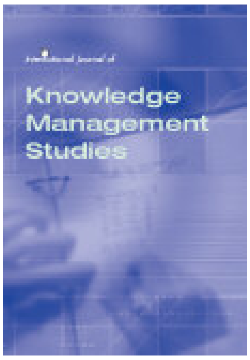

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Dynamic capabilities and intergenerational growth in the family business: the role played by director rotation

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Dynamic capabilities and intergenerational growth in the family business: the role played by director rotation

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Abstract: Director rotation mechanism can effectively solve the problem of control of family business and enhance dynamic capabilities. This paper selects the case of TaiLi, which lasted for nearly 40 years, as the object of study, and develops the theoretical basis for the alternation between turn-taking mechanism and inter-family business. The research shows that the rotation mechanism facilitates a peaceful corporate climate for family businesses, where managers can expand, share, transfer and innovate knowledge through rotation. The family business upgrades the mechanism of turning around and continuously enhances a series of dynamic capacities such as internal learning ability, resource integration ability and environmental adaptation ability, achieves intergenerational growth of family-owned businesses through the continuous emergence of heterogeneous resources. This paper establishes an analytical paradigm of turning around family business and enterprise dynamic capabilities, which can provide practical implications for the sustainable and healthy development of family businesses and managers' knowledge innovation.

Keywords: family business; director rotation; knowledge innovation; governance innovation; enterprise dynamic capabilities.

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1 Introduction

Family business is normally controlled by one or several families and plays a vital role in the economic growth of the country (Barnes and Hershon, 1976; Stern, 1986; Upton and Sexton, 1987). However, with the average lifespan of our family businesses being only about 12 years, entrepreneurs' growth is facing more environmental dynamics, complexity, and uncertainty in the process of continuous intergenerational development (Dou et al., 2020). How to develop nurture and environmental change to match the dynamic capability has become a huge challenge for family businesses and their growth (Gianesini et al., 2018). On the one hand, for start-up entrepreneurs in the early stages of China's economic reform, partnerships were undoubtedly the best option at the time due to the lack of a legitimate source of funds which led to a series of disputes between the partners over control of the business after it had been successfully established. On the other hand, under China's traditional succession model of 'the son inherits the father's business' (Yu et al., 2013), control of the family business is often concentrated in the hands of one offspring, while other family members are reluctant to seek, share and pass on knowledge, or invest too much time and effort in managing and developing resources for the business, preferring to be a free-rider (Cabrera-Suarez et al., 2001; Zahra et al., 2007; Casprini et al., 2017). As a result, many family businesses are unable to achieve dynamic competence over generations and thus gradually die out in the tide of time. In the context of globalisation, it is necessary to continuously improve a series of dynamic capabilities such as internal learning capability, resource integration capability, and environmental adaptation capability to provide endogenous power for sustainable development (Saunila et al., 2012; Teece, 2014).

Family business is the outcome of the marriage of family and business. On the one hand family business attempts to maximise economic returns, on the other hand, it aims to maintain the control of the business inheritance, which makes family business different from others (Breton-Miller et al., 2004). The extant literature about the inheritance in family business tends to focus more on the successful transfer of power and position, in fact, it is more critical for the family business to maintain sustainable competitive advantage. Such advantage is not static staying at the core competence level (Li et al., 2008; Tingko, 2019). It is a scientific, reasonable, and efficient long-term mechanism for corporate governance, which can improve the dynamic capabilities of enterprises when implemented internally. The enhancement of dynamic capabilities in family businesses across generations seems to be a mysterious process, so what model of succession can resolve the traditional disputes over control of partners in China and at the same time enhance the dynamic capabilities of family businesses to achieve the fundamental goal of family business perpetuation? Director rotation is the product of the combination of rotation and governance whereby the partners take on the role of director in turn. The complementary corporate governance behaviour of the order and the taking actions, in turn, will help the family business to create a peaceful and coexisting business atmosphere, thereby achieving knowledge and governance innovation in the process of director rotation to improve the dynamic capabilities of the business. Whilst the family business enterprise intergenerational continued to grow as its long-term development goals, issues like 'wealth never survives three generations', business dissolution caused by partnership dissociation, lack of innovation in family enterprises, etc. are always difficult to manage (Boyd and Dumpert, 1993). The emergence of the mechanism of director rotation however could potentially manage such a situation. The rotation mechanism can be considered as the outcome of tacit cooperation and innovative behaviours of the enterprise partners, which could effectively absorb the knowledge and ability of the rotating partners and implement innovative measures. Also, this could potentially minimise internal conflict and disputes, and support continuous innovation of family businesses in the long-term.

Sometimes such situations can escalate from disputes to complete opposition, which could be seen in the cases of CHINT and DELIXI Group (Zhao and Wang, 2016). Little research has been carried out to identify and explore cases of Chinese companies with partners could coexist peacefully and help each other. Based on extant research on family business international growth and director rotation mechanisms, this study identifies three hotspots that need to be further explored:

1 The existing studies of director rotation mechanism mostly research on business operation level, such as CEO rotation mechanism of Huawei, however, few studies explore director rotation of partners. Most research heavily emphasises descriptions, and there are limited qualitative or quantitative methods to test the director rotation mechanism.

2 Existing studies on director rotation in family business are mostly failed case studies, few cases describe family business partners coexist peacefully.

3 There is only a little research on the director rotation mechanism, hence the implementation process of such governance mechanism is still a black box that remains to be further explored.

Therefore, it is important to conduct an in-depth analysis of the director rotation mechanism in China to better understand the development of Chinese family businesses. As a family business that has been running for 40 years, TaiLi Industrial Co., Ltd. (later referred to as TaiLi) has successfully completed the intergenerational transmission, which is selected and studied here. Understanding how to enhance the dynamic capabilities of family businesses is a fundamental motivation for this study. Based on methods of theory building and theory improvement, the director rotation mechanism of TaiLi is examined to explore its influence on competency integration and intergenerational development of entrepreneurship which helps family businesses to seek, transform, create and exploit knowledge in the process of intergenerational transmission.

2 Innovation, director rotation, dynamic capabilities, and sustainable growth of enterprises: construction of theoretical model

2.1 The motivation of director rotation – knowledge and governance innovation

2.1.1 Knowledge innovation and family business director rotation

Knowledge innovation theory was originally proposed by the American strategists Amit and Schoemaker (1993) to put forward its view that knowledge innovation is the integration of thinking and economic activity. Nonaka et al. (2000) proposed the SECI model of knowledge innovation based on the transference of explicit and tacit knowledge which stands for the four basic modes of knowledge transformation – socialisation, externalisation, combination, and internalisation. Tacit knowledge is considered as the core element of competitive advantage since it cannot be easily replicated. Knowledge innovation is a process of dynamic knowledge reconfiguration, and it generates new ideas, new methods, and ultimately the new value through knowledge development, deployment, collision, and integration (Cheng, 2020).

In the transformation process of knowledge innovation, the source of knowledge originates in individuals in the team. The individuals exchange and diffuse knowledge through communication, hence forming team-level knowledge. New knowledge is further upgraded to organisational knowledge through inspection and sublimation (McElroy, 2000). Family businesses may contain a large amount of a body of tacit knowledge (OECD, 1996) in the early days. Since tacit-knowledge-led innovation is normally implicit and not easy to transfer (Nonaka and Takeuchi, 1995), promoting the conversion of tacit knowledge carried by individuals is the source of power for the development and innovation of family businesses.

The coding of tacit knowledge is difficult, therefore the diffusion of tacit knowledge mostly relies on the activeness of the source and the recipient's ability to accept. Such a process cannot be completed simply through training or lectures. It requires observation, comprehension, and communication between the two parties over a long period of time (Sheng, 2019). To manage the pressing needs of family business knowledge innovation, a more effective governance mechanism is needed.

The director rotation mechanism can provide the internal environment of coexistence, which enables business partners to better practice knowledge diffusion and internal management. This could stimulate and add value to the diffusion of tacit knowledge and promote intergenerational business growth. Also, director rotation could assist the second generation of entrepreneurs to learn from their predecessors, breakthrough their own knowledge limitations, and construct a more effective knowledge framework through knowledge integration.

The evergreen foundation is the fundamental goal for family businesses (Chua et al., 1999). The company's sustainable competitive advantage often comes from an effective family business governance model, like the director rotation mechanism. From the perspective of corporate knowledge innovation, this paper employs the director rotation as a powerful analytical tool, to ensure the family enterprise's sustainable competitive advantage and promote inter-generation entrepreneurs' growth.

2.1.2 Governance innovation and director rotation

Corporate governance is the mechanism to coordinate the interests and relationships among the shareholders. Berle and Means (1932) point out that separating corporate governance from enterprise ownership may damage the interests of business owners and investors along with the growth of the manager's power, which may lead to losing control of the business eventually. Williamson (1964) believes that under the influence of the 'separation of ownership', issues of corporate management emerge that might cause damage to the interests of business owners. Jiao et al. (2008) highlight that corporate governance is a restrictive relationship between corporate shareholders, the board of directors, and senior managers.

As a special form of business, a family business must have a new organisational governance mechanism formed and controlled by family members. Since family business ownership and management rights are controlled by one or more families in family businesses, there are differences between family business governance and other types of businesses. Leif (2000) states that family business governance cannot rely entirely on corporate governance theories, some of which are not applicable to family businesses. The majority of family businesses in China adopt a family governance model. Family governance refers to a governance model in which the ownership and management of the enterprise are not separated, the enterprise is integrated with the family, and the main control of the enterprise is in the hands of family members. Under this model, the ownership and management rights of the company are concentrated in the hands of family partners, and the management is highly centralised. Family business leaders can change corporate values and influence all actions of the company through authority, but not all family business partners have leadership competencies (Nan et al., 2019). In addition, the Chinese family members normally have a high degree of trust among them, but the trust for non-family members is low. These institutionalised differences in trust lead to differences of means of stimulation and restriction (Li, 2002), in order to prevent excessive-high agency costs, which ultimately limits the family business capabilities to absorb and receive social management resources (Chu, 2002). Therefore, in order to break through the bottleneck of enterprise development, family businesses need to carry out internal governance innovation.

Under the premise of limited family resources, family businesses need to innovate ownership and management rights from within the family in order to achieve internal governance innovation and reduce external agency costs. The director rotation is a reasonable solution to the problems caused by the separation of ownership and management rights. Fundamentally, taking turns is an alternation of the operating rights of enterprises, implementing the most optimised governance concept of different partners. Second, different partners can learn from each other, so as to optimise the family business to obtain a sustainable competitive advantage. In addition, due to the family kinship characteristics inherent in family members, the rotation mechanism is a good entry point for all family partners to participate in the governance process. With the ownership unchanged, the management rights are rotated, and the partners and their successors take turns to rule and jointly act as the moderator of the strategic planning and system construction of the enterprise. Therefore, the rotation mechanism is the optimal option under the need for family business governance innovation.

2.2 Director rotation and dynamic capabilities of family business: sustain the competitive advantage of enterprises

Resource-based theory suggests that corporate must build effective and sustainable competitive advantage in order to achieve their long-term strategic development goals (Wernerfelt, 1985). Research shows that competitive advantage is the basis of companies' survival and development. However, since the traditional resource-based theories have issues such as unclear key concepts definition (Williamson, 1999), insufficient external environment exploration (Amit and Schoemaker, 1993), cannot adapt to the dynamic market environment (Eisenhardt and Martin, 2015), and limitations of ex-post rationality (Williamson, 1999), etc. corporate dynamic capability theory becomes increasingly popular in this regard.

Dynamic capability theory is a frontier strategic theory developed under the conditions of complex competition, in order to solve the sustainable competitive advantage of enterprises. Teece and Pisan (1994) first proposed the concept of dynamic capabilities, which has been explained further as the competence to integrate, establish, and re-configuration of internal and external resources. Eisenhardt and Graebner (2007) consider dynamic capabilities as a recognisable routine and process. Wang and Ahmed (2007) believe that dynamic capabilities can use unique resources to upgrade and restructure core capabilities to cope with the ever-changing market to obtain and maintain a sustainable competitive advantage. Many scholars have also studied the deep-level conception of dynamic capabilities from multiple dimensions. Wu (2007) divided dynamic capabilities into resource deployment capabilities, resource reconfiguration capabilities, and learning capabilities. He et al. (2006) believed that dynamic capabilities include five dimensions: market potential, organisational flexibility, strategic isolation, organisational learning, and organisational change. Jiao et al. (2008) believed that the dynamic capabilities of an enterprise can be composed of four dimensions: environmental insight capabilities, change and update capabilities, technological flexibility capabilities, and organisational flexibility capabilities; Feng and Wei (2011) indicate that dynamics capabilities include the ability to sense opportunities and threats, to allocate resources, and to restructure resources. Dong et al. (2011) divided dynamic capabilities into environmental adaptation capabilities, organisational change capabilities, resource deployment capabilities, learning capabilities, and strategic isolation mechanisms. It can be identified that the extant research on the dimension of dynamic capabilities has reached no consensus, and the deduction is frequently based on the context and research objects. This paper develops from the viewpoint of Teece et al. (1997) and divides the dynamic capacity of the family business into three dimensions: continuous learning capabilities, internal and external resources integration capabilities, and environment adaptation capabilities.

Alignment between dynamic capabilities and managing knowledge tends to create strategies to adapt to environmental changes and thus increase the competitive advantage of family business (Alonso, 2019). To create superior value from resources, directors must stay ahead of the competition. Directors with a high level of knowledge and ability are able to lead companies to create new opportunities in an environment of high complexity and uncertainty (Gianesini et al., 2018). The acquisition, configuration, and application of new knowledge by directors enhance the continuous learning capabilities and resource integration capabilities of the company, thus increasing the flexibility and freedom needed for the development of the company and helping managers to make strategic decisions adapted to and around current environmental conditions (Zahra and George, 2002). Each board member takes turns to take on the responsibility of the company's chief operating officer (COO). During his/her term of office, the COO is expected to not only design the company's strategic development plan at the macro level but also manage decision-making at the micro level. Such a rotation mechanism limits COOs' power and encourages them to work with others to obtain sufficient support. This can be seen in many Japanese family businesses. On top of the supportive environment created, director rotation also stimulates knowledge innovation and sustains competitive advantages, which subsequently invigorate enterprises' intergenerational development. In view of this, the theoretical thinking of this study focuses on the dynamics of the family business director rotation mechanism which is the need for knowledge innovation and governance innovation in the process of firm development. The implementation of director rotation could encourage the transference and diffusion of tacit knowledge among partners, which enables good knowledge sharing in management and provides sustainable competitive advantages to the company (Yu, 2008). The rotation mechanism has experienced tests across generations. Maintaining the long-term director rotation mechanism can also have an important impact on the dynamic capabilities of family businesses.

3 Research methodology

Based on the analysis above we applied the case study method, the research starts to look for more suitable research objects. Case study – as a research method – has long been suspected, and its biggest problem is the lack of rigor and normalisation. However, Colquitt and Zapata (2007) argue that between 1963–2007 there are more and more papers published using qualitative research driven by case studies. Case studies are considered an important research tool for theory development and improvements (Yin, 2003). As a research method, the case study needs to follow pre-set procedures and steps, and it can particularly be effective when managing complex issues that cannot be quantified empirically (Yin, 2003; McDonald and Eisenhardt, 2020). Eisenhardt (1989) believes that case selection for a single case study requires attention to the extremeness and heuristics of the case. These characteristics can eliminate the interference of non-research factors in the typical situation on the research problem, and the conclusions obtained are more explanatory.

With the reality of the dominance of business dissolution caused by partnership dissociation, this study chooses TaiLi Industrial Co., Ltd. as the object of study to examine its nearly 40 years of successful director rotation experience, and aims to answer the following research questions: Why do family businesses implement a director rotation mechanism? What are the characteristics of the family company's director rotation mechanism? How do the director rotation mechanisms affect the business dynamic capabilities and inter-generational growth? The TaiLi case involved is a typical example to demonstrate a sustainable competitive advantage in the context of director rotation in family business. Analysing its successful experience assists this research to examine the construction of rotation mechanism, which could enrich understanding about the division of work, knowledge learning, and knowledge deployment, etc. to achieve sustainable competitive advantage. Therefore, it has theoretical and practical significance to explore the director rotation mechanism and its influence on sustainable competitive advantage and intergenerational growth of family businesses.

Both primary and secondary data are used in this research to improve the credibility of the argument. The collection of first-hand information includes on-site interviews, surveys, company brochures, and observations. The same questions were interviewed multiple times with different subjects in the enterprise, including founders, successors, and even corporate executives. During the interview, data from second-hand materials can also be verified (Eisenhardt and Graebner, 2007). We used several data sources:

1 two waves of interviews with second-generation successors
2 two waves of proofreading interviews with backbone employees
3 secondary materials such as media and internet sources, company press releases, and internal documents.

This diversity of data sources allows for triangulation among them and improves accuracy (Koentjoro and Gunawan, 2020).

TaiLi Company has been selected and examined in this research. Data collection was carried out in Wenzhou – where TaiLi is located – between March 2017 and January 2018 with surveys and interviews. The survey was carried out first which assisted this research to collect a large amount of second-hand information through the internet, newspapers, and magazines, and also extracted the research framework related to the research theme. Interviews were later used to complement and extend the findings of the survey. Multiple personnel was interviewed including two second-generation shareholders and one senior employee was interviewed, and each interview lasted for more than three hours. Interviews were recorded and transcribed by the authors at the earliest time, and the transcriptions were also validated by the interviewees once they are finished.

4 Implementing director rotation in a family business: a case study

4.1 Overview of TaiLi Industrial Co.

TaiLi Industrial Co., Ltd. was founded in the last 1970s by a small group of people led by Mr. Haoshao Zhe and Mr. Xiangbo Zheng, and it has been going for more than 40 years now. Currently, TaiLi adopts the director rotation mechanism and has completed the inheritance process. The development of TaiLi can be divided and demonstrated in the following key stages:

4.1.1 1984–2009: start-up and the primitive accumulation of capital

Before establishing TaiLi with others, the two core founders Mr. Haoshao Zhe and Mr. Xiangbo Zheng used worked for state-owned enterprises (Wenzhou dyeing company and Wenzhou plastic paint factory respectively). Zheng married Shao's younger sister, which formed strong ties between these two families. At that time, state-owned enterprises had relatively low salaries. They were all technical workers and very good in the fields of mould and mechanical technologies. Since these two were close in the relationship and trusted each other, the idea of starting their own business together emerged. In 1970s, Shao and Zheng had already started working together without registering a company. In 1984 when joint-stock company registration was open, they established Wenzhou Dongfeng electronics factory through affiliation of Dongfeng Street office, and the arduous process of entrepreneurship started.

Table 1 Overview of major events during the first generation of TaiLi Industrial Co., Ltd.

Time	*Key events*
October 1984	Established Wenzhou Dongfeng Electronic Device Factory
October 1990	Relocated to No. 2, Lane 35, Hangbiao Road, Lucheng District
December 1992	Established Wenzhou TaiLi Industrial Co., Ltd.
November 1993	Developed 118 series switches and sockets
December 1993	'TaiLi' trademark approved for registration
April 1994	Relocated to the new factory at No. 9 Sankai Road, Lucheng Industrial Development Zone
October 1997	Relocated to the new factory at 28 TaiLi Road, Lucheng Industrial Development Zone
November 1998	Changed its name to Zhejiang TaiLi Industrial Co., Ltd.
September 2001	TaiLi switch socket was identified as 'Zhejiang Famous Brand Product'
December 2002	Changed its name to 'TaiLi Industrial Co., Ltd.'
January 2003	'TaiLi' trademark was awarded 'Famous Trademark of Zhejiang Province'
June 2003	TaiLi owned shares in Wenzhou Commercial Bank
December 2003	Relocated to New District, No.1 Juguangyuan North Road, Lucheng District
May 2004	TaiLi setup Honeywell studio and began collaborating with the world's 500 companies
October 2004	TaiLi and several companies jointly established Sino-Swiss Consortium Holding Co., Ltd.
July 2007	Zheng Xiangbo was re-elected as the Municipal People's Congress Representative, and Shao Haozhe was elected as the District People's Congress

Source: The subject team's summary and collation of on-site interviews, surveys, observations, company brochures, media and internet sources, company press releases, and internal documents

At first, small workshops were mainly used to make some mechanical moulds, lathes, watch bands, microphones, and metres. The two took advantage of their own technical background, and soon established the leading position in the industry of electronic devices. In 1992, the company was officially restructured and became Wenzhou TaiLi Industrial Co., Ltd. In 1993, it successfully developed '118 series' switch sockets. Since then, electrical switches became the main business of TaiLi Company.

The process of entrepreneurship was difficult at the beginning. Many board members decided to quit the business however Shao and Zheng stayed. In 1993, the trademark of 'TaiLi' was approved for registration; in April 1994, it moved to the new factory at No. 9 Sankai Road, Lucheng Industrial Development Zone; in October 1997, it moved to the new factory at No. 28 TaiLi Road, Lucheng Industrial Development Zone; in November 1998 it upgraded to ‘Zhejiang Thai Industrial Co., Ltd.’; in September 2001, TaiLi brand household switches and sockets are identified as ‘Zhejiang Famous Brand’; in December 2002, the company changed its name to ‘Thai Industrial Co., Ltd.’, and was approved by the state ‘no area title’ enterprise; in January 2003 ‘TaiLi’ trademark was awarded ‘Zhejiang Famous Brand’, and owned shares of Wenzhou City Commercial Bank. In December the same year, it moved to Lucheng District Ju Park Road 1 Hao District; in May 2004, the company setup TaiLi Honeywell studio, and began collaborations with the world’s 500 companies; in the same year, TaiLi jointly established Sino-Swiss Consortium Holding Co., Ltd. with other private enterprises. The major events during the first generation of entrepreneurship are summarised in Table 1.

At the beginning of the establishment of the Dongfeng Electronic Device Factory, the size of the factory building was small, and both people had to be in contact with different affairs in various aspects. At first, there was no obvious division of labour between the two, and there were no formal structures or standards within the company. The managerial work was mainly based on trust and private connections. As the company developed, the two gradually realised the importance of division of labour and systematic coordination. Shao has a more introverted personality, so he is mainly responsible for domestic production and R&D departments. Zheng is more passionate about communication, so he is responsible for business exploration and marketing. Although such division of labour greatly improved the efficiency at that time, there were some drawbacks attached as well. Shao and Zheng gradually realised that both them did not understand each other’s work, and misunderstandings emerged subsequently. Therefore, the board members began to discuss the very first version of director rotation in the company. Initiated by Shao and Zheng, the rotation mechanism started with them taking turns to manage internal and external affairs every four years. In this way, the two can better understand and complement each other’s work, and misunderstandings were mitigated. That was also helpful when the two needed to make major decisions. Eventually, the ‘prototype’ of the director rotation mechanism was formed.

4.1.2 2009–2015: business inheritance and the concentric diversification

Haozhe Shao has only a son (Jingye Shao – Jr. Shao), and Xiangbo Zheng has a son (Wenchao Zheng) and a daughter (Wen Zheng). In the second generation, Jingye Shao is the oldest, followed by Wen Zheng, and the youngest was Wenchao Zheng.

Jr. Shao was born in 1982. After finishing high school, although Jr. Shao was accepted by East China University of Political Science and Law and studied there for three months already, he went abroad anyway to further his study under the influence of his father.

Wen Zheng was born in 1983, and she was a top-tier student in both her middle school and high school. Due to her outstanding performance in high school, she gained guaranteed admission to Tsinghua University when she was in the second year of high school. However, she rejected the offer and still took the university entry exam, and was eventually accepted by the Department of Physics at Peking University. After then, she continued her master’s degree in physics at the University of Chicago. Considering developing her family business, she took her second master’s degree in finance at New York University.

Wenchao Zheng was born in 1987 and he is the youngest among the three. He attended middle school in an international class co-sponsored by Chinese and Canadian schools. After graduation, he went directly to the University of Windsor, Canada to receive a four-year undergraduate education in business administration. It can be seen that the first generation of TaiLi entrepreneurs put a great emphasis on the education of company successors since all of them have received advanced international education.

After Jr. Shao graduated in 2009, he went back to his family business, put on the company's blue uniform, and started to work on the shop floor to learn the basics. In the same year, Wenchao Zheng also finished his education abroad and returned to China. After working in a relay production and operation-related company in Guangzhou for a year, he returned to the family business in 2010 and was responsible for the company's foreign trade business and 'concentric diversification' projects. In the meanwhile, Wen Zheng had been working in the Swiss Bank of Hong Kong and Wenzhou Finance Office since graduation, and finally returned to the family business in 2015. She is mainly responsible for the company's internal finance and foreign trade. During the process of inheritance, all of them have learned much from their parents, and the knowledge they learned abroad also paid off when they are working in the company. Most importantly, both generations accepted the director rotation mechanism and always arrange meetings when making major decisions. The responsibilities of family members are shown in Table 2.

Table 2 Overview of TaiLi's second-generation family members and roles

Family members	*Family roles*	*Graduated schools and majors*	*Joined year*	*Business roles*
J.Y. Shao	H.Z. Shao's son	Trinity Western University, Canada (BSc in Business Administration)	2009	General manager (Wenzhou) and chairman (Anhui)
W. Zheng	X.B. Zheng's daughter	Peking University (MSc in Physics) and New York University (MSc in Economics)	2015	General manager (International Department)
W.C. Zheng	X.B. Zheng's son	University of Windsor (MSc in Business Administration)	2010	Chairman (Wenzhou) and general manager (Anhui)

Source: Surveys of founders, successors, and even corporate executives

Carefully cultivated by the previous generation of entrepreneurs, the second generation of entrepreneurs began to combine their education and family business to make breakthroughs in many areas. For the corporate strategy, the second-generation team proposed a 'concentric diversification' development strategy. 'Concentric diversification' refers to the development of multiple homogeneous products related to the main products of an enterprise, such as smart homes, LED lights, etc. to promote the diversification of homogeneous products. In 2013, the second-generation team borrowed foreign advanced performance evaluation systems and combined with the management characteristics of family businesses, implemented a new performance evaluation system within the company in just two months. In addition, in the era of e-commerce companies searching for a new marketplace, TaiLi updated management ideas, formed a new e-commerce team, setup WeChat public account, and opened several e-commerce flagships stores on Tmall and JD, which assist the company to take advantage of ‘e-commerce dividend’ from the internet.

At the same time, second-generation team members employ their overseas education background to increase the trade intensity and scale abroad. They have not only intensified their collaborations with developed countries like France and Netherlands but also extended the business to developing countries, such as India and the Middle East countries. By 2017, the sale of international trade took over 40% of the company’s overall sales. All these indicate that TaiLi’s concentric diversification strategy has entered a new stage. The three successors have begun to get involved in TaiLi’s core businesses. Although the founding partners are still involved in some major corporate decisions, TaiLi’s daily corporate operations have already been handed over to the second-generation team.

4.1.3 2015 and after: the implementation of the ‘Five-Year Plan’

The second-generation team officially took over the management of TaiLi after the company’s 30-anniversary, and the implementation of the ‘Five-Year Plan’ was also initiated. The second-generation team consists of seven board members, who have different responsibilities managing different areas of the family business. The roles of the board members are shown in Table 3.

Linxi Teng is responsible for sales and technology, and Hui Hu is in charge of domestic sales. Both of them report to Zheng Wenchao who is responsible for the work of foreign trade technology. Both Hongwu Chen and Xiaoliang Teng are professional managers in the company, in charge of production work and quality control respectively. They need to report to Jingye Shao who is responsible for domestic production and business. Wen Zheng is in charge of finance and reports to Jingye Shao and Wenchao Zheng industry super report.

The implementation of the ‘Five-Year Plan’ is divided into two phases, the first phase (three years) focuses on work handovers. The older generation is expected to stay behind the scene to help the second-generation team manage; the next two years is the ‘decentralisation and governance’ phase. The second-generation team will make independent operations and decision-making of the company.

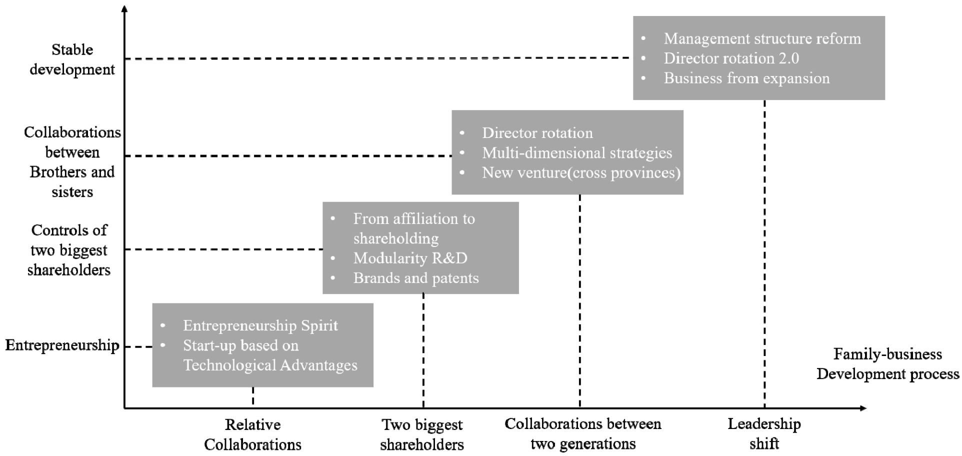
Changing the legal person becomes more and more complicated since the high cost and complicated procedures involved. The company suspended the charter change of industrial and commercial registration in the same area, and remain the information registered in the administration for industry unchanged. Finally, improve the director rotation mechanism and propose a ‘Five-Year Plan’. With the successful implementation of the first phase (first three years) of the ‘Five-Year Plan’, internal corporate power and duties have gradually completed the transition. From 2018 onwards, is a second-generation team of independence, turns, and rule of the stage. It can be seen that the director rotation mechanism has been inherited and innovated in the intergenerational growth of the family business, and the business scope and scale of TaiLi Industrial Co., Ltd. has developed. Taken together, the development history of TaiLi can be summarised as shown in Figure 1.

Table 3 Overview of TaiLi's two generations board members and their responsibilities

Before succession	First generation	Shareholders	H.Z. Shao (39.5%)	X.B. Zheng (39.5%)		Y.Y. Teng (10.5%)	F.L. Hu (10.5%)	Professional manager	
		Duty	Company governance	Sales		Technology	Procurement	N/A	
Succession process	First generation	Shareholders	H.Z. Shao (27%)	X.B. Zheng (19%)		Y.Y. Teng (3%)	F.L. Hu (6.5%)	N/A	
	Second generation	Decision-making committee	J.Y. Shao (12.5%)	W.C. Zheng (12.5%)	W. Zheng (8%)	L.X. Teng (7.5%)	H. Hu (4%)	X.L. Teng	H.B. Chen
		Duty	Production management	Sales	Finance	International trade	Domestic sales	Production	Quality control

Source: TIANYANCHA (https://www.tianyancha.com/) and surveys of founders, successors, and even corporate executives

Figure 1 The development process of TaiLi Industrial Co., Ltd. (see online version for colours)



Source: Company brochures, company press releases internal documents, and surveys of founders, successors, and even corporate executives

4.2 Findings of TaiLi's director rotation

Enterprises with heterogeneous resources and capabilities are the source of their competitive advantage (Barney, 1991). There is a dynamic change in their core capacity of the environment based on core rigidity defects (Leonard-Barton, 1992), so the dynamic capabilities theory gradually developed into studies on the theory of strategic management. The dynamic capability of the company is the key to understanding the continued growth of the family business. Based on the in-depth interview of TaiLi, this study analyses the influence of knowledge innovation and governance innovation on the company's abilities of continuous learning, resource integration, and environmental adaptation through the director rotation mechanism. Such influence can be observed in three dimensions:

4.2.1 Continuous learning ability

In the developmental process of TaiLi, the demand for knowledge and management innovation has been providing the important basis to maintain its dynamic ability. First of all, knowledge innovation affects the continuous learning ability of enterprises through the mechanism of director rotation, which directly leads to the improvement of learning ability. As an old switch production enterprise, for decades, TaiLi has been deepening production lines and expanding product variety to contribute to the development of the domestic switch industry. In the early days, the company encountered multiple difficulties. The management insisted on continuously developing core technologies to support the company's sustainable development.

In the 1990s, the electrician market of mainland Chinese was dominated by type 86 and type 120 switches, however, these two types had low flexibility and poor interoperability. The market needed continuous development and innovation. One founder of TaiLi (Xiangbo Zheng) captured the demands of the Wenzhou market. He found a new modular-based switch in the Guangzhou market that can be freely combined based on the needs and brought it back to Wenzhou. Due to the high R&D cost of this new switch technology, Zheng could not decide if he should carry on producing such a switch. His close partner, Haozhe Shao, quickly dismissed such hesitation and subsequently decided to spare no expense in the R&D. They complemented and combined their knowledge relating to such technology, and change the company's strategy from focusing on mass-market to the professional market, and eventually developed 118 series switches with a patent.

The new 118 series switch features a modular socket that can be adjusted freely by the electrician, and its interoperability is extremely strong. When it was launched on the market, although the price was much higher than others, the sale was very good due to the good interoperability, which assisted TaiLi to quickly gain a lot of mark share. That was significant for TaiLi's early year development and showed how did the company broke free from the restriction of separated technology and take advantage of director rotation to better coordinate and integrate inter resources. The successful development of the 118 series switch has laid a solid foundation for TaiL's leading position in the switch industry in the future. For this case, it can be seen that enterprise knowledge innovation came from the market demand for a better switch with strong interoperability, and product innovation was greatly influenced by entrepreneurial commitment, knowledge sharing, and most importantly the director rotation mechanism.

Secondly, governance innovation affects the company's continuous learning ability through the director rotation mechanism. Intergenerational inheritance of career and wealth is normally considered as the main goal of family businesses. When there are multiple founding partners in a family business, a lot of complications can be involved in equity structure and power distribution, and a more effective governance innovation is urgently needed to meet the sustainable intergenerational growth of family businesses. For TaiLi, the director rotation mechanism undoubtedly helped the company to construct a solid institutional guarantee for its future development.

In the early days, due to the small size of the company, the setup of functional departments was very simple. The founding partners were responsible for separate functional areas of business. Later, to prevent excessive concentration of power, and enhance each other to understand the roles of different functional departments, the board decided to use a director rotation mechanism. Haozhe Shao and Xiangbo Zheng will be in charge of internal and external affairs respectively, and such roles will rotate every four years. During the process of rotation, the corporate legal person and the operation right will alter as well, thus creating a fair and just atmosphere between the business partners to mitigate the negative influence of selfishness. Under the influence of such an atmosphere, the board members could better appreciate each other's work and gradually learned to solve any issues through regulations instead of arguments.

Along with others, the director rotation mechanism has also been inherited by the second generation. While learning and modifying the ideas from the older generation, the second-generation team has also expanded vision and knowledge and improved the director rotation mechanism. The updated director rotation keeps the rotation of operation right, but no longer requires frequent alternation of the company legal person. All the changes above have minimised the complications involved in the changes of business registration and shortened the decision-making process, especially for some important matters.

A decision-making committee was created along with the introduction of professional managers. Previously, whenever the general manager encountered important decisions, he/she needed to consult with and report to the relevant board members, hence the establishment of a decision-making committee. The rotation general manager needs to propose the topics for discussion and share any thoughts in the decision-making committee, and other committee members would provide feedback and comments. It is the rotation general manager's responsibility to summarise the thoughts on the meeting and put them into action.

Such a decision-making process has stimulated knowledge sharing through discussions, and significantly everyone's sense of responsibility in the company. Even sometimes the decision could not lead to the expected outcomes, no one could blame others since all the decisions were made at the committee meeting. Arguably, the director rotation provides the board members with a mechanism to express their values, own needs, and expectations for business development. This reduces the possible negative impact of family relationships on business decision-making and promotes business partners. Knowledge sharing, knowledge diffusion, and the company's learning ability have also received significant improvement.

4.2.2 Resource integration ability

Amit and Schoemaker (1993) divided the resource integration process into three major stages: resource identification and selection, resource acquisition, resource development, and integration. Sirmon et al. (2007) believe getting the resources for an organisation to carry out the reconstruction process is essential to form a new system with core resources. With the director rotation, the rotation general manager can effectively combine his knowledge with the development of the enterprise during his tenure, continuously deploy internal and external resources of the enterprise, and open a new path for enterprise development. Therefore, whether a family business can effectively introduce heterogeneous resources, break through the resource constraints within the original family business, and optimise the integration of resources is critical.

In the process of innovation and development of the company, TaiLi effectively adjusted the layout of heterogeneous resources inside and outside the family business through the rotation mechanism to achieve the leading position of the company's competitive advantage. In terms of the company's integration of internal resources, the entrepreneurial spirit and insight of the founding entrepreneurs are rare resources within the enterprise. Therefore, TaiLi often conducts group discussions and deliberations among partners to carry out sharing and redeployment of entrepreneurial knowledge resources. For example, Haozhe Shao and Xiangbo Zheng passed on their skills to their successors through 'storytelling', as a primitive method to disseminate tacit knowledge internally. Externally, TaiLi achieved innovative human resource management through the introduction of professional managers, which challenged the conventional operation and management of family businesses. The designated professional managers (Xiaoliang Teng and Hongwu Chen) have rich experience in their own areas. Allowing them to become business partners with shares of the company, means TaiLi has already made a huge improvement in its corporate governance mechanism.

After 2009, the second-generation entrepreneurs gradually took over the management of the family business, however, the director rotation mechanism stayed. Under the influence of the internet, the second-generation team put forward the concept of 'concentric diversification'. First, the team started to integrate existing offline resources and adopt a diversified marketing model to improve offline physical sales. Since it is becoming increasingly expensive to open physical stores offline, the replacement of the wall switch needs to be handled by professionals. TaiLi chose to cooperate with retail terminals for offline sales and sold the wall switch to hardware stores and lighting stores. This could not only save costs but also achieve a win-win situation with third parties while providing convenience to consumers. Second, the team introduced online sales platform resources, added 24-hour online sales outlets, in order to enhance customer satisfaction. With the second-generation team's overseas study experience and knowledge, it has opened up online e-commerce sales channels for the company. Purchasing a wall switch sometimes can be not as easy as it seems to be. Jargons and technical knowledge may be frequently involved in the product selection process, which may create barriers to potential customers. Normally, customers had to consult the electricians before making any purchases. To address such an issue, TaiLi provided packaged sales with clearer guidance and explanations, which lowered the threshold for customers to make any purchases and enhanced its brand's visibility on the market. In addition, the second-generation team adjusted the policies of human resource management and introduced a series of new assessment systems. For example, the establishment of an official public WeChat account, the establishment of TaiLi House, encouraging employees to setup social clubs and allocate funds to employees to organise activities, establishing an event assessment system, providing top ten employees superior treatment, and also enhancing company's influence through online voting, etc.

The new director rotation mechanism (2.0) adapted to changes in the environment, exerts its own advantages in the mechanism, and actively integrates internal and external resources of the enterprise to produce a sustainable effect of corporate competitive advantage. As TaiLi's increased business volume gradually, the second-generation team chose to expand its new plant in Fuyang, Anhui, which has relatively low costs for land and labour, to expand its production capacity. The positions of Jingye Shao and Wenchao Zheng were unchanged. Jingye Shao served as the chairman of the new plant, and Wenchao Zheng served as the general manager to be responsible for all production and external affairs of the Anhui Fuyang plant. The rotation general manager frequently emphasises the importance of product quality, by optimising the business channels, and establishing a good company image on third-party platforms, TaiLi gained a lot of new partner resources and built its stable external cooperation relations and network contacts. Since TaiLi's wall switches have been well accepted by the industry, many manufacturers contacted TaiLi to discuss the Original Equipment Manufacturer partnership. For example, China Group, Delixi Group, Philips, and even Fortune 500 companies in France, Europe two large chain-type entities supermarkets would like to collaborate with TaiLi.

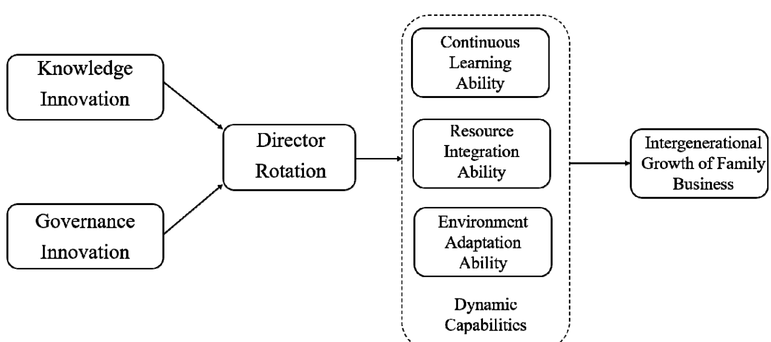
4.2.3 Environmental adaptation ability

Enterprise environmental adaptability means that when facing changes in an uncertain environment, an enterprise actively changes itself, in order to affect the environment to achieve flexible adaptation (Krijen, 1979). When the external environment changes, companies will respond according to their own governance mechanisms to cope with and explore future development opportunities, so as to adapt to the long-term changes in the external environment (Weick, 1982). Teece et al. (1997) suggests that in order to deal with the rapidly changing external environment, companies must improve their ability to adapt to their environment from the perspective of dynamic capabilities. The long-term influence of environmental adaptability on family businesses is supported by the director rotation mechanism which could assist the company to effectively avoid risks (Soluk and Kammerlander, 2021).

Family businesses have a high elimination rate during the development process. Facing the rapidly changing external conditions, decisions made by the business owner are highly risky, and the rotation mechanism on the other hand can play an important role in preventing and avoiding enterprise risks. In the case of TaiLi, although Haozhe Shao and Xiangbo Zheng (the founding partners) are close to each other, they do not have many intersections in private. They rarely have shared activities together except for family dinner. It needs to be pointed out that, in the development of family businesses, many of the causes of bankruptcy are the result of private lending. In TaiLi, when they have meals privately with other entrepreneurs, whenever the topics of cooperation and guarantees emerged, they would leave the decisions to the decision-making committee instead of making decisions themselves. This is also strongly influenced by the director rotation mechanism in place. Hence, TaiLi avoided many risks which could be caused by a single person, and the company even survived Wenzhou private lending crisis by following such an approach.

In terms of corporate management, as the second-generation team is gradually mature enough to control the enterprise, the director rotation mechanism is also undergoing some changes to adapt to environmental changes. Within the family business, the new team no longer did everything by themselves as the fathers did, and the private favours became less influential. Instead, modern management concepts and the established system of governance are considered more important. The new generation of entrepreneurs with an international education background manage employees through rules and regulations and emphasise a scientific governance model. Under the new management, the hierarchies are better clarified, but everyone should strictly follow the regulations. Even the general manager could be fined and punished if he/she does not wear labels or wear factory uniform in and out of the factory. Whoever needs to leave early, he/she needs to fill out a form with explanations.

Figure 2 Framework of family business director rotation and inter-generational growth



The younger generation of entrepreneurs believes that enterprise governance models need to be synchronised and timely reform environment. The company cannot be managed by people, but by an improved corporate governance system. With the establishment of a more effective and institutionalised scientific management model, the leadership of the company no longer requires the general manager to assign every task but is centrally managed by the system running underneath. Therefore, changes in the surrounding environment drive companies to take turns to improve their ability to adapt to the environment, and ultimately achieve the intergenerational growth goals of family businesses. Based on the above analysis, we propose the research framework shown in Figure 2.

5 Summary and discussion

5.1 Case study summary

Based on the description and analysis of TaiLi, it can be seen that the director rotation mechanism could assist the company to better solve the business issues and sustain the business development. In nearly 40 years of development of TaiLi spanning two generations, there were also some bottleneck periods. The reason for TaiLi to sustain its intergenerational growth is that the company employs a director rotation mechanism at the strategic level. The tacit knowledge development and diffusion, integration of internal resources for the implementation of the 'concentric diversification' strategy, the invention of the 118 series switch, etc. are all some of the outcomes brought by such rotation mechanism.

Furthermore, the rotation mechanism can balance the interests of family business partners, increase the ease of getting along with each other, and prevent the loss of key partners and talents and their knowledge and technology, which may affect the growth of the family business. For example, Shao Jingye indicates that "even if partners can argue a lot behind closed doors, the company will only have one decision when they leave the room, and everyone will strictly implement the decision." Through knowledge innovation and management innovation, TaiLi achieved the inherence of director rotation of the second generation, enhanced business dynamic capabilities, and established a solid foundation to sustain future development.

Updates were introduced to the original director rotation by adding the 'decision-making committee', which consolidated the management of the new team and stimulated the group participation in important decisions. The second-generation team showed its entrepreneurial spirit in major strategic decisions, and the ability to maintain a high dynamic enterprise. For example, under the leadership of the second-generation team, after an extensive field investigation, TaiLi established TaiLi (Anhui) Electric Co., Ltd. in Fuyang, Anhui. Such a decision was the direct response to the national strategies on 'Midwest Industrialisation' and 'One Belt One Road', which expanded the company's business in the long-term.

TaiLi achieved the success of the family business to the second generation by improving the company's continuous learning ability, resource integration ability, and environmental adaptability. In 2015, the construction of TaiLi (Anhui) Electric Co., Ltd. was completed and put into production, it has become TaiLi another important industrial base. The updated director rotation mechanism contributed to the second leap of the business, which also lead to new product development and the introduction of additional external resources. With the integration of China's national development strategy, TaiLi has prepared itself for even greater success. TaiLi's 40 years of the development process, is not only a microcosm of the development of China's modern family business, but also a dynamic process of hard-working, tenacious development, and continuous innovation.

5.2 Discussion

Due to the limitation of a single fund, shortage of talented personnel, and constraints of technology, family entrepreneurship at the early stage is often controlled by multiple partners representing different families. As a result, internal problems such as corporate control and profit distribution emerge during the growth of the family business. This is a fundamental issue that cannot be ignored in the family business inheritance and development. Hence, a more scientific and rational governance mechanism needs to be established to sustain continuous development and long-term success. The director rotation mechanism provides strong guarantees for family businesses to maintain dynamic capabilities and intergenerational growth. The rotation of family businesses is ultimately a manifestation of a pattern of perceptions and behaviours that allow for the efficient alternation of control of the business within and between generations. At a certain level, it reflects the allocation and integration of a series of key resource elements such as corporate governance structure, knowledge resources, and business models that are unique to family businesses, with the aim of achieving sustainable competitive advantage and intergenerational growth of the family business even in the hands of different partners.

Effective knowledge and governance innovation are essential for family businesses to create sustainable competitive advantage across generations. Managers need to be aware of product and market changes and recognise signals from the external environment in a conscious and planned way, so they need to interact socially with those involved in the family business and those outside the business to improve the company's environment adaptation capability (Spring et al., 2017; Gianesini et al., 2018; Soluk et al., 2021). In addition, managers and family members need to continuously expand, share, transfer and innovate knowledge and develop dynamic knowledge-based competency ideas, such as regular work review forums for knowledge enhancement and transfer. Managers need to master the specific work of the various departments of the business to enhance their ability to manage the various business units, which will help them to implement and expand their knowledge and improve the overall dynamic capabilities of the business (Koentjoro and Gunawan, 2020).

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