Journal of Entrepreneurship & Organization Management

McGowan and Hu, J Entrepren Organiz Manag 2014, 3:1
DOI: 10.4172/2169-026X.1000e111

Editorial Open Access

Innovation Policy and Corporate R&D

Robert P McGowan[1]* and Kai Hu[2]

[1]Department of Management, Daniels College of Business, University of Denver, Denver 80210, USA
[2]College of Economics and Management, Jiangxi Agricultural University, Nanchang 330045, China

Innovation has always played a decisive role in economic and social development; it is the main source of economic growth and also the foundation of competitiveness [1]. Innovation ability is one of the most important factors to decide the competitiveness of an enterprise, region, and country. Sidney Winter [2] argued that the difference in competitiveness is because of innovation ability. All the sources of competitive advantage can be explained by innovation, all difference competitiveness can be illustrated by difference of innovation whether history or current. Porter's theory of national competitive advantage focused on technological progress and innovation. The core of national advantage is invention and entrepreneur [3].

The biggest developed country of world, The United States, enacted A Strategy for American Innovation: Securing Our Economic Growth and Prosperity in 2011, which pointed out that the future economic development and international competitiveness of USA depends on the ability of innovation, among the various roles of innovation. The private sector is a key link in the engines of innovation, and government plays the role of the support innovation system. Meanwhile, the largest developing country of world, China put forward Innovation-Driven Development Strategy in 2012, which pointed out that innovation of science and technology is the strategy support of enhancing social productivity and comprehensive national strength, to speed up the construction of national innovation system, and strive to build the technological innovation system which is the the main body.

Innovation is a kind of new combination of production factors, is the process by which individuals and organizations generate new idea and put them into practice. It means technological or practices that are new to a given society, and these technological or practices are being diffused in that economy or society, what is not disseminated and used is not an innovation. Innovation is fundamentally a social process.

Business is the major force to stimulate economic growth is the engine of national innovation. Business has the desire to be engaged in innovation and R&D because of its profit-seeking motive. But compared with businesses other daily operational management, the difference is that corporate innovation has a strong externalities and spillover effect. Invention and innovation or more general knowledge and information have some characteristics of public products, which are knowledge developed for specific purpose would easily overflow to be used for other purposes [4].

Spillover effect of corporate R&D can be divided into two forms. On the one side, corporate R&D activities can accumulate new knowledge and new technology, which can promote social development and enhance social welfare. We defined this kind of overflow as R&D's welfare spillover. For example, although some people do not buy Microsoft's products, but they can still obtain benefit because the Microsoft's products promote the progress of society. On the other hand, achievement of corporate business (new products, new technology, and new process) may diffuse to the outside of enterprise, and can be absorbed, imitated or transformed by the peer firms, which can improve competitiveness of the peer firms. We defined this kind of overflow as R&D's competition spillover. For example, competitors hired the R&D person of Microsoft, and can utilize Microsoft's software's R&D.

For R&D's welfare spillover, corporate R&D enhance social welfare; for R&D's competition spillover, corporate R&D improve competitiveness of the peer firms, which is helpful to strengthen competitive advantage of country or regional. So, government can benefit from corporate R&D activities, no matter what kind of spillovers.

In order to effectively solve the externality of corporate innovation and R&D, government needs to provide support to the enterprises engaged in innovation and R&D activities, to promote the enthusiasm of corporate innovation and R&D activities. Innovation policy is a series of policies for government to stimulate enterprise engaged in innovation and R&D activities.

There are many influence factors to corporate innovation. From the macro aspect, it includes education, science, infrastructure, social culture, market system and so on. For example, Strategy for American Innovation pointed out improving America's science, technology, engineering and math education to create a world-class workforce; strengthening and broadening American leadership in fundamental research; building a leading physical infrastructure which includes high-speed rail and next generation air transportation system; developing an advanced information and technology ecosystem. All of these can be regarded as the foundation of corporate innovation from the macro level, but should not belong to the category of innovation policy which directly aimed to promoting corporate innovation, otherwise the innovation policy will be all-encompassing, and this is not conductive to improve the pertinence of innovation policy. So innovation policy mainly refers to those policy instruments from micro level which can directly stimulate corporate innovation, different policy instruments have different target, orientation and function. We can analyze the different policy instruments from two aspects of innovation input and innovation output.

Corporate innovation input mainly includes capital and personnel. From the aspect of innovation input, innovation policy should provide capital and personnel support to corporate innovation. Capital is the biggest bottleneck and obstacles for most enterprises to engaged in innovation and R&D activities, so government should provide subsidies or funding for corporate innovation and R&D activities. In fact a lot of innovation policies implemented in many countries can be classified into this category, including fiscal subsidy, financing policy and preferential tax policy, etc. Fiscal subsidy means government provides direct financial support for corporate R&D activities, such as

***Corresponding author:** Robert P McGowan, Department of Management, Daniels College of Business, University of Denver, Denver 80210, USA, Tel: 303-871-4399; E-mail: rmcgowan@du.edu

Receved February 17, 2014; **Accepted** February 18, 2014; **Published** February 22, 2014

Citation: McGowan RP, Hu K (2014) Innovation Policy and Corporate R&D. J Entrepren Organiz Manag 3: e111. doi: 10.4172/2169-026X.1000e111

Small Business Innovation Research Program (SBIRP) of the United States provide a special fund for R&D of small and medium-sized enterprises. Financing policy refers to government provide guarantee, loan or other supports for enterprise R&D financing, such as Small Business Administration (SBA) of the United States guarantee for small business innovation financing. Preferential tax policies have different characteristics compare with direct fiscal subsidies. Fiscal subsidies generally occur before corporate R&D activities, which may cause substitution effect to enterprise's R&D input and unfairness in the process of implementation.

Personnel are another important factor of corporate innovation input. For improving the ability of corporate R&D staff, government should support construction of corporate R&D talent team through talent introduction, training and incentives. For example, China has launched the Plan of Overseas High-level Talents Introduction from 2008; government provided various aids to high-level talents for both state-owned enterprises and private enterprises.

Corporate innovation output mainly includes new product and intellectual property (IP). From the aspect of innovation output, innovation policy should provide support to enterprises for new product commercialization and IP protection, and it mainly include government procurement policy and IP protection policy. Government procurement policy is an important means to support corporate innovation in many countries. The United States is the first country to support corporate innovation by government procurement, which was successively formulated by the Buy American Act and Federal Acquisition Regulation, had great influence on the growth of new industries. More and more countries realize the importance of IP protection policy. American innovation strategy pointed out promoting ingenuity through effective IP policy, and must ensure innovators receive high-quality IP right. IP protection policy protects the exclusive rights of innovator, prevents enterprise innovation spillover, improves the yield of corporate innovation, and can greatly stimulate the enthusiasm of corporate innovation.

In sum, R & D and innovation need to look to support from within the corporation as well as external support. For countries seeking to be competitive in the global, it is an on-going process.

References

1. World bank (2010) Innovation policy: A Guide for Developing Countries. World Bank Publications.
2. Winter S (1984) Schurnpeterian Competition in Alternative Technological Regimes. Journal of Economic Behavior and Organization 5: 287-320.
3. Porter ME (1990) The Competitive Advantage of Nations. Harvard Business review.
4. Arrow KJ (1962) The Economic Implications of Learning by Doing. The Review of Economic Studies 29: 155-173.