

Chapter 62

The Practice of Open Innovation in Chinese Enterprises

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ABSTRACT

Along with the increasing pace and complexity of technology, the importance of external knowledge exploitation has been acknowledged by many researchers and practitioners. How to manage the innovation efficiently is an important issue for firms to enhance competitiveness. Based on the essentials of open innovation, this chapter describes the conditions of openness in the process of innovation in Chinese enterprises. This chapter summarizes some modes for the organization of open innovation in Chinese enterprises, including all employees participate in the innovation process, users involve in the innovation, suppliers participate in the innovation, collaborations with firms in other industries and competitors, cooperation with universities and research institutes, and also intellectual property licensing. Finally, this chapter introduces a case of open innovation practice in Baosteel, which is a famous manufacturing enterprise in China.

INTRODUCTION

As the key factor to a company's capability to thrive, innovation can make enterprises be more competitive. The research made by PWC England Corporation indicated that enterprises mastering innovation well grow quicker and create more profits than others. Innovation is becoming the driver and headspring of survival and development for enterprises with the more intense market competition (Kumpe & Bolwijn, 1994). Enterprises must

attach importance to innovation to respond to the rapidly changing market, to satisfy users' diversified needs and to maintain competitive advantage. Through continuous innovation, enterprises can apperceive and obtain those resources with latent value and characteristic more thoroughly, thus forming heterogeneous capabilities which can be imitated with great difficulties by competitors (Alchian & Demsetz, 1972).

Today the importance of innovation has been recognized by all practitioners. Intense

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competition and the faster changing markets and technologies have made sure of that. But technological innovation is an activity full of risk with both high inputs and high rates of failure. With competition getting more intense, companies that don't innovate will die. While most innovations tend to fail, how to innovate is a key problem. In today's world where the only constant is change, the task of managing innovation is vital for companies of every size in every industry to remain competitiveness. Innovation is a very difficult process to manage.

In Chinese enterprises, the technological innovation capability is laggard compared with firms in developed countries. R&D activities in most enterprises are inactive. In 2011, only 11.5% of enterprises to total number of enterprises above designated size (with sales more than 20 million yuan) have R&D activities. And the percentage of expenditure on R&D to sales is 0.71 in Chinese industrial enterprises. Thus the support of R&D to technological innovation is relatively weak and technology intensity is very low in Chinese enterprises. R&D activities, especially basic research activities, in Chinese enterprises are usually inactive. Expenditures on basic research were only 0.11% of the R&D expenditures and the expenditures on applied research were 2.9% of the R&D expenditures¹. Therefore there is a lack of original innovation in Chinese enterprises.

Enterprises have to face the global economic circumstance. The increasingly intense market competition is challenging the technological innovation capability in Chinese enterprises rigorously. The great change of market rule and the rapid development of global economic integration lead to the radical change of enterprises' survival environment. Only through innovation can enterprises create new opportunity to exist well and face the new challenge.

The open innovation paradigm campaigned by Henry Chesbrough offers a new way of thinking about and managing innovation (Chesbrough, 2003). Open innovation means that companies can

and should use external ideas as well as ideas and take internal as well as external paths to market. Open innovation emphasizes the role of other departments besides the internal R&D department, emphasizes R&D collaboration with outside organizations, emphasizes integration of internal and external knowledge, and emphasizes outside distribution to market (Chen & Chen, 2005).

Open innovation may show the advantage of free flow of new ideas. Through opening the internal R&D process to outsides such as users, suppliers, and even competitors systematically, innovation provides access to more ideas than could be developed in-house. Open innovation can speed innovation and reduce the uncertainty of technology and market. Open innovation may bring many benefits to the advancement of innovation capability and fuel growth. In today's hyper-competitive environment, no organization is capable of generating all the knowledge it requires for innovation in-house. By leveraging the discoveries of others, companies can produce spectacular results (Silverthorne, 2003).

The new mode of innovation also shows a new direction for Chinese enterprises to innovate indigenously. More and more enterprises in China are taking on the open innovation path. For Chinese Enterprises, this new innovation mode may be especially important. The internal innovation resources are inferior and insufficient obviously in Chinese enterprises. It is unable to compare the scale and intensity of R&D investments of Chinese enterprises with their multinational counterparts. Therefore it is more difficult to realize indigenous innovation by simply relying on internal resources. Moreover, Chinese enterprises face the erosions of closed innovation. The mobility of knowledge staff is frequent, the speed of knowledge creation and dissemination is getting quicker and venture capital has been not new in China. Therefore, the open innovation paradigm is not only the tendency in the developed countries it but also will become ubiquitous in Chinese enterprises.

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