Empirical study on the impact of foreign executives on the innovation performance of listed companies

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Abstract: In recent years, more foreign executives have entered Chinese enterprises. The innovation and entrepreneurship capabilities of overseas talents in Chinese enterprises have become a common concern. This article selects 63 A-share listed companies that hire foreign executives and establishes a model based on the data of these companies from 2010 to 2019. Analyzed the impact of foreign executives on corporate innovation performance. Research and development have shown that the proportion of foreign executives has a significant positive impact on both the number of patents and the R&D investment ratio, which measure the innovation performance of enterprises.

Keywords: Foreign executives；Listed companies；Innovation performance；Impact

1. Introduction

In 2022, the total national economy exceeded 120 trillion yuan in China, an increase of 3.0% compared to the previous year. At present, China regards "innovation" as one of its main development strategies, and the China Innovation Index ranks 11th globally. For enterprises, innovation is an important commanding point for market development and an important way to improve their core competitiveness.

Excellent senior management personnel are rare and irreplaceable human resources in enterprises. The entry of foreign nationals into Chinese enterprises have become an important driving force to help Chinese enterprises better innovate and achieve international development. Studying the impact of foreign executives on the innovation performance of listed companies in China, is currently a very worthwhile issue to study. It can provide inspiration for the construction of senior management teams, market competition response, and sustainable development of listed companies in China, and has great practical guiding significance.

2.Research design

2.1 Samples and data

This paper mainly studies the impact of foreign executives' employment in China's A-share listed companies on enterprise innovation performance. In order to standardize the research samples in this document, the initial samples are removed according to the following principles:

(1) Eliminate listed companies with incomplete information.

(2) ST listed companies are excluded.

(3) Exclude enterprises whose performance has changed significantly from 2010 to 2019.

(4) Enterprises with less than or equal to two senior executives were eliminated to avoid the difference between authoritarian corporate governance structure and team governance in the normal sense.

(5) Enterprises in which foreign executives' tenure in the enterprise is less than one year are excluded to ensure that foreign executives participate in sufficient corporate governance.

After sorting out, the data of 63 enterprises were selected as the research sample. The samples and data selected in this paper are mainly from CSMAR database.

2.2 Selection and definition of variables

The introduced variables are shown in table 2.2.

<div align="center">Table 2.2 Variables and definitions</div>

Letters indicate	Variable	Type of variable	Definition
	Foreign executive heterogeneity	explanatory variable	Percentage of foreign nationality members of the executive team
	Patent number	explained variable	The number of patents granted by the enterprise each year
	Investment than	explained variable	The proportion of annual r & d investment to total investment
Sco	scale	controlled variable	Log of the year-end market value
Age	enterprise age	controlled variable	Enterprises from the birth to 2019
	Executive age heterogeneity	controlled variable	Standard deviation / mean of executive age

2.3 Model design

Based on the introduced variables, the two regression models are:

Sco+++ (2-1)

Sco+++ (2-2)

3. Empirical analysis

3.1 Descriptive statistics

<div align="center">Table 3.1 Descriptive statistics results</div>

	Observed value	Mean	Crest value	Least value	Standard error
Nationality heterogeneity	63	0.989709	0.998521	0.966942	0.006865
Enterprise size (RMB ten thousand yuan)	63	3639316	18963816	283026	4468440
Enterprise age	63	18.23	25	6	4.78
Executive age	63	54.2	70	39	5.96
Patent number	63	244.67	1275	11	286.8
Investment ratio	63	4.46392	7.46	3.18	0.871338

The heterogeneity of senior executives' nationality is low, and the proportion of foreign executives in the top management team is relatively similar. The gap between executives' age and investment ratio is relatively small in these enterprises. But there is a large gap between the scale of enterprises and the number of patents.

3.2 Regression analysis

andare 0.844 and 0.802 in model, respectively. Both data are close to 1, indicating that the goodness of fit of the model is good, and the variables in the equation have strong explanatory power. For Rat model, the statistics of goodness of fit variables are 0.719 and 0.726 respectively, indicating that the model has strong explanatory dependent variables and good goodness of fit.

The Sig of the two models are less than 0.05, indicating that the regression model is significant at a given significance level of 0.05, and the explanatory variable has explanatory power for enterprise innovation performance.

3.3 Correlation coefficient matrix

<div align="center">Table 3.3 Correlation coefficient matrix</div>

				Sco	Age	
	1					
	-0.056	1				
	-0.254	0.141	1			
Sco	0.022	0.063	0.214	1		
Age	0.003	0.005	0.021	0.004	1	
	0.01	0.021	0.413	0.302	0.184	1

The correlation coefficient between For and Pen and Rat is negative, which is logical, because the smaller the value of For, the larger the proportion of foreign executives in the team, and the higher the innovation level of the enterprise. This internal mechanism may be: Most of the foreign executives who can be hired to China are people with certain work experience and strong work ability. And Foreign executives can put forward some new suggestions and innovations in the team, which will lead to the enhancement of the innovation ability of the enterprise.

3.4 Regression coefficient

The VIF of the two models is less than 5, there is no multicollinearity problem between variables. Given the significance level of 0.05, according to the t-statistic test, the critical value is 0.234. The t-statistic in the table is basically greater than the critical value. It can be considered that under the significance level of 0.05, the heterogeneity of foreign executives has a significant impact on enterprise innovation performance.

The two models tested by econometrics and statistics are as follows:

Pen=5.236-0.496For+0.532Sco+0.023Age+0.712

Rat=3.26-0.137For ++0.364Age+

In the two models, the lower the heterogeneity, and the stronger the enterprise's innovation ability, indicating that foreign executives have a greater role in promoting the innovation ability of enterprises. Among them, for each increase in the proportion of foreign executives by one unit, the number of patents will increase by 0.496 units, and the output input ratio will increase by 0.137 units. In addition, the age of the enterprise and the age of the executives have a certain impact on the innovation ability of the enterprise.

4. Conclusions and suggestions

4.1 Conclusion

The proportion of foreign executives is significantly positively correlated with the number of patents. The higher the proportion of foreign executives in the team, the more patents the enterprise will obtain. This is basically consistent with the existing research conclusions. Foreign executives bring advanced knowledge spillovers to enterprises with their advanced knowledge and skills. They also pay more attention to the patent protection of the R&D and innovation achievements of enterprises.

4.2 Countermeasures and suggestions

4.2.1 Enterprise Perspective

(1) Introduce more excellent foreign executives.

Foreign executives can jump out of the traditional Chinese enterprise thought and use different knowledge to improve the innovation performance of Chinese enterprises. In addition, foreign executives can promote the rapid development of foreign markets for Chinese enterprises.

(2) Make full use of the existing foreign executives.

We can use the existing foreign executives in the enterprise to reduce cultural differences and design products that meet the local market. And strengthen communication with foreign executives to provide a bilingual working environment for the internal staff of the enterprise, which help them better communicate with foreign companies in the future and lead to more diversified innovative ideas,.

4.2.2 Government Perspective

Most enterprises need the support of the government to develop better. Government can hold large-scale talent exchange meetings, it will provide a good platform for Chinese enterprises to recruit foreign executives. At the same time Government shall ensure that foreigners have the same legal protection as Chinese citizens during their tenure in China. To entice them to stay and work in Chinese companies.

References

[1] Zuo-Miao X , Jian-Wen W , An-Qi W ,et al.The Influence of Executive Political Background on Enterprise Innovation Performance[J].Journal of Finance and Economics Theory, 2019.

[2] Jian H , Heng C , Li L I ,et al.Research on the Heterogeneity Threshold Effect of R&D Innovation and Non-R&D Innovation in High-Tech Industry[J].Chinese Journal of Management, 2018.

[3] Jiabao Zheng.Research on the Influence of Executive Academic Experience on Enterprise R&D Innovation[J].Operations Research and Fuzziology, 2022.DOI:10.12677/orf.2022.124153.

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