

The Research of Existing problems for Enterprise Independent Innovation Ability of High-end Equipment Manufacturing Industry in China

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Abstract

How to cultivate and improve enterprise independent innovation ability of the high-end equipment manufacturing industry in our country is major issue of the high-end equipment manufacturing industry development in China and the transformation of the pattern of economic development . From the enterprise level, through actual investigation and analysis of the reason, this article obtains the four major problems about the enterprise independent innovation ability of high-end equipment manufacturing industry in our country ,they are : the enterprise independent innovation will is not strong, the research and development of enterprise independent innovation ability is low, the enterprise independent innovation management ability is insufficient and the sustainable ability of enterprise independent innovation still needs to improve . Look forward to find the right direction of solution for the enterprise independent innovation ability .

Key Words: China high-end equipment manufacturing industry; enterprise independent innovation ability ; Existing problems

1.The introduction

Cultivating and developing the high-end equipment manufacturing industry is the major historic decision decided by the party and the government and it has important era background and practical significance. However, the lack of enterprise independent innovation ability has become a primary bottleneck problem in the development of high-end equipment manufacturing industry in our country enterprise (below referred to as high-end enterprises). Scholars have achieved fruitful results on the cultivating of enterprise independent innovation ability, but the research on high-end enterprise independent innovation ability are rarely involved. Therefore, From the enterprise level, through actual investigation and analysis of the reason, this article obtains the four major problems about the enterprise independent innovation ability of high-end equipment manufacturing industry in our country ,they are : the enterprise independent innovation will is not strong, the research and development of enterprise independent innovation ability is low, the enterprise independent innovation management ability is insufficient and the sustainable ability of enterprise independent innovation still needs to improve . Look forward to find the right direction of solution for the enterprise independent innovation ability .

2.The connotation of enterprise independent innovation ability

Enterprise independent innovation ability is to show enterprise with the kind of abilities that the enterprise is given priority to with me, actively and effectively integrating the internal and external all sorts of innovation resources,getting the leadership of the innovation of property rights and the main innovation of revenues and constantly improving the capabilities of the sustainable competitive advantage [1]. Its connotation includes the following four aspects:

the will of independent innovation is the premise . It also is the endogenous power driver of enterprise innovation behavior.

3. improving the ability of research and development is breakthrough and the strategy choice.it needs to integrate the internal and external innovation resources of enterprise.it also needs the key choice to focus on breakthrough.

- 4. the ability of independent innovation management is the guarantee. It is throughout the enterprise innovation behavior overall[2].
- (4) to obtain the sustainable competitive advantage is purpose.cultivate and improve the independent innovation ability is not based on the development of the short-term, but based on the goals of sustainable development.

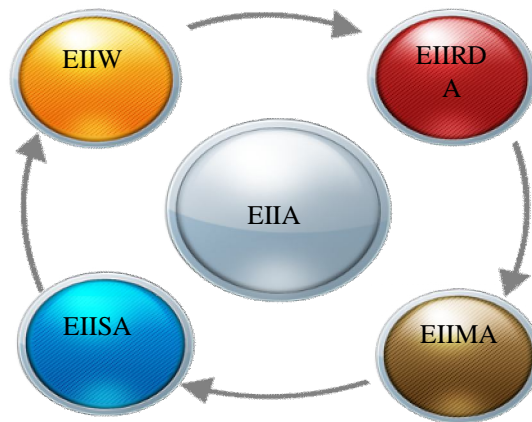


Figure 1: The relationship among the four aspects

3.Existing problems for the high-end equipment manufacturing industry enterprise independent innovation ability

3.1 Enterprise independent innovation will is not strong

In fact, the most high-end enterprise leaders have strong innovation will, but the enterprise independent innovation will not only refers to the innovation of the senior managers will, but refers to the enterprise staff (refers to the lower managers and ordinary employees) innovation will [2]. In the field survey ,we found that the nature of the different enterprises with different degree of innovation willingness between top managers and employees' willingness . According to the issue of enterprise innovation intention questionnaire, we concluded that high-level innovative intention scale: private> joint venture > state-owned large and medium-sized enterprises, respectively50%, 30% and 20% .Employees' innovation will scale: private > joint venture> state-owned large and medium-sized enterprises, 40%, 35% and 25%, respectively. From the proportion as you can see, only the private enterprise of top managers and employees are showing strong independent innovation, and other types of enterprises independent innovation will lower. So generally speaking, our country high-end enterprises independent innovation will is not high.

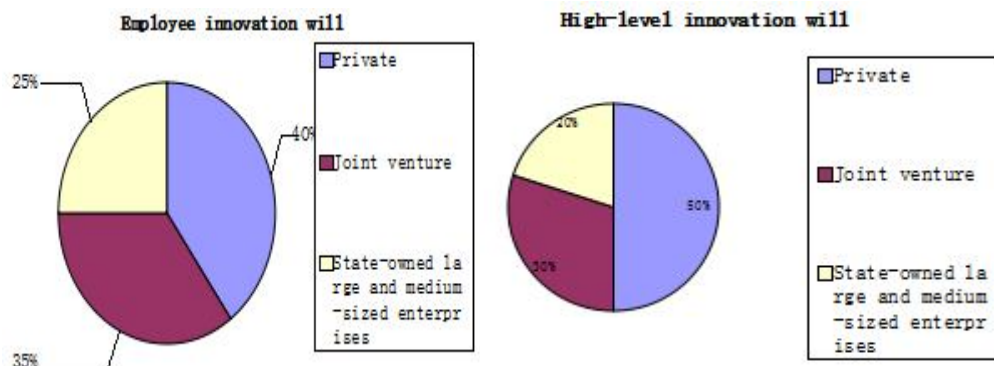


Figure 2.The different innovation will proportion of different nature enterprises both in high-level and employee innovation will

Self-directed innovation will = top level innovation will ×employees will, only both high, enterprise independent innovation will higher; If staff innovation will low, the there will be a problem with enterprise independent innovation execution ;

If high-level innovative intend to low, the enterprise staff is a passion, innovation will for the enterprise still not be high. What Can be seen from the diagram is that only the private enterprise of top managers and employees are showing strong independent innovation, but not other types of enterprises independent innovation will . So generally speaking, our country high-end enterprises independent innovation will is not high. Through our investigation, visiting and judgment, we think that the main reasons of the lack of high-end enterprises independent innovation will is the short of corporate entrepreneurship, entrepreneurship between employees and senior managers rarely achieve ideal match. If entrepreneurship can not get all the staff in the company's identity , there will be no innovation atmosphere and corporate culture of innovation, there would be no senior leaders and employees' willingness to higher innovation [2], the innovation of the enterprise will only is low.

3.2 Research and development of enterprise independent innovation ability is low

5. Lack of R&D.

R&D is divided into internal and external inputs, external investment is mainly refers to external cooperation. First, the internal input. A great many enterprises invest in innovation, such as Huawei accounted for 11% of sales, but on the whole enterprise R&D investment in China is still inadequate. On the one hand, the R&D spending. In recent years, China's large and medium-sized industrial enterprise R&D expenditure and the successive incremental, as a share of GDP in 2011 to have accounted for 1.84% of GDP, compared with 3% of the major developed countries, but remain low. On the another hand, the R&D personnel input cannot be compared with multinational companies, only about 35% large and medium-sized enterprises in our country set up special research and development institutions, but the quality level is low. Second, external investment. the degree and effect of Cooperation consciousness with external enterprises are deficient, especially on opening innovation and the user innovation. In the research, we found some high-end enterprises think the research and development is highly secret, cannot cooperate too much with external , especially with competitors. Under this kind of understanding, high-end enterprises give up the chance to learn a powerful competitors. In addition, no user innovation consciousness, few realize that in the field of innovation, the user innovation also played more and more important role. Because some high-end users with demanding particularity, allows users to have a certain value on the innovation of the products and services [3].

Table 1: The trend of R&D input of EIIA

Year	R&D input	The proportion of GDP
2002	140,000,000,000(RMB)	1.2%
2004	160,000,000,000	1.3%
2006	250,000,000,000	1.4%
2008	410,000,000,000	1.5%
2010	700,000,000,000	1.7%
2012	810,000,000,000	1.84%

6. Not enough scientific research power integration.

Research involves multiple departments, not only involves the enterprise internal organization, but relates to the cooperation with external agencies. so inevitably ,there are some problems, but more importantly, many enterprises focus on the R&D talents and funds needed for the hard power, but just ignore the effective integration of research strength which can make the hard power a reaction between each other[4].

3.3 Enterprise independent innovation management ability is insufficient

7. Independent innovation management system chaos

There is no clear conclusion on the division of high-end enterprise , many high-end enterprises are more involved in the high-end equipment field ,but the organization structure are still state-owned large and medium-sized enterprises, private enterprises and joint ventures, etc.

This will lead to the conflict between the original organization structure, management system and the the new innovation strategy. particularly in the following three perspectives: first, "scientists doing management" is a common phenomenon in the high-end enterprises. In recent years, the high-end enterprise have absorbed quite a few leading staff to improve innovation ability , such as "sea turtles" .enterprises often give a high level of administrative treatment to reflect their value. But according to statistics, talents to develop less than 40% of the time, a lot of time was dominated by various trivial administrative office. Second, the enterprise internal contradictions and lack of innovation coordinate system. "Sea turtles" and "local gang" the contradiction, the conflict between management and R&D department, the contradiction between new and old management,etc.these contradictions consuming innovation resources in great quantities, make some entrepreneurs think that "what we lack is not technology, but technical management system". Third is that project team incentive system. Many companies have not been able to develop R&D personnel performance according to the particularity of innovation system. Rewarding for R&D personnel focused on material incentives, didn't realize that today's knowledge workers pay more attention to their own career planning and the pursuit of excellence.

8. The management of intellectual property rights

High-end enterprise have problems in enterprise intellectual property management system , institutions and professionals. One is the enterprise intellectual property management is lacking. Second, even if the enterprises implement the intellectual property management, but still a plenty of problems. It is easy to produce intellectual property dispute under the unclear ownership of intellectual property system; Lack of intellectual property information management which leads to many enterprises unconsciously "infringement" [5]; Intellectual property management agencies in the enterprise has not been enough attention; Finally, the intellectual property management professionals lack, especially lack of talents who are familiar with international intellectual property rules[6].

3.4 Enterprise independent innovation sustainable ability needs to improve

High-end enterprise sustainable capacity for independent innovation is mainly reflected in three aspects: enterprise green innovation, enterprise R&D staff turnover and the brand of enterprise innovation ability.

9. Green innovation

High-end products of greening, environmental protection, low carbon has become the trend in the world. Enterprise green innovation is a striking feature of the sustainable ability of independent innovation. But for a long time because of resources endowment to extensive development path of formed by the inertia of thinking and the development of inertia makes many enterprises no green innovation consciousness and action, if any, will give up the green innovation in balance with the interests .

10. Enterprise R&D staff turnover

In practice, we found that a very important problem the high-end enterprises face is the high of R&D staff turnover rate[7]. This has all sorts of reasons, one is the appeal of multinational companies, in research we found that many developers regard domestic enterprises as the springboard to move to foreign companies. The second is, the enterprise itself R&D personnel system has a problem. High-end enterprises have problems in the concept of talent, talent incentive,and talent system construction. Personnel system is not stable which take much time on the familiar with company's development process , so the innovation efficiency is very low.

11. The enterprise innovation and brand

Brand of enterprise innovation ability refers to the follow-up tests, development, research and development application to commercial to the brand's ability[8]. In some areas,such as R&D , our country high-end enterprises can generally keep up with the world level , but not in the innovation of the brand stage. Not only because we implemented economic planning for a long time and the market economy just more than 30 years ,but also because new products is not sure with its mature, security, reliability and quality, etc . but most important reason is the enterprise itself. Foreign companies has been launched brand strategy when it begins a new product R&D , such as the company Apple.

4. Conclusion

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