

Chapter 100

Innovation Management Based on Knowledge: Analysis of Technology-Based Defense Companies

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ABSTRACT

The development of innovation management associated to knowledge management and business inter-organizational relationships based on project management is extremely important for good corporate governance and business performance. The interest of this chapter is to define the conceptual framework of everything mentioned above in technology-based companies. This chapter presents cases based on best practices for the development of innovation management, which is very present in small and medium enterprises with a market approach. This is the case of firms with a defense-related technology. The case study is about the innovation based on knowledge and research and about a technological and strategic view. On the other hand, economic inter-organizational relationships are also taken into account. An empirical analysis of 236 technology-based companies related to Spanish defense industry including a study about Knowledge and Innovation Management (KIM) as well as an assessment of its framework are also included.

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INTRODUCTION

In the last decades of the 20th century, a radical change occurred in the company's strategies. For companies to be able to survive in an increasingly competitive environment, they have to adapt and change both of their products and services. The adaption and change involves technological innovation, production and marketing of their products and services.

Innovation Management (IM) constitutes nowadays one of the main topics of research in the fields of economics and business. The interest of this proposal is to define the conceptual framework of the innovation management in technology-based companies. Innovation Management (IM) indicates some of the success factors in an economic sector, and how some companies working in that sector obtain greater levels of profitability. Technological Innovation (TI) is a differencing policy in industries where the critical mass to compete is very high. The introduction of a new technology after its invention is reflected in the use and creation of the necessary knowledge to compete or define a leadership. Technological Innovation (TI) is related to progress, growth through inter-organisational relationships and corporate governance practices, leading to a recent research about project management methodology.

In this paper the conceptual framework of innovation management is based on the following aspects: (1) Innovation based on knowledge management and research; (2) Business inter-organizational relationships based on project management; (3) All this leads to good corporate governance and can be very relevant in technology-based companies. This paper presents cases of, based on best practices for the development of innovation management, which is very present in small and medium enterprises with a market approach. This is the case of the defense-related technology.

The empirical analysis is carried out on a population of technology-based companies related to the Spanish defense industry. One of the key issues is to highlight technology is a factor of knowledge accumulation, Development and Innovation. Sharing knowledge among organizations using strategic alliances is very important for the transfer of technology. It is emphasized the knowledge transfer from defense-related technology companies to civil applications, called Dual Technology.

The activities of Research and Development (R&D) are considered to be one of the main sources of growth in business productivity. Yet numerous empirical studies show a great disparity among companies when it comes to benefitting from their innovative activities. However, these differences are explained by productivity, the difference in knowledge, and efficiency.

This paper will research cases about technology-based companies: (1) Aspects about market or environment, and elements of the company like structure, size, structural components, technical system (logistics, production system, etc). (2) Behaviour or dynamic aspects: factors which allow the system structure or business decision, sector of activity, system of objectives, decision-making process, system of power. (3) Strategic aspects: response of the firm to the environment. Strategy is developed through decisions, policies and plans which determine the competitiveness of the company. (4) Planning systems for Strategic Management, analysis of industrial structures and markets, studies of property structures and control of economic groups from participating companies and industrial strategies and policies to achieve adequate business competitiveness and a way to adapt to current economic changes. The purpose is to highlight the importance of collaboration between cases about technology-based companies related to defense and society through economic approach and knowledge transfer as a result of R&D&I (Research, Development and Innovation). In essence, the development of innovation management associated to knowledge management and business inter-organizational relationships based on project management is extremely important for good corporate governance and business performance.

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