



Analysis of the Influence of esOP on Innovation of Listed Enterprises

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Abstract

The report to the 19th CPC National Congress put "innovation" as the key word, and the congress agreed on that innovation is the most significant driving In 2014, the government issued relevant opinions on ESOP with positive response of listed enterprises.

Based on difference-in-difference method, this paper takes patent application as a measurement index of innovation, and explores its impact on The results illustrate that the number of patent applications of listed companies which implement ESOP significantly increases after the implementation, indicating that ESOP has a significant promoting effect on The empirical conclusion points out that the implementation of ESOP in employee motivation, sensors and actuators, high -level strategic plan insufficiency, salary -level strategic plan insufficiency, salary incentive provided an important role in promoting the innovation of the enterprise sustainable Management innovation decision-making in enterprise innovation is impossible or lack of a ring, It provides a new way to promote the innovation of the enterprise sustainable development, reflecting the employees as an important executor. Management innovation decision-making in enterprise innovation is impossible or lack of a ring, It provides a new perspective for the research on the influencing factors of enterprise innovation, and also provides guidance and suggestions for enterprise management. Managers should improve their leadership, stimulate the innovation driving force inside the enterprise through correct Managers should improve their leadership, stimulate the innovation driving force inside the enterprise through correct decisions, promote the improvement of enterprise innovation ability, and promote the high-quality sustainable development of economic society.

Key words: *ESOP; Patent application; Innovation performance of listed enterprises; Difference-in-difference*

1. Introduction

1.1 Background of the study and significance

"Xi Thought on Socialism with Chinese Characteristics for a New Era" is the essence of the spirit of the new era, and "innovation" is an important synonym that appears many times in the "19th National Congress" report. Xi Jinping emphasized that "innovation is the first driving force to lead development" and that it is necessary to accelerate the implementation of innovation-driven development and build an innovative country. Enterprises are one of the main bodies of the market, and enterprise innovation is an important driving force to enhance core competitiveness, assist in industrial restructuring, transformation and upgrading, and also an important

driving force to build an innovative country and promote social progress and economic growth. At this stage, in order to make local enterprises' independent innovation shift from factor-driven to innovation-driven, and to promote the transition from high-speed economic and social development to high-quality sustainable development, it is necessary to stimulate the innovation vitality of enterprises.

One of the key drivers of corporate innovation is the correct investment in human resources and their efficient use (Holmstrom¹, 1989; Hall², 2002; Chen³ et al., 2016). For human resources, not only management is an important factor in stimulating innovation, but also employees are an integral part of driving innovation in companies and are often the open source of innovation (Shaughnessy⁴, 2012; Bradley⁵ et al., 2016). Employee

stock ownership plans, a form of employee ownership realization, had its initial theoretical roots mainly in the two-factor theory developed by American economist as well as lawyer Louis Kelso from American psychologist Fredrick Herzberg, who argued that both capital and labor are effective ways to raise income, however, compared to labor, in the capitalist market, the capital element participates in the income distribution. However, in the capitalist market, the proportion of the capital factor in the distribution of income is much larger than that of labor, thus creating a huge gap between the rich and the poor, so he believes that employees should be motivated to participate in the distribution of the capital factor, so as to increase their labor participation. Louis' idea of expanding capital ownership is based on the establishment of employee stock ownership associations inside or outside the company, and the formation of a fund to purchase shares through borrowing, so that employees can hold a certain percentage of shares, and he believes that this practice can stimulate employees to participate in corporate innovation (Jou⁶, 2000). Jensen and Meckling⁷ (1976) showed that the implementation of ESOPs has a strong motivational effect on employees, which reduces the costs and expenses of the company in many aspects; Sangsoo and Moon⁸ (1995) empirically demonstrated that ESOPs have a positive effect on the market value, performance and financial indicators of the company. (1995) empirically demonstrated that employee stock ownership plans have positive effects on market value, performance, and financial indicators.

In the last century, after the implementation and popularization of the family joint production contract responsibility system in the countryside, many urban employees were influenced by it, such as "employment with capital" and other forms of capital or technology into shares, which is the earliest employee shareholding in China. Since the establishment of the two stock exchanges in China in 1990, the amount of internal employee shareholding in listed companies has been increasing with the increase in the number of listed companies. According to the CNRDS database, 635 A-share listed companies have implemented internal employee stock ownership plans. A few scholars have explored the effect analysis between employee shareholding and corporate innovation, but most of the literature is still limited to the influence of management shareholders on corporate innovation, and few articles analyze this from the perspective of employees. Based on this, this paper focuses on innovation as an indicator to investigate whether and what kind of impact employee stock ownership plans have on the innovation benefits of Chinese enterprises:

1. On the theoretical level: the research perspective of this paper will break through the previous perspective of studying employee shareholding only at the managerial level, and focus on the employees of enterprises to explore their impact on enterprise innovation, and

conduct a quantitative empirical analysis of the impact after the issuance of the Opinions by the Securities and Futures Commission in 2014, which will provide some directional guidance and value to deepen and expand the enterprise innovation activities with employees as the main body of innovation decision makers. The theoretical value of this study is to provide some directional guidance and theoretical value to deepen and expand corporate innovation activities in which employees are the main agents of innovation decisions.

1.2 Research framework and ideas

In this paper, using the double difference method, the number of patent applications as a quantitative indicator to measure the innovation performance of enterprises, and Stata16 software, we study the impact of employee shareholding on enterprise innovation, drawing on the methods of Faleye⁹ (2014), Bernstein¹⁰ (2015) and Hasan¹¹ (2020). Since the release of the Opinions was in the second half of 2014 and most listed companies implemented employee stock ownership plan in 2015, this paper takes 2015 as the time point, takes the number of patent applications of 354 A-share listed companies that implemented employee stock ownership plan in 2015 as the experimental group, and takes the number of patent applications of other 500 listed companies that did not implement employee stock ownership as the control group. The analysis was conducted by double-difference analysis, and stata16.0 was used for the analysis process.

1.3 Thesis Innovation Points

The possible innovations of this paper in relation to the existing studies are:

1. After the promulgation of the SEC's Opinions, we study the impact of their shareholding plans on corporate innovation from a new and unprecedented perspective - that of the internal employees of companies.
2. This paper will reveal the unique role and importance of employees in innovation as an important part of business activities.
3. From the empirical results, we can influence the managers to improve their leadership, stimulate the innovation drive within the enterprise through correct decision-making, promote the improvement of enterprise innovation capability, and drive the high-quality development of economy and society.

2. literature review

2.1 A review of relevant research on corporate innovation

2.1.1 Research related to corporate innovation with management as the research perspective

In recent years, the market has become increasingly competitive, and the importance of "innovation" has become increasingly apparent. Innovation can not only help enterprises to form core competitiveness, but also accelerate the transformation of national economic development and achieve high-quality sustainable value creation. How to improve the willingness and ability of enterprises to innovate is becoming a hot topic. Studies have found that factors such as shareholding structure (Francis & Smith¹², 1995), market environment (Aghion et al¹³, 2013) and managers' work experience can influence innovation.

Managers play a crucial role in innovation activities as they are involved in corporate decision making. Many scholars have studied the influence of management on corporate innovation from the perspective of the background of the management of listed companies, which includes but is not limited to the birth date, personality traits, and age of the management. Much of the literature suggests that corporate innovation is influenced in large part by the managers of the firms. Management needs to have a long-term perspective, think about the sustainability of the firm, avoid problems such as short-sightedness (Fang et al¹⁴, 2014) and hedonism (Bernstein¹⁰, 2015), be adventurous and hardworking (Holmstrom¹, 1989). Based on this, subsequent studies have argued that if managers are adventurous or involved in relevant activities or experiences, they can improve corporate innovation (Galasso and Simcoe¹⁵, 2011, Sunder et al¹⁶, 2017). However, if public market performance activities such as public market acquisitions make it more difficult for managers to focus on the long-term development of the firm, making them more short-sighted, and their willingness to innovate is suppressed (He and Tian¹⁷, 2016; Chen et al¹⁸, 2017; Quan and Yin¹⁹, 2017)

2.1.2 Corporate Innovation with Employees as a Research Perspective Related Studies

Most people, including management and employees themselves, believe that the source of corporate innovation is the effective treatment of management, because the unique role of employees in innovation and the important role they play is overlooked, as they are not involved in management activities but only in technical activities and cannot participate in innovation decisions. However, Holmstrom¹ (1989) suggests that the innovation process in a firm is composed of various

stages, each of which is labor-intensive and requires not only significant leadership from management, but also the role of employees in it. Most of the current literature focuses on the subsequent impact of corporate innovation, i.e., output, but few studies have explored the impact of employees on corporate innovation from their perspective, which is not conducive to understanding the role of employees in corporate innovation activities. Because employees, as part of the firm, are more closely connected to the firm's products and customers than management, Shaughnessy⁴ (2012) and (Bradley et al⁵, 2016) argue that some corporate innovative ideas arise from the participation of employees in the firm's production service activities. And management is somewhat disconnected from the actual technical activities of the firm, and the technical staff of the firm is the part that most directly implements management decisions and works together and collaborates with other general employees in the operation of the firm, thus determining the efficiency of innovation (Chang et al²⁰, 2015; Lu and Dang²¹, 2014; Chen¹⁸, 2017).

2.2 A review of relevant studies on employee stock ownership plans

The idea of expanding capital ownership proposed by the American economist Louis was the prototype theory of employee ownership. He believed that both capital and labor are effective ways to increase income, but compared with labor, in the capitalist market, the proportion of capital factors participating in income distribution is much larger than labor, thus creating a huge gap between the rich and the poor, so he believed that employees should be motivated to participate in the distribution of capital factors so that Therefore, he believes that it is necessary to motivate employees to participate in the distribution of capital factors so that their labor participation can be increased.

Currently, for the literature studying employee stock ownership plans, there are empirical analyses of the impact of the market by listed companies implementing employee stock ownership plans (Zhang et al²², 2016; Hu and Mao²³, 2016), as well as analyses of the impact of SOEs implementing employee stock ownership plans and relevant policies and recommendations (Huang et al²⁴, 2014; Gao and Ning²⁵, 2017; Zhu and Yi²⁶, 2018). After the implementation of employee stock ownership plan, employees are not only single corporate insider status, but also increased corporate owner status, also some scholars believe that employee stock ownership plan can effectively alleviate the internal conflict of interest between major shareholders and employees Conyon²⁷ (2002) also believes that employee stock ownership plan gives employees additional rights such as management and voting rights to the company, and the plan can have a good market effects (Gordon and Pound²⁸, 1990; Beatty²⁹, 1995; Jiang and Su³⁰, 2016).

However, previous studies have failed to capture the impact of employee stock ownership plans by starting with corporate innovation, an important driver of economic development.

2.3 Literature Review

Most scholars have investigated the drivers, influences, and measurement factors of corporate innovation from the perspective of management, but few scholars have noticed that employees are also an important part of corporate innovation activities, and their role in corporate innovation has been investigated from the perspective of employees. First of all, as an important part of the enterprise, employees are involved in the production and service process, and they play an important role in the innovation activities of the enterprise as the executors of the management's decisions. Secondly, the management is relatively disconnected from the specific production and service activities within the enterprise, while the technical staff of the enterprise is the most directly exposed to these processes and is more capable of stimulating innovative ideas than the management in the practical aspects.

The literature on employee stock ownership plans can be traced back to the 20th century after the reform and opening up, and after the promulgation of the "Opinions" of the Securities and Futures Commission in 2014, there is a large amount of literature to study the positive impact of employee stock ownership and the current problems from various angles, but most of the studies are from the response of the market output, however, when the employee holds shares of the enterprise, his identity is not only the producer, but also the owner of the enterprise. Therefore, this paper will explore the impact of employee stock ownership plan on corporate innovation from the perspective of patents as a measure of corporate innovation and from the perspective of employees, an important corporate role that has been overlooked.

3. theoretical mechanism and hypothesis formulation

The innovation process in a company is subdivided into several levels within the company (Holmstorm¹, 1989). Management, in its role as a leader, is responsible for leading and making innovative decisions and macro-level layouts in innovation activities, but because of its disconnection from the company's production activities, it is unable to intuitively propose innovative ideas. In contrast, employees are directly involved in the micro-level work of the company and are able to identify and propose innovative ideas in the process.

In Fredrick Herzberg's two-factor theory, he believes that both capital and labor are effective ways to increase income, however, compared to labor, in the market, in many cases, the capital factor participates in the

distribution of income much more than labor, so he believes that to motivate employees to participate in the distribution of capital factors, so as to enhance their labor participation. In order to motivate the employees, the employee stock ownership plan allows the employees to change from the single identity of labor producer to the dual identity of labor producer and enterprise owner.

Based on this, this paper proposes hypothesis 1:

H1: Companies implementing employee stock ownership plans can promote innovation.

Joseph (1942) argues that large firms have a wider consumer base and earn more quickly in order to achieve "profit-rolling" benefits. "In a highly competitive market, it is important to have a strong market. In a competitive market, the firm's innovation may also be copied by competitors, so it is often difficult for small-scale firms to get a return on their investment in innovation. This paper will analyze the heterogeneity of the regression results on the impact of implementing employee stock ownership plans on corporate innovation.

Based on this, this paper proposes hypothesis 2:

H2: The impact of implementing employee stock ownership plans in large-scale firms is more significant on corporate innovation.

4. Model construction and variable description

4.1 Model construction

This paper adopts the double difference-in-difference (DID) method to empirically analyze the impact of the implementation of employee stock ownership plan on corporate innovation:

$$\text{Application}_{it} = \beta_0 + \beta_1(\text{City}_i \text{Year}_t) + \gamma X_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$

In the model, β_3 is the coefficient of the interaction term, which indicates the effect after the implementation of employee stock ownership plan in listed companies. The coefficient is expected to be positive in this paper, which means that employee stock ownership can increase the number of patent applications and promote innovation in enterprises. $Firm_i$ The dummy variable for the group is $i=1$ if the company has implemented the employee stock ownership plan, otherwise $i=0$. The dummy variable for the group is $i=1$ if the company has implemented the employee stock ownership plan, otherwise $i=0$. $Year_t$ The dummy variables are phased, $t=1$ if the firm implemented employee stock ownership plan in another year, and $t=0$ otherwise. X_{it} are other control variables, μ_i are individual fixed effects, λ_t are time fixed effects, ε_{it} is the random disturbance term.

4.2 Variable Description

1. core explanatory variables

Application_{it} (later abbreviated as App) is the core explanatory variable in this paper, referring to Bernstein¹⁰ (2015) to represent the number of patents filed by firm *i* in year *t*.

2. core explanatory variables

$City_i Year_t$ is the core explanatory variable in this paper, representing whether firm *i* implemented employee stock ownership plan in year *t*. If the firm implemented employee stock ownership plan, then $i=1$, otherwise $i=0$. In addition, in order to control for other exogenous events that may exist during the sample period, annual fixed effects are included in this paper to control for time-level influences that do not vary with city. In addition, to control for other exogenous events that may exist during the sample period, annual fixed effects are added to control for influencing factors that do not vary over time at the city level; to control for heterogeneity among firms, and individual firm fixed effects are added to control for influencing factors that do not vary over time.

3. Control variables

Table 1: Definition of control variables

Variable Name	Variable Meaning	Measurement Method
<i>Size</i>	Company Size	Natural logarithm of total assets for the year
<i>ALR</i>	Gearing ratio	Total liabilities at the end of the year / Total assets at the end of the year

Table 2: Results of descriptive statistics of variables

Variable Name	Number of observations	Average value	Standard deviation	Minimum value	Median	Maximum value
Application	29933	225.79	1422.45	0	50	61404
Size	29933	22.09	1.44	16.16	21.86	31.14
ALR	29933	0.43	1.22	-0.19	0.4	178.35
ROE	29933	0.05	1.26	-174.89	0.07	21.35
LN_age	29933	2.8	0.37	0.69	2.83	4.14

<i>ROE</i>	Return on Net Assets	Net income/average balance of shareholders' equity
<i>LN_Age</i>	Company Age	20201 minus the natural logarithm of the company's date of incorporation

4.3 Data sources and descriptive statistics

The data related to listed companies, including the number of patent applications as the core explanatory variable and the age of companies as the control variable, are mainly obtained from CSMAR Guotaian database, EPS data platform and RESSET financial research database. The data were manually sorted and filtered based on the employee stock ownership plan database provided by the CNRDS platform, with more than 600,000 items.

Since the promulgation of the "Opinions" of the Securities Regulatory Commission was in the second half of 2014, and most of the listed companies responded to the policy in 2015, this paper collects all the 286 listed companies that implemented employee stock ownership plan in 2015 as the experimental group, and more than 500 other listed companies that did not implement employee stock ownership plan as the control group, and truncates the total data from 2010 to 2020. A total of 600,000 data from 2010 to 2020 were selected as the empirical objects.

5. Measurement results and analysis

5.1 Empirical results and regression analysis

5.1.1 Parallel trend test

The baseline regression in this paper can only ensure that the double difference method extracts the causal

effect of implementing an employee stock ownership plan if the firms are sufficiently similar prior to the implementation of the employee stock ownership plan, so we need to measure how different the patents filed by these firms are prior to the employee stock ownership plan. The year dummy variable can be multiplied with the experimental group dummy variable, and this interaction

term captures the difference between the two groups of regions in each year.

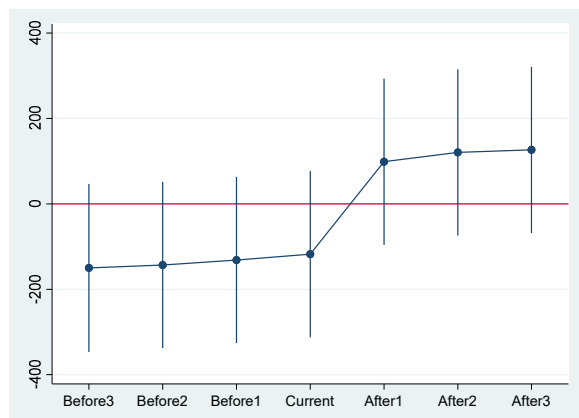


Figure 1: Parallel trend test chart

As shown in Figure 1, the estimated coefficients were negative before the implementation of the employee stock ownership plan, while after the implementation of the plan, the estimated coefficients increased significantly and consistently positive and passed the significance level test, thus satisfying the parallel trend hypothesis and showing that the premise hypothesis of the double difference method in this paper is valid.

5.1.2 Baseline regression

The results of the benchmark regressions in this paper are as follows.

Table 3: Baseline regression results of employee stock ownership plan and corporate innovation

VARIABLES	(1) App	(2) App	(3) App	(4) App	(5) App
did	259.8*** (-93.4)	184.3** (-71.5)	184.4*** (-71.49)	184.4*** (-71.49)	194.0*** (-69.88)
Size		-8.021 (-20.28)	-8.553 (-20.44)	-8.806 (-20.49)	-4.787 (-21.25)
ALR			-2.563* (-1.373)	-2.568* (-1.371)	-2.211* (-1.153)
ROE				1.571** (-0.623)	1.509** (-0.6)
LN_age					861.5* (-483.9)
Constant	33.83 -20.87	175.4 -424.1	187.7 -427.6	192.9 -428.5	-315.6* -185.1
Observations	29933	23102	23102	23102	23102
Number of c	2812	2767	2767	2767	2767
R-squared	0.033	0.033	0.033	0.033	0.034

Note: t-values in parentheses: *, **, *** indicate significant at the 10%, 5%, and 1% levels, respectively.

As shown in Table 3, the dummy variable of implementing employee stock ownership plan without adding control variables in column 1 is significantly positive at the 1% level, indicating that employee stock ownership plan can increase the number of patent applications and promote corporate innovation, which has a significant promoting effect. To verify its robustness, the regression analysis was conducted by adding control variables in columns 2 to 5, and the results showed that the coefficient of the interaction term was still significantly positive at the 1% level, which verified the hypothesis 1 of this paper, indicating that employee stock ownership has a significant role in promoting corporate innovation.

5.2 Placebo test

The double difference method is used to test the experimental effect of implementing employee stock ownership plan. The premise hypothesis is that if there is no shock of this policy and there is no systematic difference in the trend of change between the experimental and control groups, the interaction term $City_i Year_t$ coefficient β_3 will not be significant. This paper uses counterfactual analysis to verify the validity of the above hypothesis by randomly selecting the year of the policy shock to verify the effect of employee stock ownership plan on corporate innovation. In this paper, we advance the year of double difference by

3 years to 2012, when the SFC did not promulgate the Opinions and listed companies did not conduct employee stock ownership plan on a large scale, and conduct regression analysis on it. If the coefficient is significantly positive, it indicates that corporate innovation will be influenced by other factors rather than the implementation of employee stock ownership.

Table 4:Placebo test

VARIABLES	(1)	(2)
	App	App
did	143.9	36.47
	(-75.55)	(-43.67)
size		-1.216
		-21.46
alr		-2.044*
		-1.13
roe		1.478**
		-0.588
LN_age		-288.5
		-186.1
Constant	33.8	718.5
	-20.9	-495.9
Observations	29,933	23,102
R-squared	0.031	0.033
Number of c	2,812	2,767

Note:t-values in parentheses: *, **, *** indicate significant at the 10%, 5%, and 1% levels, respectively.

As shown in Table 4, the coefficient of interaction term is not significant, which indicates that without the implementation of employee stock ownership plan, corporate innovation will not be significantly promoted, and also verifies the parallel trend of the experimental and control groups before opening, this paper also randomly selected 2013 as the time of double difference, the result is still not significant, which again proves the reliability of the baseline regression results of this paper, that is, employee stock ownership plan can effectively promote corporate It is an important driving force of innovation-driven development.

5.3 Heterogeneity analysis

From the results of the benchmark regression, it is clear that the implementation of employee stock ownership plans in listed firms has a significant impact on the innovation performance of firms. However, there are differences among listed firms in terms of firm size, firm age, management personality such as whether they are challenging or not, whether they are short-sighted or not, the skill level of internal employees, internal conflicts among stakeholders, etc. For example,

compared with small firms, large firms have an advantage in patent application. According to this hypothesis, the selected sample is divided into two groups according to the size of the firm, i.e., the natural logarithm of the total assets.

Table 5:Heterogeneity analysis

VARIABLES	(1)	(2)
	Size>aver	Size<aver
did	315.1**	6.782
	(-151.7)	(-10.75)
size	-53	5.498
	-43.88	-3.473
alr	-6.679	-0.0917
	-20.49	-0.191
roe	2.800***	0.621*
	-0.861	-0.325
LN_age	-397.4	37.42
	-334.9	-22.83
Constant	2,216**	-165.5*
	-995.3	-86.53
Observations	10,550	12,552
R-squared	0.048	0.228
Number of c	1,124	1,643

Note:t-values in parentheses: *, **, *** indicate significant at the 10%, 5%, and 1% levels, respectively.

As shown in Table 5, the coefficients of the interaction coefficients are significantly positive at the 10% level for both cases with and without control variables in the baseline regression for the above-average sample of listed firms in column 1, indicating that for relatively large firms, employee share ownership is effective in promoting corporate innovation, which validates hypothesis 2 of this paper. The coefficient of the interaction term is not significant. The coefficient of the interaction term is not significant, suggesting that the implementation of employee stock ownership plans in large-scale enterprises is more effective in promoting corporate innovation. There are possible reasons for this: (1): Compared to small-scale firms, large-scale firms generally recruit employees with higher education levels, which means that their skills are more effective in implementing management's innovative decisions and are

more likely to come up with innovative ideas during the implementation process.

6. Research and Policy Recommendations

6.1 Main findings of the study

To analyze the impact of employee stock ownership in listed companies, this paper investigates the impact of employee stock ownership on corporate innovation from the perspective of employees, and uses patent applications as a measurement indicator. The data on patent applications and net gearing ratio of listed companies from 2010 to 2020 are collected and manually sorted and screened based on the database of employee stock ownership plans provided by CNRDS platform, and a double difference model is constructed to conduct a benchmark regression to investigate the impact of employee stock ownership on corporate innovation. After the regression results are significant, the policy shock time is increased to 2 years and 3 years respectively for robustness testing; then the heterogeneity analysis is conducted to distinguish the large and small enterprises according to the average of enterprise size, and finally the following conclusions are drawn:

(1) Management should promote internal coordination through reasonable management tools to enhance innovation and vitality. Management should improve their own governance, leadership and innovative decision-making power, and actively implement employee stock ownership plans, so that internal employees not only participate in corporate production, but also participate in corporate decision-making to mobilize employee enthusiasm, thus achieving a "win-win" situation, and promoting corporate innovation. The employee stock ownership plan is a supplement to the company's salary and is a means of salary payment, which improves the employees' sense of organizational support. The reasonable use of the employee stock ownership plan can attract and retain innovative talents, improve the competitiveness of the company, and thus promote the innovative vitality of the company.

6.2 Policy Recommendations

The empirical analysis shows that the implementation of employee stock ownership plan can promote the innovation performance of enterprises. For the government, the government can reasonably issue relevant documents to stimulate the response of enterprises, so as to stimulate market vitality and promote high-quality economic development. For enterprises, they can reasonably improve the ownership structure of the enterprise and appropriately increase the shareholding ratio of employees to stimulate their labor motivation and innovation energy.

(1) Before implementing the employee stock

ownership plan, the management should evaluate in advance the strategy and corporate value of the enterprise currently implemented and applied. For companies that are eager to improve their innovation dynamics and choose innovative and leading-edge competitive strategies, they may choose to enhance their innovation benefits through employee stock ownership plans. However, since the benefits of employee stock ownership are related to the current valuation of the company, they should still pay attention to the fact that the enterprise value should not be too high or too low at the time of implementation, so as to avoid conflicts between managers and employees and internal conflicts of interest.

7. Conclusion

In order to explore the relationship and mechanism between esOP and innovation performance of listed companies, this paper adopts DID model. Data were selected from all a-share listed companies that implemented esOP in 2015 and other companies that did not implement esOP. According to the theoretical analysis, after the implementation of esOP, that is, after esOP, the change of identity makes employees have the dual identity of enterprise insider and owner, which can promote enterprise innovation through the "benefit synergy" mechanism between management and employees.

After regression analysis based on DID model, this paper finds that the implementation of esOP in listed enterprises can significantly promote enterprise innovation. Heterogeneity analysis shows that compared with small-scale enterprises, the implementation of esOP in large-scale listed enterprises has a more obvious promoting effect.

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