ABSTRACT

Knowledge-based assets, intellectual property, and capital play a fundamental role in an enterprise’s competitiveness, especially in small knowledge intensive enterprises. Small knowledge intensive enterprises need to create new ways of operating in order to manage the intellectual and knowledge-based assets in their organizations more efficiently. Organizational knowledge and intellectual property can be protected, either formally via IPR, or informally via efficient knowledge management. Successful IP protection requires systematic intellectual property and knowledge management. Intellectual property protection via efficient knowledge management affects the entire organization rather than being just a separate task. It needs to be embedded in organizational work routines, practices, and processes as an overall operational strategy. When embedded in organizational work processes, IP protection and knowledge management become a continuous part of work routines and tasks in the enterprise, not a separate action.

Keywords: Intellectual Property, Intellectual Property Protection, Knowledge Intensive Enterprise, Knowledge Protection, Knowledge Sharing, Knowledge Transfer, Small Enterprise

INTRODUCTION

Small knowledge intensive enterprises has a fundamental role in global economy. In order to remain competitive, small enterprises need constantly create new knowledge. Small enterprises have certain advantages over larger corporate entities: they are able to respond quickly to changing market demand, they are organizationally flexible, and they often have efficient internal communications (Cordes et al., 1999; Mogee, 2003). As a result, small enterprises can more easily incorporate new working practices and processes into their operations and thus, be innovative. The purpose of intellectual property legislation is to provide incentives for innovation. However, small enterprises has difficult to utilize intellectual property rights (IPRs), especially patent protection due to possible patent enforcement costs. According to e.g. Lanjouw and Schankermann (2004) litigation is becoming increasingly difficult to avoid due to large enterprises’ strategic patenting behavior. This makes legal forms of protection, in other words, protection that is granted by (traditional) national Intellectual Property Rights (IPRs)
legislation, difficult for small enterprises to utilize. (Lanjouw & Schankermann, 2004; Coleman & Fishlock, 1998; Miles, Andersen, Boden, & Howells, 1999). The only sustainable competitive advantage for small enterprises is continuous innovation. This requires efficient knowledge management practices and processes and place where knowledge can be shared, stored and created. As mentioned, for small enterprises patent system does not offer incentive for innovation. Small enterprises need to create internally built processes that secure fast innovation cycle and also protect their embedded intellectual property.

The aim of this article is to examine the ways in which knowledge and intellectual capital is protected in small knowledge intensive enterprises and to discuss the factors that influence a small enterprise’s propensity to adopt processes and practices to secure their intellectual property and knowledge. The article makes recommendations as to why and how small enterprises can secure their intellectual property and knowledge. The study emphasises intellectual property protection and the development of knowledge management systems and processes that support knowledge sharing and creation, innovativeness, and knowledge protection. The analysis will focus mainly on intra-organizational activity.

The article starts with a short discussion on the role of IP protection in small knowledge intensive enterprises. The focus is on intellectual asset management strategy, intellectual property protection, knowledge creation, and transfer strategy. The main definitions and concepts are presented in this section. The first section also includes a brief description of the study sample and the methods used in the data collection and analysis. The second section discusses the methods, practices, and processes used by small enterprise managers in order to protect their embodied IP. Also, the value of these mechanisms in the process of intellectual property protection will be evaluated. Factors that might have an influence on an enterprise’s propensity to manage and protect their IP will be discussed. The section will end with a discussion of the different knowledge categories; in addition to examining the knowledge process cycle and its relation to intellectual property protection. The final section of the article summarizes the results of the study.

**RATIONALE OF INTELLECTUAL PROPERTY PROTECTION IN SMALL ENTERPRISES**

A great deal of enterprises knowledge is embedded in practise and is tacit from its nature. The importance of capturing and managing intellectual capital (intangible assets) has been acknowledged in several studies (e.g., Coleman & Fishlock 1999; Kitching & Blackburn 1998; Miles et al. 1999). However, the protection of knowledge has attracted very little attention among information systems and management researchers. The focus of the existing studies has been mainly on knowledge creation, knowledge acquisition, and knowledge sharing (Bloodgood & Salisbury, 2001; Liebeskind, 1996; Randeree, 2006). Small business and innovation researchers have investigated knowledge and intellectual property protection in small- and medium-sized enterprises (SMEs); focusing mainly on legal forms of intellectual property protection (IPRs) such as patents, trademarks, and copyrights. A central finding in previous research studies was the importance of the skills embodied in human capital: skills that cannot be protected through traditional, formal intellectual property protection (protection granted by national Intellectual Property Rights – IPRs). This intellectual capital is often only in employees’ heads and it is not externalized or formalized in any particular way. Since the mobility of qualified employees is rather high, the need to capture and protect embodied knowledge is important. A strong dependence on employees is perceived as a problem, especially in small enterprises which have not developed an overlap in knowledge base. (Kuusisto, Kulmala, & Pällysaho, 2005.) According to Teece (2000), the central role of knowledge management is to develop, capitalize on, and take advantage of intellectual
Analysis of Cyber-Attacks against the Transportation Sector
Brett van Niekerk (2017). Threat Mitigation and Detection of Cyber Warfare and Terrorism Activities (pp. 68-91).
www.igi-global.com/chapter/analysis-cyber-attacks-against-transportation/172291?camid=4v1a