3.2.2 Pros and Cons of Case Study

Case studies have the potential to construct novel theories. Case studies help researchers uncover the essence of a phenomenon through in-depth case data analysis. The vivid data in the case story scenario are transformed into theoretical elements, so as to build an exploratory theoretical framework with rich meaning. When the theory is lacking, the internal contradictions in the process of constructing the theory of case study often lead to the emergence of novel theories. Innovative knowledge usually appears in the comparison of contradictory or contradictory evidence. When constructing the theory, the case study takes the comparison of data and evidence as the core, and tries to mediate the evidence between different cases, data, and researchers, as well as dialogue with the existing literature. For example, in multiple cases, we enrich the source of case data from multiple angles, so as to facilitate comparison and find new theories.

The theory constructed by the case study method is detectable. The process of case study constructing theory is the same as a series of interrelated experimental studies. Through these discontinuous “experimental” conclusions and theories that are repeatedly compared and expanded, the theoretical construction is carried out through the data of the case and the multiple comparisons between the existing literature, and the conclusion is obtained.

The theory obtained from the case study has empirical validity. The research on the choice of innovation strategy of SMEs is completely rooted in the refinement of innovation-driven phenomena. The answers to the theoretical and research questions obtained from the research are based on data. Given that the theoretical construction process is closely related to the evidence, the conclusion is also likely to be consistent with the empirical observation. After developing the theory, especially with high reliability of multiple cases, we further verify the universality of the theory through large-sample statistical test.

3.2.3 Case Selection

After defining the research problem, we need to select the case according to the research problem and the theory to be developed. When establishing a theory from a case, the selected case sample should be representative. The case sample may be used to reproduce the previous case or extend the existing theory. Yin (1994) points out that when conducting case studies, the selected cases should be able to support the assumptions of the theory and have unique characteristics for the description, exploration, or interpretation of phenomena, or expose phenomena that cannot be explored by previous scientific research. The selection of target cases is an important link in the selection and application of case construction theory. In the case study method, the collection and sorting of typical cases is of great significance. By selecting representative cases, this study analyzes their internal driving factors, so as to lay a foundation for follow-up research. Eisenhardt (1989) mentions that although cases are randomly selected, random selection is neither necessary nor even desirable. The cases used in this study are not randomly selected, and the selected cases are for the needs of theory.

Glaser and Strauss (1967) point out that the goal of theoretical sampling is to select cases that may replicate or expand emerging theories. Multi case studies often provide a solid foundation for theoretical construction. Pettigrew (1988) also points out that considering that the number of cases that are studied is usually limited, then we have reason to choose those representative cases, and we clearly observe the formation process of these case events. However, the commonly used hypothesis test in empirical research relies on statistical sampling. Researchers randomly sample from the population in order to obtain an accurate statistical measurement of the distribution of variables in the population. According to the principle of theoretical sampling, we select seven SMEs, including family and non-family firms, as cases that have typical characteristics. The case study process itself does not focus on the number of samples. The key lies in the typicality and representativeness of samples, the richness of data contained, and the depth of research.

The criteria for selecting case samples in this study are as follows: (1) the selected enterprises must be small and medium-sized technology-based enterprises, including

family firms, in line with the above definition of China's SMEs; (2) the case is representative. The purpose of this paper is to study the innovation strategies of Chinese family SMEs. In order to more accurately reflect the influence of family ownership and CEO types, this study selects two non-family firms in addition to family firms. By comparing the choice of innovation strategies of family and non-family SMEs, the role of family ownership can be better revealed and the conclusion drawn from the case analysis can be more objective. The selected SMEs include family firms and non-family firms, specifically, CEOs of non-family firms, family founder CEOs, family descendant CEOs, and professional CEOs in family firms. (3) The selected enterprises are in different development stages. Finally, we identify seven research cases (as shown in Table 3-1).

Table 3-1 Description of the Selected Case Firms

Firm	Type	CEO	Industry	Duration of Interview (hours)
Company A	Non-family firm	Professional CEO	Education	2
Company B	Non-family firm	Professional CEO	Telecom	2
Company C	Family firm [Gen 2]	Family descendant CEO	Materials	1.5
Company D	Family firm [Gen 2]	Family descendant CEO	Materials	1.5
Company E	Family firm [Gen 1]	Family founder CEO	Furniture	2
Company F	Family firm [Gen 1]	Family founder CEO	Telecom	2
Company G	Family firm	Professional CEO	Real Estate	1.5

3.2.4 Validity and Reliability Test

The reliability of research means that the operation process of the case study is repeatable and reliable. Yin (1994) points out that each step of the case study is repeatable. If we repeat this study, then we will obtain the same results. The purpose of a reliability test is to reduce the error and bias of research. Subsequent researchers arrive at the same conclusion by following the same procedure, steps, and methods. The key to improve the reliability is the accuracy and authenticity of the data, which is also the premise of follow-up research. Research validity, also known as accuracy, refers to the

research results obtained by the research subject by using certain means to investigate the research object. It explains the appropriateness, accuracy, and effectiveness of a certain attribute of the research object. The validity of the research mainly aims at the fundamental point of the accuracy and effectiveness of the problems to be explained by the research. Generally, the more consistent the measurement results are with the content to be investigated, the higher the validity will be. Validity is the most important condition for scientific measurement tools. When determining validity, researchers must clarify the measurement purpose and scope, analyze the nature and characteristics of the measured object, detect whether it is consistent with the measurement purpose, and then judge whether the measurement results reliably reflect the degree of the measured object.

This study improves the validity and reliability of the study from the following aspects:

- (1) Set up a research group. Considering that the data collection of case study has not formed a convention and has not experienced a routine and stylized process, the case study method requires researchers' knowledge, thinking, skills, psychology, and knowledge higher than other research methods. We first set up an individual case study group. The group members not only read a considerable amount of literature on case study methods, but also discuss with experts and scholars engaged in case studies, so as to ensure that each member of the research group has a good grasp of case study methods.
- (2) The reliability and validity of the interview. Through a review of the literature, we carefully sort out the relevant theoretical research driven by technological innovation and determine the general research framework. We finally determine the specific research problems after repeated discussion, and then determine the selection criteria of research objects according to the research problems and form the interview outline and survey questionnaire. To form a complete evidence chain and improve the reliability of the research, we use recording equipment in the interviews. Two members of the research group who participated in the interviews sorted out the interview recordings for in-depth information mining. Unclear information and inconsistencies were discussed, finally reaching a consensus through repeated listening to the tape or verification, so as to ensure the reliability and validity of the study.

- (3) In order to ensure the validity of the study, we use multi-source evidence for triangular validation. Triangular verification emphasizes the use of multiple methods to study the same phenomenon. The new findings are confirmed by cross-testing of multi-source data to avoid subjective assumptions as much as possible. This study uses interviews, questionnaires, second-hand data, on-site observation, and other ways to obtain information. Multi-source data sources realize the triangular mutual evidence of the choice of innovation strategies of SMEs. Finally, we compare the conclusions drawn from the interview data through non-interview data. The research conclusions are fed back to the senior management of the case enterprise for their verification, thus ensuring the validity of the research.
- (4) Multi case study is more reliable and valid than single case study. To ensure the best reliability of the research conclusion, multiple cases are selected for analysis, and a rigorous research design is designed. We carefully analyze the selected case materials according to the principles and procedures of grounded theory and methods. We extract the factors that affect SMEs' selection of different innovation strategies and control the variables well to ensure a certain relationship between the research variables. We also try to eliminate the negative impact of variables that are unrelated to the research objectives.

3.3 Data Collection

Case studies are applicable to a variety of data sources, including interviews, field observations, questionnaires, online media reports, and documents. Glaser (2002) believes that everything is data. This study uses a variety of data collection methods. Triangulation based on a variety of data collection methods, which is similar to the hypothesis test, provides solid empirical basis for the construction of hypotheses. Case studies often use multiple methods to collect data, and most of them are qualitative studies (DeVaus, 2001). Qualitative research includes in-depth interviews, direct observation, and document access. These methods are used comprehensively to collect data so as to learn from one another. In addition, the case study emphasizes the viewpoint of multiple researchers and multiple data sources. Having multiple researchers strengthens the innovation of research. Given that researchers have their

own strengths, they pool their wisdom and form a wide range of opinions on the research. They also give play to their subjective thinking and obtain new experiences and understanding. Moreover, once multiple researchers reach an agreement on a certain point of view, the research results are easy to converge, which enhances the researchers' confidence in the research. Multiple data sources make the data corroborate one another, making it difficult for researchers to form their own views on the collected data, that is, bias.

To ensure the effectiveness and accuracy of the interview and make the interview content authentic and reflect the situation of the enterprise, we contact the interviewees about a week before the interview to give them time to prepare for the interview content. In this way, we obtain insightful information from them. During the communication, we explain the subject, general content, and purpose of the interview to the interviewees, so as to ensure the smooth progress of the interview and allow the interviewees to reflect on the topic in advance.

During the interview, the direction of questions is designed to facilitate the excavation of the information required for this survey. The answers of the interviewees must also be fully confirmed to ensure that the visitors' understanding of the answers is objective and accurate and to avoid affecting the effect of access quality. In the interview process, notes and recordings are taken to ensure the integrity of the original materials and to avoid mistakes. The interview time of each interviewee is controlled within two hours, and the researchers strived to obtain objective and accurate materials.

According to the characteristics of the research problems, this study creatively designs the method of combining multi case study with grounded theoretical analysis, and selects appropriate SMEs as sample cases on the basis of the research background of disruptive innovation. The formulation of its data collection method refers to the previous relevant research experience, which is extensive, comprehensive, and authoritative. On the basis of fully collecting data, through three strict coding processes of openness, axis, and selectivity, the data are summarized, deduced, and compared from bottom to top, with the ultimate goal of presenting a saturated theoretical model. The design of the research methods is innovative (see the Appendix for details).

Chapter 4 The Innovation Strategy Choice of Non-family Firm

CEOs

Assuming CEOs of family firms decide upon innovation strategies as nonfamily firm CEOs, this research includes interview of two CEOs of non-family firms, Company A and Company B. From the baseline of these two interviews, we can ascertain the factors that influence family firm CEOs.

Headquartered in Shanghai, Company A is an online education company engaged in Internet technology development. "Learningclan," the main product of Company A, is an Internet platform for the teaching and learning process. The product mainly includes vocational education system, customized enterprise training platform, community education, and standardization construction of senior university and community affairs acceptance service center.

Company B is engaged in technology development, service, consultation and transfer in the fields of automation technology, electronic technology, intelligent technology, environmental protection technology, computer technology, and Internet of things technology.

Both enterprises are representative in business innovation.

The businesses of the two companies are typically innovative, and they are not controlled by any family or any family member, which is consistent with the characteristics of non-family firms. Considering the industry, business, and business innovation status of the company, the case is selected to ensure their typicality and representativeness.

This chapter selects Company A and Company B for the case study of non-family firm CEOs' choice on enterprise innovation strategy. By using the method of grounded theory, this chapter decodes the interviews of the two CEOs step by step, focusing on identifying the primary and secondary categories and core categories of non-family firm CEOs' choice of enterprise innovation strategy.

Chapter 7 presents the comparative analysis, identify the common factors of triple cases and the internal logical relationship between factors, determine the internal mechanism, and construct the model of CEO innovation strategy selection of Chinese SMEs. The findings have important guiding significance for practice.

4.1 Open Coding of Innovation Strategy Choice of Non-family CEOs

The information about Company A and Company B in this Chapter mainly comes from public data and in-depth interviews with the CEOs. Among them, two in-depth interviews were conducted, each lasting for about two hours. We recorded the interview with the consent of the respondents. After the interview, we sorted out the recording and transcribed them. This study also collected relevant second-hand data from journals, newspapers, networks, and other media, including the company's official website and reports and comments on Company A and Company B obtained through search engines. To ensure that the above data truly and accurately reflect the phenomenon of innovation strategies of non-family SMEs, this study collates, integrates, cross-examines, and labels the data to be analyzed as the non-family CEO data record.

According to grounded theory, data analysis is divided into three steps: open coding, axial coding, and selective coding. Open coding is the first step of coding and the basis of grounded research. It is mainly the process of conceptualizing and categorizing data. Through interviews, field observation records, literature, network and other means, this study collected data about Company A and B according to the operation steps of open coding, and we decomposed the original data. To reduce and clarify the concepts obtained from the research, in the process of labeling, we refined the central meaning of each paragraph in the case data and defined its phenomenon. Next, we changed the

definition of phenomena to concepts and concepts to categories, grouped concepts of the same or similar phenomena under the corresponding categories, and named categories in professional terms. Labels that expressed one meaning at the same time are merged, and on this basis, they are further summarized to form 101 initial concepts, represented by “x+sequence number.” In this process, 101 initial concepts are summarized into 27 core concepts, represented by “X+sequence number,” and further condensed into 9 categories. The naming of category is expressed by borrowing academic circles, and also by self-created expression according to the needs of this study. A total of 9 categories are extracted and expressed by “XX +sequence number.” Table 4.1 shows the specific open coding process and categorical expression. For the characteristics of non-family firm CEOs, we find that:

In an interview with the family founder CEO of Company A, he mentioned “The company was founded in 2016 and has been in the era of rapid development in the education industry. However, at this time, the industry competition is fierce and there are many players. In the early stage of entrepreneurship, there is great pressure, but everyone is full of entrepreneurial passion. Given that the selected track belongs to the relatively novel online education and the audience is grass-roots community public officials, the whole model is innovative. We need to pay attention to new content all the time, pay attention to what public servants need, and innovate the product content according to their needs. Considering that the firm is original, it has invested more in R&D in the early stage. I have a close relationship with colleges and universities. I establish cooperation and exchange relations with colleges and universities and actively explore new knowledge, which also make my thinking flexible.” Given that the enterprise is not controlled by family members, as a start-up non-family enterprise, the family founder CEO of Company A is a CEO full of passion, innovation, and exploratory spirit. (x1–x4, x14–x17)

The CEO of Company B mentioned that “I have worked in this industry for many years and have a deep understanding of the industry. I should fully grasp the upstream and downstream of the industry, whether from the national policy level or the external environment. Only with a full understanding of the industry can I accurately identify

new opportunities and make appropriate innovation strategic choices. I should keep an open mind, communicate well, communicate with friends, and learn from the same experiences of our competitors; hence, we will find many business opportunities.” (x5–x13)

The interviews with the CEOs of the two companies reveal that they have a consistent understanding of the concept of talents. “We attach importance to the company’s talent. The first step is to introduce talents. Through school recruitment and social recruitment, they turn to some headhunting institutions to constantly absorb outstanding talents in the industry. They are full of confidence in the appointment of talents, and will give different powers according to their fields of expertise and encourage them to work freely. In some core positions, they communicate directly with employees exchange and discussion, and always grasp the frontier of technological innovation. In terms of cultivating ability, they invest money every year, organize members to study advanced technology in colleges and universities and scientific research institutions, purchase relevant learning materials, and regularly organize internal exchange and sharing meetings. In terms of employee salary, they have higher salary incentive than that in the same industry, and have better benefits on holidays, so as to create a sense of belonging and improve employees’ happiness.” (x18–x33)

The CEO of Company A mentioned “When I started my own business, I took risks boldly and invested most of my possessions in this enterprise. My heart is career-oriented. Therefore, when I make decisions, I will not consider the impact on my family or let family members participate in specific businesses. Considering that I am radical, I will not limit the local market and will actively explore new markets from the grass-roots personnel in this area to customers to all over Shanghai. Owing to the increase of customers, the demand has become diverse, so the business is constantly innovating to meet the diversified needs of customers.” (x34–x48)

The CEO of Company B mentioned “I regard the development of the enterprise as the most important thing. I often stay up late and work overtime in the enterprise, regard

the enterprise as the second home, and always put the enterprise’s affairs in the most important position, hoping that the enterprise will develop and grow and do a good job. As the CEO of the company, I should deeply participate in the important decisions of the company, trust my intuition and judgment, and finally make my own decision on whether to take such strategic measures. I will often sum up experience and constantly improve my decision-making level.” (x49–x64)

The two CEOs have a relatively consistent view on their choice of innovation strategy: “As a start-up enterprise, products need to quickly open up a new situation and improve their influence in new fields. We must break through the technology bottleneck, achieve fundamental change, and keep up with trends. A culture of change is needed throughout the company, which involves thinking out of the box, going beyond the box, and actively learning new theories. To address customer demands, we must think about how to meet their needs and highlight the company’s unique characteristics. Both management and technical personnel should dare to think and not be afraid that their bold ideas cannot be achieved. As CEO, I fully support the company’s innovative behavior, invest a lot of money, and equip a special R&D team. However, failure is always a risk, innovation takes a long time, with no immediate results, if it succeeds, it will bring huge benefits and solidify the company in this new field.” (x65–x88)

The CEO of Company B also mentioned, “in the new field, we should dare to imagine the use needs and scenarios of customers, actively try, dare to break through, and always straight forward. Even some measures need to be radical. In addition, as CEO, personal intuition is very important, but we cannot be stubborn. In the process of project development, if a project fails halfway, then we should identify the reasons for failure in time.” (x89–x101)

Table 4-1 Open Coding: Conceptualization and Preliminary Categorization

Initial Concept	Core Concept	Category
x1 Aggressiveness	X1 Spirit of innovation (x1, x2, x3, x4)	XX1 Opportunity identification and development, striving for innovation (X1, X2, X3, X4)

x2 Always focus on innovative content.	X2 Opportunity identification (x5, x6, x7, x8)	XX2 Attach importance to talents and display their talents. (X5, X6, X7, X8)
x3 Pay attention to the R&D investment of new products.	X3 Industry awareness (x9, x10, x11, x12, x13)	XX3 Risk preference, no more constraints (X9, X10, X11, X12)
x4 Try every means to activate the innovation vitality of enterprises.	X4 Spirit of exploration (x14, x15, x16, x17)	XX4 Work engagement and self-orientation (X13, X14, X15, X16)
x5 Communicate with friends and take the initiative to find business opportunities.	X5 Introduction of excellent talent (x18, x19, x20, x21)	XX5 Breakthrough in innovative knowledge (X17, X18, X19)
x6 Identify appropriate opportunities according to national policies.	X6 Appropriately empower talented people (x22, x23, x24, x25)	XX6 Divergent thinking (X20, X21)
x7 Society has changed significantly, and consumer behavior, habits, and methods have changed as well. We should keep up with the pace of the times.	X7 Strengthen training (x26, x27, x28, x29)	XX7 More investment, higher risk (X22, X23)
x8 Constantly learn from the experiences of peers and find opportunities worthy of reference.	X8 Talent compensation mechanism (x30, x31, x32, x33)	XX8 Willing to accept change (X24, X25)
x9 In-depth grasp of industrial policies and regulatory systems	X9 Dare to take risks (x34, x35, x36, x37)	XX9 Unafraid of failure (X26, X27)
x10 In-depth understanding of the process of the industry	X10 Less affected by family members (x38, x39, x40, x41)	
x11 Has only started a business and lacks experience, but with the deepening of learning, the understanding of the industry continues to deepen	X11 Actively lay out new business (x42, x43, x44, x45)	
x12 Industry research is very important, and special personnel should be assigned to study the industry	X12 Actively explore new regional markets (x46, x47, x48)	
x13 The formulation of strategy needs in-depth research on the industry.	X13 Active learning knowledge (x49, x50, x51, x52)	
x14 Strengthen contact with universities and	X14 Corporate responsibility (x53, x54, x55, x56)	

research institutes to explore new knowledge.		
x15 Flexible thinking	X15 Spends a lot of time on work (x57, x58, x59, x60)	
x16 Analyze the position, advantages, and difficulties of the enterprise from a macro perspective, and formulate the long-term development goals of the enterprise.	X16 Strong personal awareness (x61, x62, x63, x64)	
x17 Constantly explore new technologies	X17 Fundamental breakthrough (x65, x66, x67, x68)	
x18 Introduction of core technical talents	X18 Keen on experimental change (x69, x70, x71)	
x19 Attaches importance to establishing connections with famous universities in Shanghai in order to recruit excellent students	X19 Meet new customer needs (x72, x73, x74)	
x20 Introduce excellent talents through headhunting.	X20 Uniqueness (x75, x76, x77)	
x21 Attaches importance to the circle of friends and alumni and recruit suitable talents	X21 Diversity and comprehensiveness (x78, x79, x80)	
x22 Has great trust in core technicians	X22 High input (x81, x82, x83, x84)	
x23 Core technicians report directly to the founders.	X23 High risk (x85, x86, x87, x88)	
x24 Empower employees in areas where they excel.	X24 Creative needs to advance (x89, x90, x91, x92)	
x25 Encourage outstanding people to work freely	X25 Not limited to rules (x93, x94, x95)	
x26 Cooperate with university research institutions to invite experts and professors to give lectures.	X26 Innovate without fear of failure (x96, x97, x98)	
x27 Organize staff to attend training regularly.	X27 Be bold, be aggressive (x99, x100, x101)	

x28 Regularly organize employees to participate in institutional training.		
x29 Purchase relevant learning materials for the company.		
x30 Give higher salary compared with competitors.		
x31 Bonus system		
x32 Employees are entitled to benefits on holidays.		
x33 Let members have a sense of belonging.		
x34 Decision makers are bold and decisive.		
x35 Has the spirit of adventure		
x36 Invest most of its possessions.		
x37 Dare to be the first.		
x38 Family members are not considered in decision-making.		
x39 Do not allow family members to interfere with your career.		
x40 Family members will not be involved in company details.		
x41 Focus on corporate matters, not the accumulation of family wealth.		
x42 Development paths should be diversified.		
x43 Actively grasp the new business to bring new customers.		
x44 Have a first mover advantage.		
x45 Take the original business as the basis and take steps to expand new business.		
x46 Do not limit yourself to your local market. Expand into new markets.		
x47 Contact new customers through existing customers.		

x48 Take significant time and energy to develop new markets.		
x49 Actively understand the relevant knowledge of the industry.		
x50 Advocates employees to learn relevant knowledge actively at the forefront of the industry.		
x51 Often focuses on news and official WeChat account push messages		
x52 Often exchange learning experience with college teachers		
x53 Be responsible for investors and employees of the enterprise.		
x54 Always put the business in the most important position.		
x55 It is the responsibility of the enterprise to develop and expand the enterprise.		
x56 Hope the enterprise develop steadily and expand and fortify its business		
x57 Less time-out for rest		
x58 The work of the enterprise is very important: always care about the business of the enterprise		
x59 Often stay up late to work for the company		
x60 Work on weekends and treat the company like a second home.		
x61 Other people's opinions are important in making decisions, but sometimes your own intuition and judgment are more important.		
x62 To the enterprise's major decisions to be		

deeply involved, have their own influence		
x63 Summarize experiences and improve your decision-making level.		
x64 The enterprise strategy choice ultimately needs to be decided by itself.		
x65 The product needs to be used in new areas.		
x66 The breakthrough of technology bottleneck improves product performance		
x67 Do not limit yourself to previous technologies; you need to innovate.		
x68 Break out of fixed thinking patterns and take the initiative to learn new theories.		
x69 Technical R&D personnel are often encouraged to carry out technological innovation and change.		
x70 Put fresh ideas into practice.		
x71 Company culture that promotes change		
x72 Strategies are formulated to meet the new needs of customers.		
x73 Break through technology constantly and follow trends.		
x74 Some customers ask for new features that need to be implemented.		
x75 The company's strategy should be different from that of competitors.		
x76 To have their own unique, unique bright spot		
x77 Think about how exactly do you meet demand and how do you respond to the market.		

x78 Do not limit yourself to rules when designing features.		
x79 Dare to think, and do not be afraid to fail.		
x80 Go beyond the basics and try to think differently.		
x81 Substantial funds are required.		
x82 A dedicated R&D team to design new features		
x83 Construction of new platforms		
x84 Human, material, and financial resources should keep up.		
x85 As it is a new field, there is great uncertainty.		
x86 The pressure to fail		
x87 Old customers may be lost due to new features.		
x88 Time-consuming, not necessarily immediate results		
x89 Customers have new requirements, and we need to make changes.		
x90 You cannot be stubborn and constantly change your mind.		
x91 Focus on enhancing employee creativity.		
x92 If the competition changes and we remain the same, we will be eliminated.		
x93 Think outside the box.		
x94 Give it a try.		
x95 New product development must dare to break through.		
x96 Cannot look ahead and backward		
x97 Midway failure should be summed up in time.		
x98 Do not be afraid to fail. Take the first step.		

x99 Some methods are radical.		
x100 Make bold assumptions and do not be too cautious.		
x101 Dare to imagine the use of customer needs and scenarios.		

4.2 Axial Coding: Mining of Main Categories

In open coding, although the nine categories extracted are abstract to a certain extent, the relationship between the nine categories has not been reflected, and they are like the description of some words. The next step is axial coding, which connects the categories derived from the open coding with various logical relations. The coding process of the main category is still under the development category, and each category has no theoretical framework. Axial coding attempts to establish the relationship between the independent categories obtained by open coding, excavate the potential logical relationship between each category, and develop the main category and the corresponding category. In this case, through the analysis of the internal logical relationship between the nine categories, we reclassify and summarize them, and finally obtain three main categories: non-family CEOs, promotion focus, and exploratory strategic orientation. Table 4.2 shows the open coding categories corresponding to each main category and their connotation.

Table 4-2 Axial Coding: Recognition of Core Categories and Typical Relational Structures

Main Category	Corresponding Category	Connotation of Category
Non-family CEOs	Identify and develop opportunities and strive for innovation	Unique ability to identify, grasp, and actively develop new opportunities in the industry
	Attach great importance to talents and give full play to talents	Attach great importance to excellent talents, actively empower them, and encourage them to showcase their talents
	Risk preference, no more constraints	Adventurous, risk preference, and free to make decisions
	Engaged and self-directed	Take work as the most important part of life, have independent self-concept
Promotion focus	Be open to change	Be open to change brought about by new opportunities
	Unafraid of failure	Willing to seize new opportunities to try hard, unafraid of failure

Exploratory strategic orientation	Innovative knowledge breakthroughs	The breakthrough of new knowledge, to meet the new needs of customers
	Divergent thinking	Innovate the uniqueness of knowledge, pursue diversity and comprehensiveness
	More investment, bigger risk	Need a large number of capital manpower investment, and the risk is high

4.3 Selective Coding: Recognition of Core Categories and Typical Relational Structures

Selective coding is refining and integrating on the basis of axial coding, that is, identifying the “core category” from the main category and then analyzing the connection between the core category and the main category through the “story line” that describes the phenomenon. This process forms a new theoretical framework. The “story line” not only involves the relationship between the main categories, but also covers the conditions for the formation of context. At this stage, the relationship between the main category and the main category will form a clear context and gradually appear. Through in-depth analysis of the first nine categories and three main categories, and on the basis of repeated comparison with the original data, the author abstracts the core category of “Non-family CEOs - Promotion focus - Exploratory strategic orientation.”

CEOs of non-family firms mainly refer the independent founder CEO or professional CEO of an enterprise. The CEO of a non-family firm may also be recognized as the builder or creator of the business. The CEOs of these non-family firms often have strong divergent thinking and are not bound by rules. Owing to their self-confidence and bold character, they often seize industry opportunities, especially in highly competitive industries. They will subjectively weaken the risks brought about by technological innovation. They believe that the expected benefits brought about by high-risk technological innovation should be favored, and they are willing to invest in breakthrough technologies. Moreover, they are willing to take the initiative to seek change and realize the self-growth of enterprises through technological innovation. CEOs of non-family firms pay more attention to enterprise technical employees than those in other departments, and often grant them more power and encourage them to

carry out technological innovation actively. These CEOs are customer-oriented, put customer needs first, and actively make changes according to their needs (Loasby, 2007; Tajfel & Turner, 1979).

As the “maker of meaning” of the company, CEOs of non-family firms are the role models of the company. Through their behavioral style, they convey the expected behavior of the organization, and their behavior pattern is an important situational factor. Given that CEOs of non-family firms are good at creating new ideas, like a variety of choices and creative working methods, have strong subjective initiative, unafraid of risks, and has exciting ideas, they will be more frustrated and braver even after multiple attempts (Brockner et al., 2004). This kind of leadership is characterized by flexibility, exploration, attempt, and innovation, which enhance the overall creativity of the company and awaken the promotion focus in an organization (Crowe & Higgins, 1997).

Exploratory innovation strategy mainly reflects the flexibility and experimentation of innovation activities, involving search and discovery, R&D innovation, technological change, and risk-taking. Exploratory innovation strategy emphasizes the pursuit of new knowledge and often produces new innovative ideas and research results through divergent thinking (Tushman, 2003; He & Wong, 2004).

Non-family firm CEOs are likely to have an independent self-concept. Their views on innovation are defined by unique attributes and characteristics, which are different from that of others. Compared with other types of CEOs, CEOs of non-family firms have more desire for success. Research shows that individuals with a strong independent self-concept tend to pay more attention to promotion, and they will be encouraged to pursue ambitious goals without worrying about potential risks. Therefore, they are more likely to engage in future-oriented exploratory activities. In the process of such innovation, fundamental or breakthrough changes will take place in technology, which generally requires significant investment and is accompanied by high risks. However, once successful, the new innovation output will win a wider market share and more competitive space for enterprises, and is expected to continue to make profits, and open

new business opportunities to adapt to the changing environment and growth (Kammerlander et al., 2015).

Owing to their individual growth environment, their own abilities, and personal characteristics, CEOs of non-family firms often pursue fundamental technological innovation and desire success, even if they need to take major risks. This kind of leadership is characterized by flexibility, exploration, attempt and innovation, which enhance the overall creativity of the company and awaken the promotion focus in an organization. Therefore, a positive correlation exists between the CEO of non-family firms and exploratory strategic orientation, whether they are independent founder CEO or professional CEO.

Chapter 5 The Innovation Strategy Choice of Family Descendant

CEOs and Professional CEOs of Family Firms

To explore the impact of family descendant CEOs and professional CEOs of family business on the choice of enterprise innovation strategy, the CEOs of Company C, Company D, and Company G are interviewed individually.

Founded in 1989, Company C has more than 10 holding (participating) subsidiaries, which are involved in the fields of power, door industry, tools, carpets, household appliances, real estate, agricultural equipment, and biomedicine among others. Adhering to innovation and revitalizing enterprises with science and technology and under the background of the new development pattern of “double cycle,” traditional industries accurately subdivide domestic and foreign markets, further expanding the brand influence. The R&D division is focused on its two major projects, the broad-spectrum antitumor drug called “eribulin mesylate” and the latest generation of diabetes medicine “Tenelia tablets,” which is known as the chemical drug “Mount Qomolangma” among medical professionals.

Company D is a standardized joint stock limited company approved by Zhejiang Administration for Industry and Commerce. The company specializes in the research, development, production, sales, and technical services of concrete admixtures. It has an annual production capacity of more than 1 million tons of powder, and it is leading in the concrete admixtures industry worldwide. According to its domestic sales, the products have been sold to more than 20 countries, and the product quality and reputation are highly praised by users at home and abroad.

Company G was established in the 1990s, is one of the largest real estate consulting service companies. Company G remains its leading position in the real estate service industry in South China, and has become the largest

platform enterprise with a second-hand real estate consulting agency, property management, investment and financing, property auction, and other services.

In this chapter, Company C, Company D, and Company G are selected as the case study for family descendant CEOs and professional CEOs' choice of enterprise innovation strategy. By using the method of grounded theory, the interviews of CEOs are decoded step by step, focusing on identifying the primary and secondary categories of future generations' CEOs and professional CEOs' choice on enterprise innovation strategy, core category.

5.1 Open Coding of Innovation Strategy Choice of Family Descendant CEOs and Professional CEOs of Family Businesses

The information about Company C, Company D, and Company G in this chapter mainly comes from the public data and in-depth interviews with the company's management. Three in-depth interviews were conducted, and each interview lasted for about 1.5 hours. We recorded the interview with the consent of the respondents. After the interview, we sorted out the recording and transcribed them. In addition, secondary materials such as literature, online videos or reports, blogs and comments about the companies from online journals were used. As for the characteristics of family descendant CEOs and professional CEOs of family firms, we find that:

In an interview with the family descendant CEO of Company C, he mentioned that "Company C is a typical family business, which was founded by my father and uncle. Growing up with my family, I was greatly influenced by my parents and had a strict family education. The overall style of the family is rigorous, and elders reminded us to do things in a down-to-earth manner. I am also a self-motivated person. I completed my study overseas to broaden my vision and better lead the development of the enterprise. I am worried about the impact of future failure on my family. After I finished my studies and returned to the company, I started at the front line. Although I was on the front line at that time, I often communicated with my parents. I also often communicated with my brother about the problems in the development of the enterprise.

Later, I came into contact with the core affairs of the enterprise, who were mainly responsible for foreign investments. As a member of the family, I should consider the interests of the family in some important decisions, and even invite my parents to participate. In the process of investment, I should think about the development of the enterprise, but we should also consider family interests and weigh the contradiction between family interests and enterprise development. If my parents have objections, then I will treat them carefully.” (a1–a15)

The family descendant CEO of Company D shared that “Company D is a traditional industrial enterprise, which attaches great importance to safety and environmental protection and is cautious in making decisions. Influenced by my parents since childhood, I always consider whether every decision I make will have serious consequences when I take over the firm. After taking over, I noticed that although innovation is carried out, it is constrained by the attributes of traditional industries. The step-by-step promotion of innovation strategy is not too radical. The transformation of a traditional heavy industry is also difficult, and the initial investment cost is too high. The development path is still based on the main business. A large amount of capital and energy are invested in the original business. On this basis, the business is expanded and continuously excavated to achieve better performance and in-depth development to become a leader in the original market. For some production technologies, we learn from the advanced experiences of our peers. For this part of the market, we constantly strengthen our relationship with old customers, investigate their needs, and worry about being alienated due to too little maintenance of old customer relations. The market will be more subdivided, and the goal setting will be more detailed. Given that it is a traditional industry, innovation is more about the production process, improving the production technology, standardizing the process, reducing costs, and pursuing high efficiency.” (a16–a46)

The family descendant CEO of Company C also mentioned that “as the parents gradually stepped back, some changes occurred in the organization of the company. In order to reduce the management cost, the company streamlines some departments and simplifies them. In order to respond to the changes of the market in time, we listen to

the feedback of department heads and deeply participate in the important decisions of the core department. The company has also compressed its internal decision-making process. The selection of some department heads requires my own assessment, which opens up a direct communication channel with the department heads. As a second-generation successor, I also care about my influence in the company. I hope the company is not only influenced by my parents, but also implements the decisions I make and establish a series of feedback mechanisms.” (a47–a61)

The professional CEO of Company G said, “When I first entered the enterprise, I did not have any sense of identity. As a professional manager, I simply hope that the company’s performance is up to the standard and I become worthy of this position. Before coming to this enterprise, I worked in the management of many large enterprises and had rich practical experience in enterprise management. I have also been in this industry for many years. I have a unique understanding of the industry and a relatively accurate grasp of policies. As I worked for a long time and regularly reported work and exchanged experiences with family members, I was gradually influenced by the family culture and gradually recognized it, and the emotional bond with the family was slowly established. This emotional bond is the trust of family members in me. Communicating with them will resonate with major decisions. With the increase in the number of exchanges with family actual controllers, I gradually understood and deepened my understanding of the company’s goals and vision, and have emotional resonance. I will take the family goals into account when making decisions. On the one hand, it is the establishment of emotional ties. On the other hand, it is also the special nature of family firms. I often need to strike a balance between family interests and the company’s financial performance. If some decisions will harm the interests of the family, then I will not adopt them. Generally, there will be trade-offs when making decisions. We not only want to improve the company’s finance and make the company develop better, but also need to safeguard the interests of the family.” (a105–a130)

The family descendant CEO of Company D mentioned the need for safety: “When I make decisions, I will take full account of potential mistakes. I have recently taken over and am worried about problems, so I prefer less innovation to avoid mistakes and be on

the safe side. Innovation is for performance, so I also prepare detailed plans to discuss the impact on performance. The performance indicators brought about by innovation should have quantitative standards. In innovation, we should increase quality investment in inspection, conduct stricter quality inspection on original products, and improve the product quality. When I make a strategy, I am cautious and need to look ahead and consider many factors. At the beginning of succession, I was afraid to take the first step for fear of failure. The formulation of strategy should also consider the interests of family members. To promote the implementation of innovation, we will let it go, not too hard, and sometimes even take a circuitous way.” (a62–a81)

For the specific innovation strategy, the family descendant CEO of Company D mentioned that “given that it is a traditional industry, it is difficult to achieve breakthrough innovation. It is mainly based on improvement and upgrading of old technology in order to improve efficiency.” The family descendant CEO of Company C said: “The starting point of my innovation strategy is that the old technology no longer meets the efficiency requirements of the existing market, so I need to innovate to improve efficiency. Given that the market for few products is clearly defined, the purpose of making improvements is to better meet market demand. After all, most customers are satisfied with the performance of products, and the purpose of improving technology is to serve better.” The professional CEO of Company G mentioned that “I try not to change the initial setting when formulating the strategy. Relying on the original platform, the original R&D team remains stable and the investment is relatively small. In this way, the pressure of failure is small, the time is short, and the effect is quick.” (a82–a105)

Following the ideas of the previous chapter and according to the operation steps of open coding based on grounded theory, we decompose the original data and form 130 initial concepts, represented by “a+ serial number.” In this process, 130 initial concepts are summarized into 36 core concepts, which are represented by “A+ serial number.” The 36 core concepts are further condensed into 12 categories. The naming of categories is expressed by referring to academic circles, as well as the self-created expression carried

out in this study according to the needs, which is expressed by “AA+ serial number.”

Table 5-1 shows the specific open coding process and categorical expression.

Table 5-1 Open Coding: Conceptualization and Preliminary Categorization

Initial Concept	Core Concept	Category
a1 The development of enterprises should take into account the overall interests of the family.	A1 Serve family needs (a1, a2, a3, a4)	AA1 Family responsibility (A1, A2, A3, A4)
a2 When making the decision, consider whether it affects the interests of the family.	A2 Maintain close communication with the family (a5, a6, a7, a8)	AA2 Comparative risk aversion (A5, A6, A7, A8)
a3 The investment projects of the enterprise meet the needs of the family.	A3 Loyalty to the family (a9, a10, a11)	AA3 Opportunity development and exploration (A9, A10, A11, A12)
a4 Family interests are the primary consideration in the development direction of enterprises.	A4 In the family growth environment (a12, a13, a14, a15)	AA4 Pay attention to the internal management of enterprises and establish prestige. (A13, A14, A15, A16)
a5 Often communicate with my parents.	A5 Tend to choose a safe route (a16, a17, a18, a19)	AA5 Security requirements (A17, A18, A19, A20)
a6 Parents attend important meetings on enterprise strategic development.	A6 Conservative character (a20, a21, a22, a23)	AA6 Cautious avoidance strategy (A21, A22)
a7 The important decisions of the enterprise fully consider the suggestions of the parents.	A7 The new business is based on the old business (a24, a25, a26, a27)	AA7 Knowledge improvement (A23, A24, A25)
a8 Members of the family often communicate.	A8 Focus on maintaining relationship with old customers. (a28, a29, a30)	AA8 Focused thinking (A26, A27)
a9 As the successor in the family business, we should be loyal to the family.	A9 Path dependence (a31, a32, a33, a34)	AA9 Less investment and less risk (A28, A29)
a10 Always weigh the development of the family.	A10 Opportunity development (a35, a36, a37, a38)	AA10 Identification with the family (A30, A31, A32)
a11 Cannot go against the wishes of the family	A11 Rigorous process (a39, a40, a41, a42)	AA11 Balance the relationship between corporate performance and family income. (A33, A34)
a12 Grew up in the family and is influenced by father	A12 Absorbed (a43, a44, a45, a46)	AA12 Professional ability (A35, A36)

a13 Strict tutoring	A13 Optimize internal management and reduce costs. (a47, a48, a49, a50)	
a14 Family culture, family tradition	A14 Focus on building prestige and personal influence. (a51, a52, a53)	
a15 Feelings for the family, worried about the impact of failure on the family	A15 Strengthen the influence on department leaders. (a54, a55, a56, a57, a58)	
a16 Consider whether each decision has serious consequences.	A16 Program decisions implemented (a59, a60, a61)	
a17 Believe that development is realized step by step.	A17 Reduce unnecessary mistakes. (a62, a63, a64)	
a18 Worried that the company's current performance is not as good as before.	A18 Worry about the impact of innovation decisions on enterprise performance. (a65, a66, a67)	
a19 Many factors affect the restraints of hands and feet	A19 Focus on quality. (a68, a69, a70, a71)	
a20 Even innovation needs to be done step by step.	A20 Focus on innovation under rules and regulations. (a72, a73, a74)	
a21 Do not be too radical.	A21 Innovate with caution. (a75, a76, a77, a78)	
a22 Comprehensively compare the conditions.	A22 Take a roundabout approach. (a79, a80, a81)	
a23 If the possibility is small, then it will no longer focus on investment or may not require investment.	A23 Improvement and upgrading (a82, a83, a84, a85)	
a24 The development path should focus on the main business.	A24 Increase of efficiency (a86, a87, a88)	
a25 We should actively grasp the new customers brought about by new business.	A25 Clear market prospect (a89, a90, a91)	
a26 We should be a leader in the original market.	A26 Integration (a92, a93, a94)	
a27 Take the original business as the main line, and expand the surrounding areas on this basis.	A27 Specificity and depth (a95, a96, a97)	

a28 Focus on the local market and expand surrounding markets.	A28 Less investment (a98, a99, a100, a101)	
a29 Strengthen relationship with old customers.	A29 Low risk (a102, a103, a104, a105)	
a30 Actively investigate the needs of old customers.	A30 Family identity changes over time. (a106, a107, a108, a109)	
a31 Affected by industry inertia	A31 Emotional bond with family (a110, a111, a112, a113)	
a32 Excessive initial investment	A32 Identification with family goals (a114, a115, a116, a117)	
a33 Unwilling to give up the old business	A33 Decisions need to take into account the interests of the family. (a118, a119, a120, a121)	
a34 Worry about being alienated by too little maintenance of the relationship with old customers	A34 Some decisions are contradictory. (a122, a123, a124)	
a35 Continue to dig deep into the technology of the past.	A35 Professional management ability (a125, a126, a127)	
a36 Excellent in better, in-depth development	A36 Industry knowledge (a128, a129, a130)	
a37 Continue to invest capital and energy into the original products and technologies.		
a38 Learn from peers' products and put their good side into own products.		
a39 The production process tends to be standardized.		
a40 Accurate grasp of details		
a41 Cost compression		
a42 Pursue efficiency		
a43 Strengthen the connection between research institutes and universities, and deeply focus on relevant theories.		
a44 Focus on one point and deepen it.		
a45 The market is subdivided, and the formulation of enterprise objectives is detailed.		
a46 Continuously improve technology.		

a47 Organizational structure adjustment		
a48 Streamline departments and simplify complexity.		
a49 Reduce internal decision-making process.		
a50 Seek benefits from management.		
a51 Care about personal influence in the company.		
a52 I hope the company cannot only be influenced by its parents, but also have its own influence.		
a53 Care about the evaluation of the company's employees.		
a54 Deeply participate in important decisions in all departments.		
a55 The selection of department leaders needs to go through their own assessment.		
a56 Open up communication with department leaders.		
a57 Pay attention to the feedback of department leaders.		
a58 Pay attention to the performance assessment of department leaders.		
a59 Decisions made at the company's senior meeting are expected to be implemented.		
a60 There should be a feedback mechanism for the implementation of decision-making.		
a61 The plan needs to have specific objectives in each department.		
a62 Potential mistakes should be fully considered in making innovation decisions.		
a63 It's better to be less innovative than to avoid mistakes.		
a64 Be safety-oriented and make fewer mistakes before making decisions.		

a65 Performance is an important consideration in innovation decision-making.		
a66 Detailed plans are needed to consider the impact on performance.		
a67 The performance brought about by innovation should have quantitative indicators.		
a68 Carry out strict quality monitoring on the products of the original products to improve the quality.		
a69 Further improve the company's service level.		
a70 The company is further optimizing the service process.		
a71 Investment for quality inspection		
a72 We should innovate under the existing institutional framework.		
a73 Make partial modifications to the existing system.		
a74 Major changes should be carefully discussed.		
a75 The formulation of innovation strategy should be done with caution.		
a76 Strategy formulation requires foresight and consideration.		
a77 Afraid of failure, dare not take the first step		
a78 The formulation of the plan also needs to consider the family members.		
a79 The formulation of the plan should not be too direct.		
a80 Do not push innovation too hard.		
a81 Try to take a circuitous way.		
a82 The technology is mainly improved.		
a83 Further improve technology to improve product performance.		

a84 Upgrade based on old technology.		
a85 Expand relevant technologies in the old model.		
a86 The purpose of technical improvement is to improve efficiency.		
a87 The old technology no longer meets the efficiency requirements of the current market.		
a88 Improve existing products to meet the improvement of efficiency.		
a89 The market for existing products is clear.		
a90 The improvement of technology is to meet the needs of the market.		
a91 Most customers are satisfied with the performance of the product, and the purpose of improving technology is to provide better service.		
a92 The formulation of the company's strategy refers to competitors' strategies.		
a93 Integrate the product functions of major players in the market and optimize their own products.		
a94 Learn from advantages and improve disadvantages.		
a95 The improvement of products should be in-depth and focused.		
a96 Do better and be more specific in the original application field.		
a97 Try not to change the original settings.		
a98 Less investment		
a99 The original R&D team remains stable.		
a100 Rely on the original platform.		
a101 High uncertainty		
a102 The pressure of failure is small.		
a103 Expand new customers on the basis of old customers without		

worrying about losing the original market.		
a104 Short time and quick effect		
a105 Just come to the enterprise and have a general sense of family identity		
a106 Influenced by the corporate family culture and gradually has a sense of identity		
a107 Report to family members regularly and obtain feedback.		
a108 The longer you stay in office, the deeper your recognition of family culture.		
a109 Emotional bond with the family needs to be established slowly.		
a110 Communicating with family members resonates with major decisions		
a111 This emotional bond is the trust of family members in me		
a112 Feelings for family members affect strategic decisions.		
a113 At first, I communicate my goals with the actual controller of the enterprise, but there is not much resonance.		
a114 As the number of exchanges increases, they will gradually agree with the objectives of the actual controller.		
a115 Important decisions take family goals as influencing factors.		
a116 It resonates with the family's goals		
a117 As a professional manager, we should still consider the interests of the family.		
a118 How to balance the company's financial performance and family interests		

a119 If some decisions harm the interests of the family, then these decisions will not be adopted.		
a120 Some strategies are less radical because of family interests.		
a121 There is less interaction with family members in the early stage, mainly because they care about the company's finance.		
a122 Influenced by family interests, making decisions presents conflicting priorities.		
a123 Not only improve the company's finance, but also safeguard the interests of the family		
a124 I have received systematic education, and my major is business.		
a125 He has worked as a management in many large enterprises.		
a126 Experience in management consulting		
a127 Rich practical experience in enterprise management		
a128 Engaged in related industries for many years		
a129 Has a unique understanding of the industry		
a130 In-depth understanding of relevant industry policies		

5.2 Axial Coding: Mining of Main Category

In open coding, although the extracted 12 categories are abstract to a certain extent, the relationship between the 12 categories has not been reflected. Next, axial coding connects the categories derived from the open coding with various logical relations. In this case, through the analysis of the internal logical relationship between the 12 categories, we reclassify and summarize them, and finally obtain four main categories, namely, family descendant CEOs, professional CEOs, prevention focus, and

exploitative strategic orientation. Table 5-2 shows the open coding category corresponding to each main category and its connotations.

Table 5-2 Axial Coding: Recognition of Core Categories and Typical Relational Structures

Main Category	Corresponding Category	Connotation of Category
Family descendant CEOs	Family responsibility	As the heir of the family, you are responsible for the whole family.
	Comparative risk aversion	Affected by the family, do not want to affect the interests of the family because of poor management, so you worry about risks
	Opportunity development and exploration	Continuously and deeply tap the advantages of the past, continuously improve, deeply develop, and make the best of the best.
	Pay attention to the internal management of enterprises and establish prestige.	Carry out organizational and management changes within the enterprise, establish personal prestige, and expand its influence in the enterprise.
Professional CEOs	Identification with the family	With longer tenure, the deeper the emotional bond with the family business.
	Balance the relationship between corporate performance and family income.	As a professional CEO of a family business, your decision-making needs to balance the interests of the family and that of the business.
	Professional ability	As a professional CEO, he has rich management experience and industry awareness.
Prevention focus	Security requirements	The decision-making is cautious, on the side of safety, and worried about affecting enterprise performance
	Cautious avoidance strategy	The strategy is cautious, circuitous, and not too radical.
Exploitative strategic orientation	Knowledge improvement	Improve according to the existing knowledge mainly to improve efficiency
	Focused Thinking	Specific and focused thinking mode to integrate products and to optimize them
	Less investment and less risk	Less capital and manpower investment and low risk

5.3 Selective Coding: Recognition of Core Categories and Typical Relational Structures

As in the previous chapter, selective coding is performed at this stage. The relationship between the main category and the main category form a clear context and gradually appear. Through in-depth analysis of the first 12 categories and four main categories, and on the basis of repeated comparison with the original data, the author abstracts two core categories: “family descendant CEOs - prevention focus - exploitative strategic orientation” and “professional CEOs - exploitative strategic orientation.”

Family descendant CEOs of family firms mainly refer to the successor of family business as the CEO. The CEO of a family firm may also be recognized as the builder or creator of the business (Burke & Reitzes, 1981). These CEOs of family firms often have received professional education and have a strong ability to obtain the required information. Compared with family founder CEOs, they have significant advantages in professional knowledge, language skills, global cognition, data collection, and comprehension. Some of the heirs have received education abroad and have a broad international vision. On the basis of these characteristics, family descendant CEOs often provide new technologies, new knowledge, and new thinking for the transformation and sustainable development of the family firm. However, the innovation strategy orientation of family descendant CEOs is affected by the family environment (Ward, 2004). As descendants of the family, family descendant CEOs are born with the mission of serving the needs of the family and being loyal to the family. This emotional bond will bind the heirs. They will first consider whether the innovation strategy will harm the interests of the family. If the strategy is too radical, then it may harm the interests of the family. Therefore, they are more risk averse and tend to adopt a stable strategy. When the successor takes over, the enterprise management system has been relatively perfect. They optimize internal management and further reduce management costs under the original institutional framework. They also pay more attention to the impact of individuals on the enterprise, hoping to establish their prestige quickly in the enterprise and convince the rest of the enterprise of their authority.

As a new generation of decision-makers and managers of the company, the personal values and cognition of family descendant CEOs will be transmitted to the strategic orientation they want. As family descendant CEOs need to err on the side of caution

when making decisions, they worry that innovation will affect the performance of the company. Hence, they adopt a cautious avoidance strategy, make plans, look forward and backward, and consider the interests of the family. They are worried about failure and would rather innovate less than avoid mistakes. Their innovation of original products and technologies often focuses on improvement, pursuing the improvement of quality, and the optimization of processes. This kind of leadership is characterized by safety and prudence. It will formulate strict systems, pursue high quality, and stimulate defense focus in the company (Higgins, 1997; Higgins & Spiegel, 2004).

Exploitative innovation is an innovation activity with the basic purpose of improving efficiency, including product upgrading, technology upgrading, structure improvement, and channel renewal. Exploitative innovation focuses on the exploitative and development of existing knowledge resources. Such innovation activities tend to use focused thinking to improve, upgrade, and replace existing products or technologies according to the demand characteristics of the product and technology market. The investment of exploitative innovation is generally less, the degree of risk is low, and the market prospect is clear, so it is often conducive to the short-term growth of enterprise income (March, 1991).

Given that family descendant CEOs are affected by family ties, their innovative decision-making and management behavior have obvious traces of family predecessors. Their views on innovation are defined according to whether it will affect the company's performance and the improvement of technology. Compared with other types of CEOs, the behavior of family descendant CEOs is more stable and adheres to the mentality "one hopes he gets no awards but no mistakes." When a family descendant CEO inherits the business, the business has achieved success in the original field, meeting the psychological demands of the family descendant CEO to control the family identity and sense of belonging. Therefore, family descendant CEOs further allocate enterprise resources to areas that maintain the original dominant position of the enterprise, rather than disperse enterprise resources to new areas with high uncertainty. They focus on the existing knowledge and experience to meet the expressed needs of customers. Their definition of innovation is that they hope to be close to the existing capabilities and

product design, and make gradual improvement on this basis, focusing on efficiency and implementation (Lee et al., 2000). However, they pay attention to the needs expressed by customers, which can reduce the possibility of making mistakes, make the process of further searching information predictable, and the information they collect is more reliable in use. It is also in line with the cautious and risk averse character of family descendant CEOs. Therefore, family descendant CEOs are likely to adopt exploitative activities, which are important for obtaining short-term efficiency benefits and providing stable and safe income (Kammerlander et al., 2015).

Family descendant CEOs are influenced by family loyalty, family reciprocity, and altruism. Family owners and managers usually try to meet the expectations of family members to obtain social and emotional satisfaction. Research shows that individuals with accessible and interdependent self-views tend to focus on prevention. In this case, individuals will be motivated to value continuity and maintain the status quo while avoiding failure and loss at all costs. Family descendant CEOs with more accessible and interdependent self-views tend to focus on prevention. Therefore, a positive correlation exists between family descendant CEOs and the exploitative strategic orientation.

Professional CEOs working for family firms have many years of management experience and professional knowledge. They should have shouldered the key function of building enterprise innovation and are the key driving force of enterprise innovation. However, after the separation of enterprise management rights and ownership, the introduction of professional CEO breeds agency conflict and trust problems. In order to enhance the actual control of the controlling family over the enterprise, the controlling family often increases the degree of its family involvement, so as to improve its voice in the enterprise (Gomez-Mejia et al., 2011; Schulze et al., 2001). On the one hand, the business decisions and business philosophy need to be recognized by the family founder CEO, that is, the controlling family, before they are transformed into practice. On the other hand, professional CEOs have emotional resonance with the family, and this emotional bond will become increasingly strong with the increase of professional CEOs' tenure. If they identify more with the family, then they will tend to

behave more like family descendant CEOs and use business resources to retain the social emotional endowment of owning the family. Therefore, they will tend to focus on family interests rather than corporate financial performance (Gomez-Mejia et al., 2007, 2011).

As family professional CEOs increase tenure, they experience more transformative events with the family business. A series of experiences will deepen the emotional bond between professional CEOs and families, and make the controlling family treat these CEOs more like family members. Under such emotional resonance, professional CEOs will have higher recognition of the family, and they will gradually take the family goal as an important factor affecting enterprise decision-making (Kang et al., 2016). If some decisions harm the interests of the family, then professional CEOs will not adopt them. Owing to the need to balance the company's financial performance and family interests, their innovation strategy is generally not radical. They focus on the improvement of technology and on the improvement of products. The main purpose of this strategy is to improve efficiency, improve customer experience, and further meet the needs of the market.

The longer professional CEOs work in family firms, the more transformative events they experience together with family firms, and the more likely they are to adopt prevention focus and exploitative orientation.

The data of Company C, Company D, and Company G are in the open coding stage. The author summarizes the interview data, analyzes the steps of labeling, conceptualization and categorization, summarizes the personality label into a concept, and further refines three categories. In the main axis coding stage, the main categories are refined for each category, and the family descendant CEOs of family firms, professional CEOs, defense focus, and exploitative strategic innovation orientation are defined. The selective coding stage further summarizes the two core categories of "family descendant CEOs adopt exploitative strategic innovation through defense focus"

and “professional CEOs adopt exploitative strategic innovation with the deepening of family identity,” and commands all categories and case materials.

Chapter 6 The Innovation Strategy Choice of Family Founder

CEOs

In the previous two chapters, I analyzed the cases of CEOs of non-family firms, family descendant CEOs, and professional CEOs of family firms. This study intends to explore the impact of different types of CEOs on enterprise innovation strategy. In this chapter, we continue to conduct grounded research on the impact of family founder CEOs on enterprise innovation strategy. Following the research process of the previous chapter, this chapter uses the same method to find out the main category and core category of the case.

Company E is a direct selling platform of home furnishing products integrating designers, suppliers, and consumers to provide one-stop soft decoration design and collocation. The company has five category suppliers of furniture, lamps and lanterns, cloth art, ornaments, and household articles. Company E operates online and offline to provide whole-house soft decoration design for consumers.

Company F is an enterprise specializing in the production, sales, and service of optical communication equipment. The company has sealed, dust-free light products production building and international advanced optical testing instruments and other equipment. The optical communication products produced and operated have excellent quality and stable performance, and have passed the ISO9001-2000 quality system. The relevant products have obtained the Telecom Equipment Access License and TLC certification issued by the Ministry of Industry and Information Technology of China. The company takes the development of access equipment for optical fiber communication and data transmission and intelligent network management platform as its core products, provides high-quality, safe and reliable products for China Telecom, China Netcom, China Unicom, China Tietong, China Broadcasting Network, finance, electric power, schools, enterprises and other information networks, and obtains good reputation and popularity in the industry. With scientific and

standardized management, strict quality control and good technical services, the enterprise has developed rapidly, making Company F a vibrant and dynamic high-tech enterprise in the IT field.

6.1 Open Coding of Innovation Strategy Choice of Family Founder CEOs

In our communication with the CEO of Company E, he mentioned “As the founder of an enterprise, my family has been deeply engaged in this industry for a long time. I have a thorough understanding of this industry and have a unique understanding of theoretical knowledge, professional skills, and changes in the external environment. I did not limit my vision to this industry, because the knowledge from different fields provide a lot of inspiration. Some reform opportunities in the industry may germinate in other industries first. Sometimes, I also turn to external resources to deepen my grasp of the industry, such as professionals, third-party market research institutions, and strategic consulting institutions. Their suggestions are objective and would supplement my knowledge. I attach great importance to teamwork and do not make a speech in the company. I take the senior executives into account, conduct full communication, discuss together, integrate different views, and finally make decisions. Although it is a team discussion, I lead the team and play my leading role. In addition, I attach great importance to supporting future generations of the family. Some important decision-making meetings allow future generations to participate, pay attention to their views on issues, carry out interactive exchanges with future generations and senior executives, pay attention to establishing the influence of future generations on senior executives, and cultivate the decision-making ability of future generations.” (b1–b14, b48–b64)

The founder of Company F mentioned “I will do a good job in the positioning of the enterprise and fully understand the stage of the enterprise. I judge whether the enterprise actively responds to the impact of new opportunities according to the stage of the enterprise, and adopt different strategies according to different positioning. For superior products, I develop them on the basis of their superior functions and occupy the market in depth. The original products and technologies are the basis of the company’s development. We should not pursue new technologies too much and ignore the maintenance and improvement of original technologies and products. At the same time,

I have no restrictions on the development of Company F. On the basis of optical communication equipment, I carry out diversified development, continuously expand upstream and downstream of the industry, overcome inertial thinking, adopt an inclusive attitude toward diversified opportunities, and create the line of the whole industrial chain. The communication industry changes greatly and changes rapidly. Hence, we should have a full grasp of the information transmitted by the industry. Some opportunities are suitable for improvement, and some are suitable for fundamental breakthroughs. We need to make a choice. The choice of innovation strategy should match the development of enterprises and not be blindly made. There are many business opportunities, and I spend a lot of time screening them. Some opportunities seem tempting but they may actually lead to losses.” (b15–b32, b89–b95)

In terms of risk, Company E’s CEO highlighted that “I have a full understanding of the risks brought about by innovation and change; hence, I try to identify risk sources, risk events, risk causes, and potential consequences. I require the decision-making team to combine qualitative and quantitative methods to assess risks from the perspective of industry and value chain, and fully consider the enterprise’s ability to bear risks. When the enterprise was established, it adopted some low-risk measures because of its low risk resistance. Now, the development of enterprises has gradually entered the formal stage. Sometimes, they are radical and inclined to high risk. We should look at the risks and benefits brought about by innovation decisions to enterprises as a whole, determine the priority of risk reduction and control, formulate risk response measures in advance, and clarify the safety strategy of project innovation. Family interests are also an important factor. Whether it is product improvement or breakthrough, we should consider the impact on the family in the future. If the innovation range is too large, then it may affect the succession of the second generation of the family.” (b33–b47)

The CEO of Company F shared that “Since its establishment, the enterprise has gone through many different stages. According to the needs of development, the strategy is not constant, but constantly adjusted. The purpose of strategic decision-making is to serve the current development needs. There are new changes in the market, so the enterprise will keep up with these changes. If the external environment changes too

much, then the company's strategic orientation will be flexible. If the external environment is stable, then the strategic orientation of the company is stable. If the environment changes too fiercely and the company's strategic orientation remains unchanged, it may be eliminated by the market. The company's strategy is flexibly oriented according to the changes of the external environment. The choice of strategy should be combined with the company's performance objectives. If short-term performance is the objective, then the strategic orientation is conservative and the goal should be the pursuit of improvement. If we only want long-term performance, then we need a fundamental breakthrough in technology. At present, the company breaks through the existing competitive pattern and pursues radical strategy. In addition, I think cultural experience will affect my strategic choice. I am greatly influenced by dialectical materialism. I often look at the development of the industry and the choice of the company's strategic orientation dialectically. It is precisely because of the influence of dialectics that the company's strategic orientation choice is comprehensive. Their growth environment is complex, and they are influenced by different cultures. If they have foreign experience, then both Chinese and Western cultures will have an impact. Therefore, I have an inclusive attitude toward culture. A multicultural perspective makes my judgment and decision-making comprehensive." (b96-b117)

Regarding the choice of strategy, Company E's CEO said that "enterprises have different contradictions at different stages of development. When enterprises have only been established, they need to open up the market by advanced technology. At that time, they should focus on innovation and build a technical moat. For enterprises, innovation at this time is tantamount to survival. Breaking through the pressure of peers, innovation plays an important role. After the initial stage, enterprises enter a period of rapid development. We should continue to innovate and develop new customers. At this time, we need to work hard to break the cocoon into a butterfly; otherwise, we will lose power. However, this stage costs a lot of money. Corresponding improvement and innovation are needed for some new needs of customers. At present, our enterprise is in a stable state. At this time, it is a cash cow. The enterprise is mainly making money, and there is no excessive demand for technological innovation and breakthrough. At this time, the innovation strategy selected is based on improvement, introducing new equipment, and improving efficiency in order to reduce costs and improve revenue. However, at

this time, we should have a sense of crisis and need to make a new breakthrough at the right time.” (b65–b77)

The CEO of Company F mentioned his own views on the choice of innovation strategy: “When an enterprise develops to a certain stage, although the old market brings stable benefits, it needs diversified development, because the enterprise cannot complete the transformation without making new breakthroughs. In addition, considering the inheritance of the family, I hope that the enterprise will have new development momentum before the handover. The definition of innovation is often regarded as technological innovation, but in fact, marketing strategy is also an aspect of innovation, which is used to cooperate with the implementation of technological innovation. We often choose the appropriate marketing strategy according to the needs of the enterprise. The implementation of the marketing strategy is to stimulate the resonance of the company’s new products. The benefits of good marketing are not weaker than technological breakthroughs. For breakthrough technology, marketing needs to design a new public image that resonates with consumers. For some improved technologies, marketing needs to focus on channels and explore the market. Make some improvements in the conventional promotion methods of products, such as increasing the promotion discount in the off-season.” (b78–b88)

The data of Company E and Company F mainly come from the interviews with the company’s management and the field observation records in the production workshops of the two companies. Among them, two in-depth interviews are conducted, and each interview lasted about 2 hours. We recorded the interview with the consent of the respondents. After the interview, we sorted out the recording and transcribed them. In addition, we collected second-hand information from journals, magazines, newspapers, and the Internet. The collected data sources are rich and have good reliability and validity. Following the ideas from the previous two sections, we decompose the original data and label them as the basic analysis unit. A total of 117 labels are presented in this chapter, represented by “b+sequence number,” and these labels are independent of each other. The 117 labels are summarized into 30 concepts, which are represented by

“B+sequence number” and further condensed into 9 categories, represented by “BB+sequence.” Table 6-1 shows the specific process.

Table 6-1 Open Coding: Conceptualization and Preliminary Categorization

Initial Concept	Core Concept	Main Category
b1 Good theoretical knowledge of the industry	B1 Deep knowledge reserve (b1, b2, b3, b4)	BB1 Differentiated cognitive structure (B1, B2, B3, B4)
b2 Deep grasp of the external environment of the enterprise	B2 Knowledge of different fields requires extensive reading (b5, b6, b7, b8)	BB2 Deep development and diversity exploitative of opportunities (B5, B6, B7, B8)
b3 Study of professional skills	B3 Make full use of external cognitive assistance (b9, b10, b11, b12)	BB3 Effectively weigh risks (B9, B10, B11, B12)
b4 As a founder, you must have a unique understanding of the knowledge involved.	B4 Accurate positioning (b13, b14, b15, b16)	BB4 Bear the heavy responsibility of the family to cultivate descendants (B13, B14, B15, B16)
b5 You cannot focus on your industry.	B5 Needs deep development (b17, b18, b19, b20)	BB5 Different development stages entail different strategic choices (B17, B18, B19, B20)
b6 Different fields provide a lot of inspiration	B6 Needs diversity exploitative (b21, b22, b23, b24)	BB6 Technology and marketing have different priorities. (B21, B22)
b7 Some change opportunities in the industry may be first reflected in other industries.	B7 Depth and breadth should be fully combined. (b25, b26, b27, b28)	BB7 Determine inputs and risks according to strategic needs. (B23, B24)
b8 On the basis of the knowledge in their own field, take the initiative to learn about relevant industries.	B8 Effectively distinguish between different types of opportunities. (b29, b30, b31, b32)	BB8 Balance, stability, and change (B25, B26, B27, B28)
b9 Sometimes, my judgment is inaccurate, so I will consult professionals.	B9 Reasonable risk assessment (b33, b34, b35, b36)	BB9 Multilevel strategy (B29, B30)
b10 At the beginning, you will inevitably lack experience. At this time, you need to consult professional people.	B10 Balance the relationship between risk and return at different stages of enterprise development. (b37, b38, b39, b40)	
b11 If you do not grasp opportunities, then you will hire a third-party market research organization.	B11 Be well prepared. (b41, b42, b43, b44)	
b12 Third-party organizations are often	B12 Consider the impact on descendants.	

consulted on what strategies should be adopted to deal with new opportunities.	(b45, b46, b47)	
b13 We need to have a clear understanding of the current stage of the enterprise.	B13 Pay attention to team interaction. (b48, b49, b50, b51, b52)	
b14 We should have a clear judgment on the current development trend of the industry.	B14 Comprehensiveness of team decision (b53,b54,b55,b56)	
b15 Could the enterprise actively respond to the impact of new opportunities at the current stage?	B15 Pay attention to the cultivation of family descents (b57,b58,b59,b60)	
b16 The positioning of the enterprise determines what type of strategy to adopt.	B16 Emphasize personal influence. (b61, b62, b63, b64)	
b17 We should further develop advantageous products and increase the market share.	B17 The start-up period is a fundamental breakthrough in technology. (b65, b66, b67, b68)	
b18 Based on the advantage of the products, pursue the improvement, so as to enhance the customer satisfaction.	B18 In the development period, enterprises pay equal attention to technological breakthrough and improvement. (b69, b70, b71, b72)	
b19 The original products and technology are the basis of the company's development.	B19 The mature stage is mainly improved. (b73, b74, b75, b76)	
b20 We should not pursue new technologies too much and ignore the maintenance and improvement of original technologies and products.	B20 The transition period is dominated by breakthroughs. (b77, b78, b79, b80)	
b21 The company's growth has no limits.	B21 In addition to technology, innovation strategy requires marketing (b81, b82, b83, b84)	
b22 Encourage diversified development.	B22 The choice of marketing strategy will be exploratory and exploitable. (b85, b86, b87, b88)	
b23 Allow inconsistent views and perspectives.	B23 Inputs and risks are dynamically variable. (b89, b90, b91, b92)	
b24 Overcome habitual thinking and adopt an inclusive attitude toward diverse opportunities.	B24 Make adequate plans. (b93, b94, b95)	

b25 Deep development and diversified development are not separate.	B25 Constantly adjust the original strategy (b96, b97, b98, b99)	
b26 Organically combine the improvement of old technology with the breakthrough of new technology.	B26 Target oriented selection focus (b100, b101, b102, b103)	
b27 Pay equal attention to the maintenance of old customers and the development of new customers.	B27 Rapid changes in the external environment (b104, b105, b106, b107)	
b28 The choice of innovation strategy should match the development of enterprises and not be blindly made.	B28 Long term–short term performance (b108, b109, b110)	
b29 New business opportunities will appear every day. We should learn to distinguish.	B29 Dialectical world outlook (b111, b112, b113, b114)	
b30 Some opportunities seem tempting, but they may actually lead to losses.	B30 Multicultural influence (b115, b116, b117)	
b31 The communication industry changes greatly and rapidly. We should have a full grasp of the information transmitted by the industry.		
b32 Some opportunities are suitable for improvement, some are suitable for fundamental breakthroughs, and choices should be made.		
b33 Fully understand the risks brought by innovation and change		
b34 Try to identify risk sources, risk events, risk causes, and potential consequences.		
b35 Qualitative and quantitative risk assessment		
b36 Evaluate the risk from the perspective of industry and value chain.		
b37 Fully consider the enterprise's ability to bear risks.		
b38 If it is the early stage of enterprise development,		

low risk is mainly considered.		
b39 If it is in the later stage of enterprise development, bias toward high risk.		
b40 We should look at the risks and benefits brought about by innovation decision-making to enterprises as a whole.		
b41 Determine the priority of risk reduction and control.		
b42 Formulate risk response measures in advance.		
b43 Determine the safety strategy for further innovation of the project.		
b44 Human, material, and financial resources should keep up.		
b45 Whether it is product improvement or breakthrough, we should consider the impact on the family in the future.		
b46 Whether the heirs of the family accept such innovations		
b47 If the innovation range is too large, then it may affect family succession.		
b48 Decisions will be made at the senior management team level.		
b49 Fully consider the ideas of senior executives.		
b50 Pay attention to mutual communication before decision-making.		
b51 Lead the decision-makers to discuss and make decisions together.		
b52 Involve the family heirs to the decision-making level.		
b53 Through full communication, the perspective of analyzing problems is comprehensive.		
b54 Take into account the value of different views.		

b55 Pay attention to the interests of the whole.		
b56 Integrate different views and finally make a decision.		
b57 Pay attention to the opinions of family descendants.		
b58 Daily life will cultivate the decision-making ability of future generations.		
b59 Interact with family descendants and executives.		
b60 Pay attention to establishing the positive influence of family descendant CEOs.		
b61 When making decisions, we need to draw on the strengths of others, but pay more attention to the role of individuals.		
b62 I should lead and steer team discussions		
b63 Emphasize your leadership role.		
b64 They will pay more attention to the opinions of family heirs and intend to highlight the status of future generations.		
b65 The enterprise has only been established, and it needs to open up the market by using advanced technology.		
b66 Pay attention to innovation and build a technological moat.		
b67 For enterprises, innovation at this time is tantamount to survival.		
b68 Break through the pressure of other peers, and the role of innovation is important.		
b69 Continuously make technical improvement to maintain the relationship with longstanding clients.		
b70 Enterprises are in a period of rapid development, but they must		

also innovate and gain new clients.		
b71 At this time, enterprises need to transform; otherwise, they will lose power		
b72 At this time, we spend a lot of money. We also need to improve and innovate for some client needs.		
b73 At this time, the enterprise is a cash cow.		
b74 There is no excessive demand for technological innovation and breakthrough.		
b75 At this time, we will focus on improvement and introduce new instruments to improve efficiency.		
b76 Improve technology in order to reduce costs and increase revenue.		
b77 With crisis awareness, new breakthroughs are needed.		
b78 Although the old market brings stable benefits, it needs diversified development.		
b79 Enterprises cannot complete the transformation without making breakthroughs.		
b80 We should consider the inheritance of the family and hope that the enterprise will have a new driving force for development before the handover.		
b81 Marketing strategy also needs innovation to cooperate with the implementation of technological innovation strategy.		
b82 Select the appropriate marketing strategy according to the enterprise development and market demand,		
b83 The implementation of marketing strategy is meant		

to stimulate customers' resonance with the company's new products.		
b84 Good marketing is not weaker than technical breakthrough.		
b85 For breakthrough technology, marketing also needs to design a new public image.		
b86 The new image needs to resonate with consumers.		
b87 For some improved technologies, marketing needs to focus on channels and explore the market.		
b88 Make improvements in the conventional promotion methods of products, such as increasing discounts in the off-season.		
b89 At different stages of development, enterprises will determine the investment and risk brought by strategy.		
b90 Not so worried about investment and risk, only about the benefits		
b91 If the market demand is clear, more risk projects can be invested.		
b92 If the risk is too high, then the project with too much investment will be carefully considered.		
b93 Cooperate with the company's innovation strategy and make sufficient analysis on investment and risk.		
b94 Detailed plans are in place.		
b95 Detailed breakdown of inputs		
b96 Since its establishment, the enterprise has experienced many different stages and needs continuous adjustment.		
b97 The strategy is not constant and it is constantly adjusted according to the needs of development.		

b98 The purpose of making strategic decisions is to serve the current development needs.		
b99 There are new changes in the market, and the enterprise must keep up with these changes.		
b100 Focus on the choice of strategy according to the changes of the company's objectives.		
b101 At present, the company's strategic choice is conservative in order to improve profits.		
b102 At present, in order to break through the existing situation, the company's strategic choice is radical.		
b103 Strategic choices for different department objectives.		
b104 If the external environment changes too much, then the company's strategic orientation will also change.		
b105 If the external environment is stable, then the company's strategic orientation is also stable.		
b106 If the environment changes too fiercely and the company's strategic orientation remains unchanged, it may be eliminated from the market.		
b107 Flexible strategic orientation adapts to changes in the external environment.		
b108 The choice of strategic orientation should weigh the long-term and short-term performance.		
b109 In the pursuit of short-term performance, the strategic orientation is conservative and for the pursuit of improvement.		
b110 If we only want long-term performance, then we need a fundamental		

breakthrough in technology.		
b111 I am greatly influenced by dialectical materialism.		
b112 I often dialectically look at the development of the industry and the choice of the company's strategic orientation.		
b113 It is because of the influence of dialectics that the company's strategic orientation choice is comprehensive.		
b114 Dialectics are used in strategic decisions.		
b115 I grew up in a complex environment and am influenced by different cultures.		
b116 Has foreign experience, and both Chinese and Western culture have an impact		
b117 I have an inclusive attitude toward culture. A multicultural perspective makes my judgment and decision comprehensive.		

6.2 Axial Coding: Mining of Main Categories

In open coding, although the nine categories extracted are abstract to a certain extent, the relationship between the nine categories has not been reflected. Next, axial coding connects the categories derived from the open coding with various logical relations. In this case, by analyzing the internal logical relationship between the nine categories, and on this basis, reclassifying and summarizing, we finally obtain three main categories, namely, family founder CEO, combined regulatory focus, and ambidextrous orientation. Table 6-2 shows the open coding category corresponding to each main category and its connotation.

Table 6-2 Axial Coding: Recognition of Core Categories and Typical Relational Structures

Main Category	Corresponding Category	Connotation of Category
Family founder CEOs	Differentiated cognitive structure	As the founder of an enterprise, in addition to the accumulation of knowledge, the CEO's thinking must be flexible, widely involved, and accurately positioned.
	The depth development and diversity exploitative of opportunities	In the face of opportunities, it is necessary to distinguish them effectively and fully combine depth and breadth.
	Effective risk balancing	At different stages of enterprise development, we should balance the risk and return, reasonably evaluate the risk, and consider the impact on the family.
	Undertake the task of family cultivation	As a family business, for the smooth inheritance of the family, family founder CEOs need to pay attention to cultivating the loyalty of the senior management team and the cultivation of future generations.
Combined regulatory focus	Balance, stability, and change	We should constantly adjust according to the changes of the situation, and there will be different emphases. On the whole, we should balance stable and radical orientation.
	Multi-level strategy	Influenced by dialectics and multiple cultures, the choice of strategy will also be multi-level and all-round.
Ambidextrous orientation	Different stages of development have different strategic choices	For enterprises from start-up to late transformation, the strategic choices in different stages are different, not constant.
	Technology and marketing have different priorities.	The innovative choices of technology and marketing complement one another and have their own emphases.
	Determine inputs and risks based on strategic needs.	The investment and risk are dynamic and variable, and adequate plans should be made.

6.3 Selective Coding: Recognition of Core Categories and Typical Relational Structures

As in the previous two sections, selective coding is performed at this stage. The relationship between the main category and the main category will form a clear context and gradually appear. Through in-depth analysis of the first nine categories and three main categories, and on the basis of repeated comparison with the original data, the author abstracts the core category of “family founder CEOs - combined regulatory focus - ambidextrous orientation.”

Family founder CEOs refer to the founder of the family business and has been the CEO of the business. They plan the future of the enterprise with their own knowledge, life experiences, accurate judgment, and insights (Miller & Breton-Miller, 2011; Miller, Breton-Miller, & Lester, 2011). They have distinct values, sufficient power, and strong will to ensure that the enterprise develops according to plan. Family founder CEOs have a unique understanding of the market and constantly perceive new opportunities, carry out new businesses, and achieve their sustainable development. In addition, these CEOs often have unique social resources and can transform these heterogeneous resources into unique capabilities, bring competitive advantages to enterprises, and realize the development of families and enterprises. On the basis of these characteristics, the founding CEO of the family business will actively explore new products and technologies, not fear failure, devote himself to improving the competitive advantage of the business, and lay the foundation for the development of the family business. However, with the development of the enterprise, family members continue to enter the enterprise. Hence, the innovation strategy orientation of CEOs will be affected by the family environment, and they shoulder the mission of family inheritance. For a smooth intergenerational inheritance period, the family needs to strengthen its control over the enterprise. However, because innovation activities need to invest significant human and financial resources, this excessive resource investment is likely to cause the family to lose control of its enterprise technology trajectory and development direction, and may eventually affect the task of family intergenerational inheritance. Therefore, family founder CEOs often reduce the investment in innovation and choose a conservative strategy for the smooth transition of enterprise inheritance.

Family founder CEOs shoulder the important task of making the company achieve a breakthrough from 0 to 1. These CEOs' individual characteristics, manner of doing things, and life experiences convey the strategic orientation they want for the company. Given that these CEOs play a complex role in the enterprise, they will take the breakthrough development of the enterprise as their main mission in the early stage. In the later stage, with the continuous development and growth of enterprises, they face the problem of intergenerational inheritance. When making decisions in the later stage, they will first consider the demand for safety and worry that innovation will affect the intergenerational inheritance of the company. Therefore, they tend to adopt a cautious

avoidance strategy. In addition to considering the influence of intergenerational inheritance, these founders will be affected by multiple cultures and have dialectical thinking; hence, the strategic orientation is often multi-level and all-round. They will weigh whether to innovate products and technologies with improvement or fundamental breakthrough according to needs. This type of leadership is characterized by contradictory opposition, takes the needs of different stakeholders into account, and stimulates a combined regulatory focus in the company (Gorman et al., 2012).

The essence of ambidextrous orientation is to consider the coexistence of two different innovation modes in a dialectical and unified way of thinking. On the one hand, according to the changes of internal and external environment, enterprises separate exploratory innovation and exploitative innovation in time, that is, exploratory innovation in one period of time and exploitative innovation in another period of time, so as to achieve the sequential balance of the two types of innovation. On the other hand, enterprises simultaneously carry out exploratory innovation and exploitative innovation in the same business unit, that is, they carry out targeted innovation according to different aspects of the same business (Lubatkin, 2006; O'Reilly & Tushman, 2008).

Considering that family founder CEOs are influenced by their role as entrepreneur and family member, their innovation decision-making and management behavior are characterized by contradiction and opposition. Their views on innovation are defined by determining whether an innovation will be conducive to company development and family intergenerational inheritance. Compared with other types of CEOs, the behavior of family founder CEOs is more complex. They must balance the relationship between risk and return at different stages of enterprise development. When an enterprise is in the early stage, the founders will first consider the survival of the enterprise. They adopt an innovation strategy in hopes that a fundamental breakthrough in technology would be achieved. At this stage, enterprises need to open up the market by advanced technology and build a technical moat. In the mature period of enterprise development, the enterprise's own development is stable and has stable income, but family intergenerational inheritance needs to be considered. Hence, the founders allocate

resources to the existing advantageous technologies, keep the superior technologies, further improve the enterprise's revenue capacity, and ensure the stability of the enterprise's intergenerational inheritance. In addition, these CEOs have a differentiated cognitive structure, know how to distinguish different types of opportunities effectively, and take corresponding measures to develop and make diversified use of opportunities. Therefore, in addition to different development stages, founders and CEOs will adopt different innovation strategies. In the face of the same business unit, these CEOs effectively distinguish which opportunities are suitable for improvement and which are suitable for fundamental breakthrough, so as to adopt different innovation strategy orientations. Therefore, under the dual influence of entrepreneur identity and family founder identity, family founder CEOs will adopt an ambidextrous orientation.

Family founder CEOs have multiple roles and logic. On the one hand, they establish and develop their own enterprises, play the role of entrepreneurs, take pride in their achievements, and are responsible for the development of the enterprise. On the other hand, as family members, they have close emotional ties with family members in the enterprise, which gives these CEOs the role of family inheritance. Under the influence of these multiple identities and their multi-level thinking structure and dialectical thought, they are more likely to think and act from the perspective of integrating contradictions. Thus, the two motives of promotion focus and defense focus are likely to coexist. To be responsible for the enterprise and the needs of family inheritance, family founder CEOs will tend to adopt a combined regulatory focus and pursue both exploratory innovation strategy and development innovation strategy.

Chapter 7 Case Comparison and Model Construction based on the Grounded Analysis

After the research and analysis in the first three sections, this study makes a rooted analysis and sorting of the case data of the above enterprises. Several categories and main categories that affect the choice of enterprise innovation strategy are identified, which are conducive to a complete understanding and further comparison between cases. Cross-case comparison identifies the differences between different cases and finds common factors, so as to tap the essence behind the phenomenon and lay a solid foundation for theoretical construction. Through the cross-case comparative analysis of the cases analyzed in the first three sections, the regular characteristics are analyzed and summarized to build the cognitive mechanism under the relationship between CEO type and innovation strategy affected by family ownership and social identity, which is the focus of this chapter.

The CEO of a company is the advocate, organizer, and chief decision-maker of the company's innovation strategy. The company's innovation strategy starts from planning, technology R&D, and progresses to the industrialization of innovative products. During this period, any link is closely inseparable from the leadership of the CEO. Innovation is initiated by CEOs who dare to take risks. CEOs' innovative spirit, knowledge reserve, and family role are considered important factors affecting the company's innovation strategy. Among them, the CEO's innovative spirit drives the innovation strategy mainly in enterprising spirit and risk-taking. CEOs' knowledge reserve determines whether the innovation strategy is forward-looking and can be implemented. The CEO's corporate role depends on whether he is a relevant member of the family. If CEOs play an important role in the family, then they will incorporate family interests into the important factors of the company's innovation strategy. The chairman of Company A is an entrepreneur with innovative spirits and is not restricted by the family. Therefore, it took only half a year to position the company's educational products successfully and promote their application in the community. The chairman of Company F, as the founder of the family business, led the R&D team to tackle key technical problems in the early stage of the enterprise, successfully overcame the

technical difficulties of optical testing instruments and other equipment, and successfully realized the commercialization of products. As the second generation of the enterprise, the chairman of Company C pays more attention to the steady development of the enterprise. Therefore, in recent years, the company has mainly carried out strategic innovation through capital operation, and has not done much research on technological breakthroughs.

SMEs are an important part of China's economy, and innovation is an important driving force for the success of SMEs. The definition of family business is a family's ownership and control of a business, and the vision of how the business benefits the family may span several generations. As a complex system formed by family involved enterprises, the choice of innovation strategy of family firms will be significantly affected by family involved factors. Owing to the differences in the degree of family involvement, different types of family firms choose different innovation strategies. For non-family firms, because there is no consideration of family interests, their innovation strategies are often radical. A comparative analysis of the above cases shows that the impact of enterprise ownership on innovation strategy varies. Without the influence of family involvement, the innovation strategies of non-family firms Company A and Company B are radical. They pursue a fundamental breakthrough in technology and hope to quickly occupy the market and realize the rapid growth of revenue. For family firms, the involvement of family in enterprise ownership affects the choice of enterprise innovation strategy. For the founders, the early family involvement is less, so the innovation strategy at this time pays more attention to the fundamental breakthrough of technology. Later, if the family is involved more, it will be involved in the needs of safeguarding family interests. The innovation strategy is conservative and pursues technological improvement. In the succession of family firms, the family is more involved at this time. They pursue technological improvement, maintain old customers, and invest less in innovation. The main purpose is to improve efficiency and reduce costs, so as to obtain income growth.

Social identity is important for CEOs because it drives them to take the position of innovation strategy. The purpose of social identity theory is that organization members obtain self-cognition and self-classification in their organization. Social identity theory shows that identity promotes members to work toward collective goals. Family business essentially contains the family component of its identity, and the company reflects the interests and opinions of family members. For family firms and non-family firms, CEOs have different corporate identity due to their different identities.

The operation of social identity was visible in findings on the family founder CEOs and family descendant CEOs described in the findings earlier. Family founder CEOs are concerned about the businesses rather than family relations. The firms may still be seeking to survive. Alternatively, they could be still on the development phase which is replete with risk. They will tend to adopt an explorative strategy for innovations. Family descendant CEOs are more attached to their families. They have dual obligations placed on them to preserve and to continue business success. As such, they will tend to adopt the exploitative strategy that could bring about business sustainability with less risk.

Whilst one might think that a professional CEO would not have identification with the family, the CEO of Company G showed that longer periods of employment with the company where there are informal relationship activities leading to familiarity and “bonds” with the family could result in behaviors that not very different from family descendant CEOs. Company G’s professional CEO had deepened recognition of the family, his innovation strategy gradually focuses on family interests.

In contrast the CEOs of non-family firms, with no intention of the inclusion of family members or family interests are more ambitious in their pursuit of business success. Where they are still in the startup phase, they will take more risks. They tend to adopt the explorative strategy. Their regulatory focus is on the goals of their enterprises. Social identification is only with the firms and the commercial viability.

The cases suggest that social identity influences the regulatory focus and that regulatory focus in turn affects their choice of innovation strategy. Regulatory focus theory has an impact on CEOs' choice of enterprise innovation strategy. The theory explains the differences in individual methods and potential motivation to achieve goals, including promotion focus and defense focus. In promotion focus, leaders pay attention to the possibility of success, achieve the desired state by pursuing success, so as to obtain progress, growth and achievement, and carry out more exploratory activities, which is conducive to the long-term performance of the organization. The chairman of Company B is a CEO actively pursuing success. Under his leadership, the scientific research team actively tackled key problems, finally overcame the difficulties of communication technology, and opened the market through innovative products. By contrast, leaders who attach great importance to prevention focus are driven by the needs of safety and responsibility, so they strive to avoid mistakes or potential negative results. For Company C, the family descendant CEO is worried about the impact on the enterprise performance after taking over, the strategy adopted is often conservative, avoids risks and focuses on safety. Studies show that due to the complexity of the internal and external environment of the enterprise and the CEO's own knowledge reserve and personality characteristics, promotion focus and defense focus will coexist. Taking Company D as an example, the founders of the family business are widely involved and have multiple thinking structures. The internal and external environment of the enterprises they founded has also changed from the initial stage to the mature stage. Therefore, in different stages, the promotion focus and defense focus coexist (Higgins, 1997; Higgins et al., 2001).

Exploratory innovation reflects the flexibility and experimentation of innovation activities, involving search and discovery, R&D innovation, technological change, and risk-taking. Exploitative innovation is an innovation activity with the basic purpose of improving efficiency, including product upgrading, technology upgrading, structure improvement, and channel renewal. However, influenced by the internal environment such as the enterprise's own characteristics, the personal character and knowledge reserve of enterprise leaders, as well as the external environment such as the industry

and macro-economy, exploratory innovation strategy and exploitative innovation strategy coexist, that is, innovation duality. Thus, obtaining short-term benefits through utilizing innovation will win the future technology market competitiveness from exploratory innovation. In this research, the innovation strategies chosen by enterprises also vary under the influence of enterprise ownership and the role of entrepreneurs (Gibson & Birkinshaw, 2004; O'Reilly & Tushman, 2008).

To understand the cognitive mechanism under the relationship between CEO types affected by family ownership and social identity and innovation strategy, this study constructs a 2×2 matrix to determine the type of CEO (as shown in Figure 7-1). The y-axis indicates if the CEO is a family member or a non-family member (professionals), and the x-axis shows whether the enterprise intends to become a family enterprise.

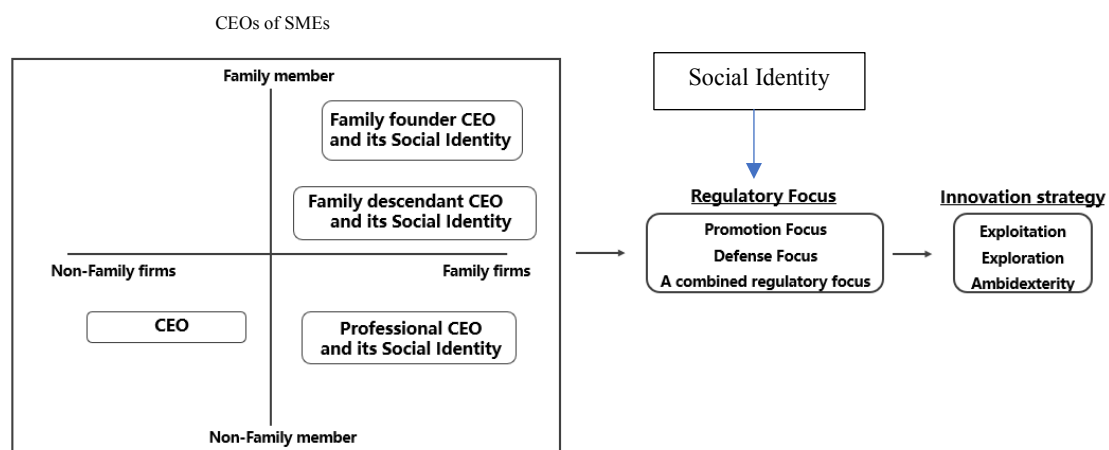


Figure 7-1 Conceptual Model

The findings suggest that the CEOs who lie on the right of the vertical axis in terms of proximity in relationship with the family firms are affected by social identity. The proximity in relationship to the family firms could be by way of family ties as in the family founder or family descendant CEO. It could also be a professional CEO who has worked with the family firm over a long period of time who identifies with the family firms. The identification could take the form of alignment of objectives, norms and values. The greater the degree of identification of the CEOs with the family firms, the greater the influence of the family in choice of innovation strategies. The degree of social identity of the CEOs with the family influences the regulatory focus and

thence the innovation strategy. The operation of these factors just described is illustrated through the cases below. To enable a comparative view of the cases, the findings on the influence of the factors on the different CEOs is shown in Table 7.1. below.

(1) In the case of Company A and Company B, due to personal growth environments, their own abilities, and individual characteristics, CEOs of non-family firms often pursue fundamental technological innovation and desire success, even if they need to take major risks (*e.g.*, *x1–x13*, *Chapter 4*, *Table 4-1*). This kind of leadership is characterized by flexibility, exploration, attempt, and innovation, which enhance the overall creativity of the company and awaken promotion focus in the organization (*e.g.*, *x75–x88*). Therefore, a positive correlation exists between the CEO of non-family firms and exploratory strategic orientation (*e.g.*, *x89–x101*, *Chapter 5*, *Table 4-1*).

Example:

The company was founded in 2016 and has been in the era of rapid development of the education industry. However, at this time, the industry competition is fierce and there are many players. In the early stage of entrepreneurship, there is great pressure, but everyone is full of entrepreneurial passion. Because it is original, it has invested more in R&D in the early stage.

As a start-up enterprise, products need to open up a new situation quickly and improve their influence in new fields. We must break through the neck technology, achieve fundamental change, and keep up with trends.

From the interview of the CEO of Company A

(2) In the case of Company C and Company D (Gen 2), family descendant CEOs are influenced by family loyalty, family reciprocity, and altruism (*e.g.*, *a1–a15*, see *Chapter 5*, *Table 5-1*, *p.* 59). In this case, individuals will be motivated to value continuity and maintain the status quo, while avoiding failure and loss at all costs (*e.g.*, *a62–a74*). Family descendant CEOs with more accessible and interdependent self-

views tend to focus on prevention. Therefore, a positive correlation exists between family descendant CEOs and the exploitative strategic orientation (*e.g., a92–a97, p.60*).

Table 7-1 CEOs, Ownership, Social Identity, Regulatory Focus and Innovation Strategy

	Non-family Firms [Company A & B] Age < 5 years	Family Firms		
		Family Descendant CEOs [Company C & D] Age > 10 years	Professional CEOs [Company G] Age >10 years	Founder CEOs [Company E & F] Age >10 years
Social Identity	No family factors	family bond; i.e, Family descendant CEOs are influenced by family loyalty, family reciprocity and altruism.	family bond; i.e, A series of experiences will deepen the emotional bond between professional CEOs and families	the role of entrepreneurs and close emotional ties with other family members in the enterprise
Regulatory Focus	Promotion; i.e enhance the overall creativity of the company and awaken the promotion focus in the organization	Prevention; i.e Family descendant CEOs will be motivated to value continuity and maintain the status quo, while avoiding failure and loss at all costs.	Prevention; i.e If some decisions harm the interests of the family, these professional CEOs will not adopt them.	Promoting focus and defensive focus are more likely to coexist
Risk-taking	Yes	No; Conservative	No; Conservative	Yes, promotion strategy
Choice of innovation strategy	Exploratory strategic oriented	Exploitative strategic oriented	Exploitative strategic oriented	Ambidexterity

The biggest difference between CEOs of family-owned SMEs and those of non-family-owned SMEs in choosing innovation strategies is the factor of family emotion. CEOs of non-family SMEs do not consider family factors, such as whether it damages family interests or affects family unity. Therefore, compared with other types of CEOs, CEOs of non-family firms have more desire for success. This kind of leadership is characterized by flexibility, exploration, attempt and innovation, which enhance the overall creativity of the company and awaken the promotion focus in an organization.

The difference between the family founder CEOs and the family descendant CEOs is that the founder CEOs of family business establish and develop their own enterprises, play the role of entrepreneurs, are proud of their achievements, and are responsible for the development of the enterprise. As family members, the founder CEOs of family business have close emotional ties with other family members in the enterprise, which gives these CEOs the role of family inheritance. The founder CEO will tend to adopt a combined regulatory focus and pursue both exploratory innovation strategy and development innovation strategy. Family descendant CEOs are influenced by family loyalty, family reciprocity and altruism. Family descendant CEOs with more accessible and interdependent self-views tend to focus on prevention. Therefore, there is a positive correlation between the CEO of family enterprises and the exploitative strategic orientation.

As for family descendant CEOs and family professional CEOs, influenced by family loyalty, family reciprocity and altruism, if some decisions harm the interests of the family, these CEOs will not adopt them, the main purpose of this strategy is to improve efficiency, improve customer experience and further meet the needs of the market. There is a positive correlation between these CEOs and the exploitative strategic orientation

Example:

Company C is a typical family business, which was founded by my father and uncle. Growing up with my family, I was greatly influenced by my parents and had a strict family education. The overall style of the family is rigorous, and elders reminded us to do things in a down-to-earth manner. As a member of the family, important decisions should consider the interests of the family, and even invite parents to participate.

The starting point of my innovation strategy is when the old technology no longer meets the efficiency requirements of the existing market, so I need to innovate to improve efficiency.

From the interview of the CEO of Company C

(3) In Company G, for professional CEOs working for family firms, they have many years of management experience and professional knowledge, and should have shouldered the key function of building enterprise innovation. As professional CEOs increase their tenure, a series of experiences will deepen the emotional bond between professional CEOs and the families (*e.g., a101–a113, Chapter 5, Table 5-1, p. 64*). They worry that innovation will affect the performance of the company and tend to focus on prevention (*e.g., a75–a81*). Professional CEOs will have higher recognition of the family, and the more likely they are to adopt exploitative orientation (*e.g., a98–a105, Chapter 5, Table 5-1*).

Example

When I first entered the enterprise, I did not have any sense of identity. As a professional manager, I simply hope that the company's performance is up to the standard and I become worthy of this position.

As I worked for a long time and regularly reported work and exchanged experience with family members, I was gradually influenced by the family culture and gradually recognized it, and the emotional bond with the family was also slowly established. This emotional bond is the trust of family members in me.

If decisions will harm the interests of the family, then I will not adopt those decisions. We not only want to improve the company's finance and make the company develop better, but also need to safeguard the interests of the family.

From the interview of the CEO of Company G

(4) In Company E and Company F (Gen 2), because family founder CEOs are influenced by the role of entrepreneurs and family emotional ties, their innovative decision-making and management behavior are characterized by contradiction and opposition (*e.g.*, *b1–b16; b48–b60, Chapter 6, Table 6-1*). Their views on innovation are defined by determining whether it will be conducive to company development and family intergenerational inheritance. Under the influence of this multiple identities and their multi-level thinking structure and dialectical thought, they are more likely to think and act from the perspective of integrating contradictions and tend to adopt a combined regulatory focus (*e.g.*, *b65–b80*). Family founder CEOs both exploratory innovation strategy and exploitative innovation strategy (*e.g.*, *b96–b110, Chapter 6, Table 6-1*).

Example

My family has been deeply engaged in this industry for a long time. As the family founder CEO, I have a thorough understanding of this industry and have a unique understanding of theoretical knowledge, professional skills, and changes in the external environment.

Enterprises have different contradictions at different stages of development. When enterprises have only been established, we need to open up the market by advanced technology. At that time, we should focus on innovation and build a technical moat. For enterprises, innovation at this time is tantamount to survival.

At present, our enterprise is in a stable state. At this time, it is a cash cow. The enterprise is mainly making money, and there is no excessive demand for technological innovation and breakthrough. At this time, the innovation strategy selected is also based on improvement, introducing new equipment, and improving efficiency.

From the interview of the CEO of Company E

Chapter 8 Discussion and Conclusion

After the grounded analysis and cross-case comparative analysis of the seven cases in the first four chapters, we construct the cognitive mechanism model under the relationship between CEO type and innovation strategy affected by family ownership and social identity, which basically reaches the expected purpose of the research. In this chapter, we summarize the innovation and practical enlightenment of the research, and look forward to the future research.

8.1 Research Insights

(1) Expand the connotation and extension of dual innovation mode.

Dual innovation in this study is broad, including not only the single aspect of exploratory innovation and development innovation, but also the innovation of the coexistence of exploratory innovation and development innovation. This study updates the connotation of dual innovation and expands its extension, which is of great significance in the theoretical research of dual innovation. This research regards exploratory innovation and development innovation as two orthogonal dimensions rather than two extremes of a continuum, and examines the internal causes of innovation strategic decision-making of SMEs according to the ownership attribute and CEO nature of SMEs.

(2) Fill in the gaps in family business literature.

This study fills the literature gap on the duality of business development and family interest maintenance in family firms. The extant literature emphasizes the results such as performance and strategy, rather than the reasons behind them. When analyzing the reasons, the duality of enterprise owner and the identity of enterprise owner and CEO is ignored. In addition, the current analysis of enterprise owners mainly focuses on their personal characteristics rather than their social environment. However, the social identity of different types of owners is the key factor to explain the preference for innovation duality.

(3) Apply focus theory to the innovation strategy of SMEs.

This research makes a new application of regulation focus theory and applies it to the field of SME innovation and family business. Focus theory provides new insights for this topic. Most of the previous studies on regulation focus theory focus on personal issues, such as job performance, creativity, helping behavior, and communication. In this research, the focus on regulation theory is effectively applied to CEO decision-making, innovation strategy, and its relationship, which is of guiding significance.

(4) Focus on SMEs.

In the past, the research on family business and innovation strategy focuses on large enterprises. However, SMEs are an important part of China's economy, and the factors and results of their innovation strategy have not been well studied. Innovation is an important driving force for the success of SMEs. The existing literature on family business innovation is mostly based on quantitative research. Quantitative research has obvious advantages in testing theory and comparing the current situation, but there are deficiencies in theoretical construction and exploring the mechanism under the phenomenon. Therefore, scholars encourage more qualitative research. Through interviews, field studies, and case studies, this study reveals the "black box" of family business innovation. Moreover, most studies are carried out in Western countries. Given that different external institutional environments lead to different behavioral characteristics of family firms, whether this theory and logic is applicable to Chinese enterprises remains to be tested. Therefore, this study increases and deepens the universality of the existing theory by conducting qualitative research on China's SMEs.

This research demonstrates the significant influence of social identity on regulatory focus on the strategy choice of family descendant CEOs and

professional CEOs. While the extant literature may have shown some conclusions on the impact of strategy preference on performance, this research through the grounded theory supplement the literature that the reasons family descendant CEOs and professional CEOs might end up less adventurous and conservative at times. The research findings suggest that family firms and the CEOs themselves might have to guard against the influence of the families. While being accepted by the family members might be important for the CEOs, their professional competences and contributions to the businesses should not be “blunted” by the tendencies the cases suggest. Family business board members in China can draw lessons from the cases to be aware that when they appoint CEOs to set the goals for the CEOs that are clear and to guard against the social identity effects, if exploration and not exploitation is their goal. Being aware of the social identity effect forewarns the family businesses and the CEOs of the resulting regulatory foci should they not guard against them.

8.2 Research Contributions

8.2.1 Managerial Implications

Enterprises are the main body of innovation. SMEs are the source of national innovation vitality, the main force of national economy, and the main force to realize technological leap. In recent years, China’s SMEs have developed rapidly. On the one hand, the technological innovation of SMEs has made fruitful achievements and made important contributions to the improvement of the national economy and the level of science and technology. On the other hand, compared with large state-owned enterprises and multinational enterprises, the overall enterprise strength of SMEs is weak, and their core competence needs to be improved. In this development situation, combined with the research results of this study, this research puts forward the following suggestions:

For non-family firms, in order to ensure better innovation, CEOs need to pay attention to three aspects. First, strengthen the spirit of learning and innovation. CEOs should strengthen learning and constantly improve the spirit of innovation in their firms. Entrepreneurs should have the courage to innovate and dare to innovate. Only through innovation can enterprises make great progress. Therefore, CEOs need to strengthen the spirit of innovation. In the era of knowledge economy, new things emerge one after another. Thus, CEOs must pay attention to new knowledge and information, continue to learn actively, adopt new ideas and concepts that conform to the development of the times, and apply these new ideas and concepts to the innovation of enterprises. Second, improve the talent incentive mechanism. A stable and innovative R&D team is the key to the smooth implementation of technological innovation in SMEs. CEOs should have the awareness of cultivating talents, encourage technology R&D talents, create a good working environment, conditions or good development opportunities for them, address concerns, and let them devote themselves to technological innovation. CEOs should reward R&D personnel with strong innovation ability and remarkable achievements, such as stock ownership or salary increase. Third, increase investment in technology R&D. CEO should attach great importance to R&D work, increase R&D investment, reintroduce equipment, strengthen the transformation of their own technology, learn the technology development mode of other enterprises, increase R&D capital investment, cultivate their own R&D team, increase technology reserves, and improve the conversion rate of R&D achievements, so as to ensure technology leadership.

For family firms, the founders should strengthen their R&D investment when serving as CEO. They should employ professionals from inside and outside the family for innovation, to improve the tolerance of R&D failure, improve the scientific and technological level of the enterprise, and optimize the product structure of the enterprise. They should strengthen technological development,

research and develop core technologies and products with independent intellectual property rights, cultivate brand products, establish brand advantages, and promote enterprise innovation. From the perspective of long-term development, enterprises can promote innovation in a short time. Only by continuous innovation could they improve the core competitiveness of enterprises. Only when the enterprise develops steadily for a long time will it be conducive to the preservation of the family's social emotional wealth.

Family founder CEOs should strengthen the training of family successors. In China, the son inherits the father's business in the succession model of family business. The unique human resource advantages and good educational background of family business successors enable the family successor to serve as CEO, which can promote enterprise innovation. Therefore, if the family successor is willing to take over the family business, the family successor must be trained to facilitate the inheritance process. When the family successor acts as CEO, we should give full play to the enterprise's core role in enterprise innovation and constantly promote enterprise innovation.

When family firms choose professional managers as CEOs, business owners should enhance trust in professional managers, learn to authorize, and do not stick to immediate interests. Family business owners bind the long-term interests of the enterprise with the income of professional managers by means of material incentives, non-material incentives or formulating a reasonable CEO performance evaluation system, so as to give better play to the initiative of professional managers and CEOs. Family business owners should formulate a sound enterprise internal control system to reduce agency costs. Professional managers and CEOs should play their role as stewards, increase investment in enterprise R&D, create value for the enterprise, fulfill their responsibilities, and create wealth for enterprise owners.

8.2.2 Limitations and Future Research

Although the seven cases are representative of innovation strategic decision-making of SMEs in China, the number of cases is limited. On the basis of the comparative analysis of grounded theory, does the cognitive mechanism under the relationship between CEO types affected by family ownership and social identity and innovation strategy adapt to the innovation strategy choice of other enterprises? This study believes that in order to enrich the theoretical research system of technological innovation strategy choice of SMEs, future research is carried out from the following aspects:

First, by using quantitative research, the factors affecting the innovation strategy decision-making of SMEs are expressed by quantitative coefficients to make up for the subjectivity of qualitative research such as grounded theory and case study in the evaluation standard.

Second, this study uses the interview method as the main way to collect original materials. The original materials are limited by the interviewees and the number of interviewees, so the conclusion of this study is not necessarily of universal significance. Many interviewees in this study have different backgrounds, different ages, and their industries are completely unrelated. The materials obtained from these interviewees may not be representative and cannot cover the decision-making methods of other start-ups. Therefore, whether the innovation strategy decision-making model of SME decision-makers obtained in this study has universality and applicability, as well as the reference value of the model, need to be confirmed by more extensive research and practical tests.

Third, the researcher's own knowledge and potential understanding of the industry may have an impact on the whole research process. In addition, grounded theory requires researchers to be sensitive to concepts and their

relevance. Researchers may have missed important information or misunderstood the concept in the research process. Therefore, the sensitivity of researchers determines the accuracy and preciseness of the research process.

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