

# A STUDY OF THE INFLUENCE OF FAMILY MEMBERS' PARTICIPATION ON ENTERPRISE INNOVATION IN FAMILY ENTERPRISES



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## Abstract

Summarizing the research literature in the related fields of family business, enterprise innovation and family members' participation in enterprise management, combined with the development status of family business, with the help of principal-agent theory, housekeeper theory and Altruism Theory, this paper puts forward that family members' participation in enterprise management can inhibit innovation, and family members' participation in management in different industries can inhibit enterprise innovation. The higher the proportion of family members of the board of directors, the greater the inhibition of enterprise innovation. The interface data of family business is collected from CSMAR database.

Through empirical research, the hypothesis is proved to be true, that is, the participation of family members in the management of the enterprise will inhibit the innovation of the enterprise, and the robustness of the conclusion is proved through industry division and the replacement of explanatory variables. The participation of family members in different industries will inhibit the innovation of the enterprise. At the same time, this paper uses the proportion of family members of the board of directors to replace the explanatory variable, the proportion of directors and supervisors, It is concluded that the higher the proportion of family members of the board of directors, the more obvious the inhibition of family business innovation. Finally, according to the results of the analysis, the corresponding reference suggestions are put forward.

**Keywords:** Family firm, Participation, Enterprise innovation, Family characteristics

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## Introduction

This article was written and completed under the diligent teaching of Professor Jiang Haiyue. Time flew by. During the two-year master's degree, teachers and classmates have been silently encouraging and supporting me behind my back and helping me solve difficulties. Through the study and mastery of professional courses, it has laid a solid foundation for entering the society in the future. First of all, I would like to thank my professor. Due to the new crown epidemic, my life in Thailand was very difficult. Teachers gave me great support and encouragement in my study and life, and my professor was highly responsible for the thesis guidance and rigorous and pragmatic work. Attitude and positive attitude towards life gave me a higher level of understanding of life. my professor 's guidance to me is not only in the academic itself, but also in every little thing in daily life. My gratitude to my professor is beyond words! Her caring and caring for my life has also enabled me to successfully complete my master's studies. Here, I send my most sincere wishes and hope that the teacher will live a happier life and work more smoothly.

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Finally, I would like to thank my parents, who have worked hard for me at home. Even in a foreign country, I will never forget your ardent expectations for me. I will achieve excellent results to repay my parents for their help. The education and help my parents gave me made me realize the meaning of responsibility, and I hope my parents can be happier and healthier.

In the early stage of family business development, family members are more concerned about the risk of innovation and the damage to social and emotional wealth; but when the business reaches a certain scale, the family business must ensure the favorable competitiveness of the business through innovation. Participation of family members in business management is sometimes a good thing and sometimes a bad thing. On the one hand, it may be due to the fact that capable leaders can bring positive development to the family business, and on the other hand, due to the excessive concentration of power, the enterprise may reach a certain level. The effect is not as good as imagined, thus affecting the innovation behavior of enterprises

In summarizing the previous studies, it is found that most of the current research on family businesses in the academic circles focuses on the business performance of the business itself, but relatively little research on the participation of family businesses in management. The academic community generally believes that family businesses Excellent operating performance and corporate profits are the core of the development of a family business. As long as the performance of the business is guaranteed, the family business can achieve good development. However, this article believes that if family business want to pass on from generation to generation, the role of innovation is the most important. Therefore, under this academic background, the research of this paper will be very difficult.

## Objectives

The innovation behavior in family business has always been the focus of attention within the company. Combining the innovation theory of family business and the characteristics of the company, it is concluded whether the participation of family members will affect the innovation of the company and the internal relationship between them. While

providing relevant business management suggestions, it is expected to provide certain ideas for family businesses to improve their innovation capabilities, and to put forward targeted suggestions for improving family innovation decision-making and business management mechanisms. At the same time, family characteristics have brought opportunities for family businesses,

## Material and Method

### 1. Literature review

At present, in the existing literature on the topic of enterprise innovation, relatively rich research has been carried out at home and abroad. According to the existing research results, it can be concluded that enterprise innovation is generally more difficult, and the factors that affect enterprise innovation are also very important. The current research section on the impact of corporate innovation should also involve many fields such as history and culture, clan concepts, power distribution, strategic planning, and marketing for topics such as family businesses, because the governance of family businesses is relatively different from that of other companies. The degree of difficulty of language is higher, and the relevant research on the internal links of family enterprises has received relatively little attention. The existing research results provide a theoretical basis for the research of this paper, and put forward my own views and opinions based on the research status and the shortcomings of the current research.

The development of society has always been in a dynamic change. Only by continuously improving the anti-risk ability of family enterprises can we ensure the development of enterprise innovation and finally survive in the social competition. Therefore, the research direction of my thesis is mainly to study the participation of family members in the enterprise and enterprise innovation at the same time, and to explore the relationship between them. Ideas, and the importance of blood relationship, on this basis, combined with the three theories of this article, after drawing conclusions, put forward suggestions suitable for the actual situation, and put forward the most reasonable suggestions for family members and enterprise innovation. At the same time, on the basis of learning and referring to previous scholars, this article has always critically absorbed and inherited the views of the predecessors. After analyzing the research results of the predecessors, summed up their shortcomings, and then put forward their own views. This kind of research is more important.

### 2. Research hypothesis

In order to maintain the existing economic situation of the family business and their status in the family business, family members usually do not like challenging activities. The traditional thinking of Chinese people generally believes that stability is the premise of a happy life, mainly because Confucianism has long been in China. Influenced by the cultural atmosphere. It is also in this situation that when family members are faced with whether to make innovative decisions, they usually refuse directly. Secondly, the return on innovation of family enterprises is higher than that of ordinary enterprises, because the internal management of family enterprises is very complicated. If you want to make breakthroughs in the innovation sector, you need to pay more energy and costs, which will require more innovation achievements. Higher return compensation, and often the more risk-averse family managers, require higher return compensation. In addition, there are some very special situations in family businesses. For example, the team of the family business has discovered very meaningful innovation projects, so the following two hypotheses are proposed:

H<sub>1</sub>: The higher the participation of family members in enterprise management, the greater the inhibitory effect on enterprise R&D investment.

H<sub>2</sub>: The higher the participation of family members in enterprise management, the greater the inhibitory effect on the patent output of the enterprise.

Due to different industries, the participation of family members in family enterprises is not exactly the same, because the types of enterprises are different, so the methods used by family members in the daily management of enterprises must be different, and many family members of enterprises. The daily work of scientific researchers should not be interfered too much. In those high-tech fields, the role of professionals is very obvious. Due to the particularity of some industries, family members have a high degree of participation in the enterprise, but family enterprises generally have a common feature: aversion to risk and a high emphasis on family social and emotional wealth. Therefore, in order to make the experimental results robust, and in order to compare the differences in the research results among different industries, this paper classifies and summarizes the enterprises in the sample according to the different industries they belong to, and analyzes according to the relevant model, so this paper puts forward the following assumptions:

H<sub>3</sub>: For family businesses in different industries, the increase in the participation of family members will inhibit the company's R&D investment, but the inhibitory effects are not the same.

H<sub>4</sub>: For family enterprises in different industries, the increase in the participation of family members will inhibit the patent output of the enterprise, but the inhibitory effects are not the same.

In order to reduce the contingency of the experiment and increase the robustness of the experiment, this paper adopts the replacement of explanatory variables to further verify the results. This paper replaces the previous explanatory variables with the proportion of family members on the board of directors. The reason why I chose to use the proportion of family members of the board of directors to replace it is mainly because the role of the board of directors is indeed too great. It can not only participate in the formulation of corporate plans, but also has some specific powers, such as the function of rewards and punishments and the function of holding a meeting. The role of the board of directors in family businesses is more prominent. In addition to the above functions, the board of directors can also affect this issue in the inheritance of family businesses. With the development of the economy, the role of the board of directors in family businesses is also very prominent. If the proportion of family members on the board of directors is higher, the impact on the company itself will definitely be different. Therefore, in order to ensure the robustness and reliability of the results, this paper replaces the explanatory variable with the proportion of directors, supervisors and senior managers with the proportion of family members on the board of directors. This paper puts forward the following assumptions:

H<sub>5</sub>: The higher the proportion of family members on the board of directors, the greater the inhibitory effect on corporate R&D investment.

H<sub>6</sub>: The higher the proportion of family members on the board of directors, the greater the inhibitory effect on corporate patent output.

## Results and Discussion

### 1. Descriptive statistical results

After screening, this paper removes companies that do not meet the conditions and have missing data, and retains a total of 204 companies. At the same time, SPSS24.0 is used for empirical analysis. First, perform a descriptive row statistics on the sample. The results of descriptive statistics can be fully reflected in the following table. Descriptive statistics are measured by four indicators. Among them, the two quantities of PATENE and SCALE are not the values themselves, but are taken quantity after the LN value. The purpose of this is to reduce the range of the experiment and make the data more conspicuous, and at the same time, it is easier to calculate.

Variables	MIN	MAX	Average	Standard Deviation
FAMILY	0.0455	0.3684	0.1571	0.0715
INNO-INPUT	0.0005	0.0850	0.0248	0.1398
PATENT	1.0986	10.8828	4.9263	1.3791
ROA	-0.1617	0.0278	0.0606	0.5466
LEV	0.0080	0.8282	0.3039	0.1737
SCALE	19.2176	25.2974	21.3512	0.8918

## 2. Correlation analysis

From the table below, we can see that family member participation is negatively correlated with all variables. The company has been established for a short time and is in the growth stage. At this time, family members need to participate in the operation and management of the company, because the family's social and emotional wealth can play a very powerful role at this time. In real life, this phenomenon has also been fully verified, which shows that in small and medium-sized family enterprises, the high participation of family members can promote enterprise innovation. Through the correlation analysis, we also found the following main conclusions: Generally, the participation of family members has a negative impact on innovation input and patent output, but the innovation of enterprises is not only related to the participation of family members, but also involves .There are multiple factors such as asset-liability ratio, so it is necessary to establish a multiple regression model to prove whether the assumption is true.

	FAMILY	INNO-INPUT	LN ( PATENT )	ROA	LEV	SCALE
FAMILY	1					
INNO-INPUT	-0.085*	1				
LN ( PATENT )	-0.087*	0.208**	1			
ROA	-0.014	0.246**	0.028	1		
LEV	-0.184*	-0.058	0.257**	-0.232**	1	
SCALE	-0.205**	-0.076*	0.478**	0.019	0.526**	1

## 3. Multiple regression analysis

The table summarizes the analysis of the regression results of family member participation on enterprise innovation, and explains that R&D investment and patent output are lagged by three periods respectively, which makes the results more convincing. The main conclusions in the chart are: the regression coefficients of the proportion of directors, supervisors and senior managers in family enterprises (FAMILY) on the company's R&D investment (INNO-INPUT) are -0.022 (lag 1 period), -0.009 (lag 2 periods), - 0.017 (lag 3 periods), where R<sup>2</sup> values are 0.0218 (lag 1 period), 0.0018 (lag 2 periods), 0.0083 (lag 3 periods). The regression coefficients of the proportion of directors, supervisors and senior managers in family enterprises (FAMILY) on the company's patent output (PATENT) are - 1.120 (lag 1 period), -2.303 (lag 2 periods), -1.497 (lag 3 periods), R<sup>2</sup> values are 0.0041 (lag 1 period), 0.0151 (lag 2 period), 0.0056 (lag 3 period). The absolute value of the regression coefficient of family member participation on patent output is greater than the regression coefficient of family member participation on patent output. The absolute value of the coefficient shows that the participation of family members in the process of enterprise management will not only reduce the investment in research and development, but also the management characteristics of the family business itself will invisibly dampen the enthusiasm of employees for innovation. Effects of further concentration, resulting in fewer patents.

Analysis of regression results (regression of family member participation on innovation input)

variables	1 period behind	2 period behind	3 period behind
FAMILY	-0.022	-0.009	-0.017
ROA	0.064	0.054	0.037
LEV	-0.006	-0.008	-0.008
SCALE	-0.024	-0.012	-0.027
R <sup>2</sup>	0.0218	0.0018	0.0083
Time Fixed Effects	Fixed	Fixed	Fixed

Analysis of regression results (regression of family member participation on patent output)

variables	1 period behind	2 period behind	3 period behind
FAMILY	-1.120	-2.303	-1.497
ROA	0.064	0.054	0.037
LEV	1.899	1.765	1.875
SCALE	0.728	0.656	0.759
R <sup>2</sup>	0.0041	0.0151	0.0056
Time Fixed Effects	Fixed	Fixed	Fixed

#### 4. Robustness tests

For all industries, there is a phenomenon that the higher the participation of family members in enterprise management, the less the innovation output of the enterprise. Among them, the absolute values of the regression coefficients of the computer industry and the daily consumption industry are relatively higher, indicating that the patent output of emerging industries is more likely to decline with the increase of family members' participation. The absolute values of the regression coefficients of the computer industry, the biomedical industry, the daily consumption industry and the industry after family members participate in management gradually increase, indicating that family members always have an attitude of exclusion towards innovation in the process of participating in enterprise management.

Analysis of regression results by industry (regression of family member involvement on innovation input)

variables	Computer	Biomedical	Consumptiomn	Industrial
FAMILY <sub>i-1</sub>	-0.0190	-0.0181	-0.00284	-0.0103
R <sup>2</sup>	0.0064	0.00156	0.0432	0.0056
FAMILY <sub>i-2</sub>	-0.0191	-0.0072	-0.00235	-0.0271
R <sup>2</sup>	0.0058	0.0030	0.0257	0.0528
FAMILY <sub>i-3</sub>	-0.0195	-0.0270	-0.00263	-0.0281
R <sup>2</sup>	0.0062	0.0404	0.0043	0.088
Control variables	Control	Control	Control	Control
Time Fixed Effects	Fixed	Fixed	Fixed	Fixed

Analysis of regression results for different industries (regression of family member participation on patent output)

variables	Computer	Biomedical	Consumptiomn	Industrial
FAMILY <sub>i-1</sub>	-3.9447	-0.2156	-2.2463	-1.4941
R <sup>2</sup>	0.0471	0.0008	0.0128	0.0201
FAMILY <sub>i-2</sub>	-3.879	-0.5567	-3.5213	-1.9632
R <sup>2</sup>	0.0467	0.0004	0.032	0.0492
FAMILY <sub>i-3</sub>	-4.3017	-0.5236	-1.9743	-1.9984
R <sup>2</sup>	0.0439	0.0404	0.0043	0.088
Control variables	Control	Control	Control	Control
Time Fixed Effects	Fixed	Fixed	Fixed	Fixed

In order to make our results more convincing, we replace the original explanatory variable with the proportion of family members in the board of directors of family enterprises, and then verify whether the hypothesis is true according to the data analysis model designed in Chapter 3. According to the following analysis results, It can be seen that the proportion of the board of directors will inhibit the innovation of the enterprise, and it will inhibit the two sub-factors, and the impact on the patent output will gradually increase after the family members participate in the management.

Analysis of regression results (regression of family member participation on innovation input after replacing explanatory variables)

variables	1 period behind	2 period behind	3 period behind
FAMDIR-NUMBER	-0.015	-0.007	-0.005
R <sup>2</sup>	0.016	0.013	0.012
Control variables	Control	Control	Control
Time Fixed Effects	Fixed	Fixed	Fixed

Analysis of regression results (regression of family member participation on patent output after replacing explanatory variables)

variables	1 period behind	2 period behind	3 period behind
FAMDIR-NUMBER	-0.644	-1.233	-0.999
R <sup>2</sup>	0.003	0.011	0.006
Control variables	Control	Control	Control
Time Fixed Effects	Fixed	Fixed	Fixed

## Conclusion

There is a negative correlation between family member participation and corporate innovation. 2) In different industries, family participation and innovation are both negatively correlated, but the magnitude of the final impact is different. 3) The higher the proportion of family members on the board of directors, the greater the inhibitory effect on corporate innovation, indicating that the higher the proportion of family members in the management team, the greater the inhibition on innovation. Due to the uncertainty of innovation itself and the risk of investment, family members often make investment decisions with great care to protect the social and emotional wealth of the family. Therefore, family members face innovation. Risky innovations are often rejected when making decisions. Enterprise innovation generally requires stable capital investment, and when family businesses consider intergenerational inheritance, investment funds will be used more cautiously, which will also make enterprises invest less in research and development. Therefore, if a family business wants to improve its own innovation ability, it must properly "de-familyize", and at the same time introduce professional managers to manage the business, and extensively absorb advanced management concepts and methods on the premise of ensuring family characteristics.

In response to the conclusions drawn in this paper, we propose the following suggestions for family members: 1) Family members themselves should continuously improve their comprehensive quality and management ability. Although professional managers are stronger than family members in many aspects, the core power of family businesses must be in the hands of family members. If family members lose their right to speak in the enterprise, not only will it not promote the innovation of the enterprise, but it will lead to the collapse of the family enterprise. Therefore, family members can only promote the innovation of the enterprise on the premise of retaining the family characteristics if they keep forging ahead and be prepared for danger in times of peace. 2) The members of the family should not "hold a group" too much. Because the family members have blood relations as a prerequisite, family

members sometimes gather together in daily life, but family members also need to communicate and communicate with outsiders. On the one hand, it can increase emotional communication, on the other hand, it can improve the comprehensive quality and ability of family members. Both family members and non-family members are important components of an enterprise. The tacit understanding between them is not only related to the innovation ability of the enterprise, but also has a great impact on the development of the enterprise. 3) Family members must separate the social and emotional wealth of the family from the business performance of the enterprise, and they cannot be confused. Both are the basic strengths of the family business, but after all, the social and emotional wealth of the family is the special emotion of the members of the family. This kind of feeling is exerted on professional managers, but mutual respect and mutual understanding with professional managers, and jointly make the greatest strength for the family business. Therefore, in the face of corporate innovation decisions, as far as possible, the rationality should prevail over the emotional.

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