

## Chapter 13

# The Effect of Business Characteristics on the Methods of Knowledge Protections

**Xu Bin**

*National University of Singapore, Singapore*

**Tan Kay Chuan**

*National University of Singapore, Singapore*

### ABSTRACT

*Intellectual property (IP) protection has been suggested to be essential in protecting innovation in product-dominant companies. However, with the development of service industries, the ineffectiveness in IP protection becomes manifest. Meanwhile, other knowledge protecting methods enable companies to maintain their competency without formal protection. This study examines the effectiveness of different means of knowledge protection. Specifically, business is classified according to companies' offering nature, serving mode and consider about their business hardware. The effectiveness of protection methods is analyzed among these business types. Interviews were conducted with senior managers of 39 companies in China and Singapore. It is demonstrated that the choice of knowledge protecting method does not depend mainly on whether a company provides products or services, but on how the company produces and provides its offerings. It is found that the core competency of companies largely affects their attitude on whether to protect their offerings. It is found that in weak appropriability regimes, companies apply for patents not for their knowledge protection function, but for other benefits, such as getting awards or tax reductions, and improving reputation among customers.*

DOI: 10.4018/978-1-4666-3613-2.ch013

## INTRODUCTION

### Innovation and Knowledge Protection

Knowledge has been recognized as the “overwhelmingly important productive resource” (Grant, 1997). For improving quality, creating new markets, reducing cost, and reducing environmental pollution, innovation and knowledge management is regarded as a driving force (Oerlemans, Buys, & Pretorius, 2001). It is suggested that “Innovation is the key element in providing aggressive top-line growth, and for increasing bottom-line results” (Davila, Epstein, & Robert, 2006). The importance of innovating ability has long been emphasized.

In the knowledge infrastructure, knowledge protection is considered essential to organizational capabilities (Gold, Malhotra, & Segars, 2001). Teece (1986) suggested that whether a firm could profit from its innovation is affected by complementary assets and appropriation. Following Teece, appropriation, innovating abilities, and complementary assets have been widely analyzed (Spencer, 2003; Colombo, Grilli, & Piva, 2006; McGahan & Silverman, 2006). It is clarified that “... when R&D investments do not pay off ... the innovation will not be realized” (van Ark, Broersma, & Hertog, 2003). The effectiveness of intellectual property protection (IP protection) is considered as a major factor affecting motivation and successfulness of innovations.

### The Emergence of Service Business and Ineffective IP Protection

Despite the recognition of IP importance, there are also debates about its effectiveness (Arundel, 2001). Especially since 1990s, the development of service industries has challenged the protection system. Before service industries flourished, researches on knowledge management and in-

novation were mainly focused on products. For instance, in 1986, Teece (1986) put forward the proposition that “manufacturing often matters”: innovating firms without manufacturing and related capacities may face problems, because imitation from competitors and cooperators would cause profit loss. However, it has been showed that services are becoming more important for modern business (CIA, 2008; Fitzsimmons & Fitzsimmons, 2004; John & Storey, 1998) and manufacturing is no longer a must have element in producing offerings.

Because service innovation has attracted more attention only since about a decade ago, theories for systematically developing service are still not mature (Aurich, Fuchs, & Wagenknecht, 2006; Berry, Shankar, Parish, Cadwallader, & Dotzel, 2006; Zhang, 2004; Nijssen, Hillebrand, Vermeulen, & Kemp, 2006; Tether, & Metcalfe, 2003; De Jong & Vermeulen, 2003). Bader (2007) suggested that “value creation is shifting towards service innovations. However, legal protection strategies still are a novelty in this emerging business field.” A recent paper (Hurmelinna-Laukkanen & Ritala, 2010) claimed that “service innovators cannot rely solely on intellectual property right strategies.” The effectiveness of different knowledge protection means has been examined (Bader, 2007; Blind et al., 2003; Brouwer, 1997). It is suggested that, applying formal protection may have more obstacles for process innovation and service innovation (Barracough, 2005). Informal methods are more commonly used. These studies illuminated that the nature of offering that company provides may influence the effectiveness of knowledge protecting method used.

Meanwhile, it has to be noted that nature of offering is not the only factor which may affect the effectiveness of IP protection. In order to identify the relationship between knowledge protection methods and business styles, an exploratory study is conducted. We do not only consider about the offering types, but also serving styles, business

27 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/effect-business-characteristics-methods-knowledge/75383](http://www.igi-global.com/chapter/effect-business-characteristics-methods-knowledge/75383)

## Related Content

---

### A Study on Occupational Health and Safety Practices on Construction Site Workers for Finding Discomfort Level

Suchismita Satapathy (2023). *International Journal of Social Ecology and Sustainable Development* (pp. 1-15).

[www.irma-international.org/article/a-study-on-occupational-health-and-safety-practices-on-construction-site-workers-for-finding-discomfort-level/326754](http://www.irma-international.org/article/a-study-on-occupational-health-and-safety-practices-on-construction-site-workers-for-finding-discomfort-level/326754)

### Public Sector Role in Sustainable Development: Rolling Back the State – A Game Changer to Sustainable Development

Onesmus Gichuru (2018). *Handbook of Research on Sustainable Development and Governance Strategies for Economic Growth in Africa* (pp. 149-159).

[www.irma-international.org/chapter/public-sector-role-in-sustainable-development/197589](http://www.irma-international.org/chapter/public-sector-role-in-sustainable-development/197589)

### Study on Labour Force in Romanian Agriculture

Maria Nica (2018). *International Journal of Sustainable Economies Management* (pp. 36-44).

[www.irma-international.org/article/study-on-labour-force-in-romanian-agriculture/202430](http://www.irma-international.org/article/study-on-labour-force-in-romanian-agriculture/202430)

### Fiscal Policy Effectiveness in the Tunisian Economy

Slah Slimani (2021). *International Journal of Sustainable Economies Management* (pp. 21-38).

[www.irma-international.org/article/fiscal-policy-effectiveness-in-the-tunisian-economy/298949](http://www.irma-international.org/article/fiscal-policy-effectiveness-in-the-tunisian-economy/298949)

### The Diabetes, Depression, and Alcohol Triad: Potential Impact on Community Development

Mark A. Strand and Donald Warne (2014). *International Journal of Social Ecology and Sustainable Development* (pp. 31-46).

[www.irma-international.org/article/the-diabetes-depression-and-alcohol-triad/112113](http://www.irma-international.org/article/the-diabetes-depression-and-alcohol-triad/112113)