Chapter I
Measuring and Reporting Technological Capital in Companies

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ABSTRACT

The chapter addresses the importance of knowledge-based resources proposing indicators to measure and report technological capital in companies. The first part of the chapter develops a conceptual framework to analyze organizational learning and its outcomes. It focuses on the strategy perspective of organizational learning, addressing its ontology, contributions, and problematics. The second part is focused on a particular type of knowledge—the technological capital—that is institutionalized knowledge in the form of technologies. This section proposes a map for the different types of technological capital of companies: idiosyncratic, core, ancillary, and compulsory. The chapter shows the results of a case study with European firms measuring and reporting technological capital. Finally the chapter summarizes main conclusions for management.

INTRODUCTION

Companies are aware that knowledge is their most valuable and strategic resource in the present business environment. Managers know they have to manage the process of learning and measure its outcomes, knowledge-based organizational resources, if they want to be competitive. However, most of the companies neither have knowledge management models nor measurement tools to help them manage better their learning outcomes, like skills, knowledge, expertise and competences. It is therefore important that they know how international pioneer learning organizations have managed and measured their organizational knowledge.

This chapters is structured into four sections. The first section proposes a conceptual framework to analyze organizational learning and its outcomes, such as knowledge at individual, group, organizational and interorganizational level, respectively. The second section is focused on knowledge embedded in organizational structures and processes: the structural capital. It studies the different forms of organizational structural capital of companies: idiosyncratic, core, ancillary and compulsory. Section three shows the results of a case study done in pioneer learning organizations in Europe regarding knowledge measuring and reporting. It analyzes the main indicators used for quantifying the knowledge embedded in the firm. Finally, the last section shows the main results and implications for the management of knowledge drawn from this paper.

THE LEARNING PROCESS IN THE COMPANY

Introduction

The Resource Based View of the Firm (RBV) will help us to explain how important knowledge-based intangible resources are to reach and maintain a sustainable competitive advantage. This view of the firm studies the way to employ and combine strategic organizational resources so that the competitive advantage becomes sustainable as well as the nature of income-generating resources and the origins of heterogeneity. Later we will move to the literature on Organizational Learning to tackle key issues arising out of the discipline today, such as how to transform knowledge at individual level into knowledge at organizational level as a result of the learning process in the firm.

Resource Based View of the Firm

Introduction

This section analyses the main strategic implications from the Resource Based View of the firm. This theory explains how and why companies reach a sustainable competitive advantage and are able to maintain it. The underlying idea is to consider the company as a cumulus of unique resources of different nature, and so move away from the traditional business perspective to analyze the companies according to their market activities (Barney, 1991, 2001; Grant, 1991, 1997; Hamel and Prahalad, 1994; Penrose, 1959; Peteraf, 1993; Teece, 1980, 1982; Wernerfelt, 1984).

The Competitive Advantage in the Company

It is necessary to own, identify and exploit strategic resources to be able to develop a strategy that makes competition possible on the basis of these resources. Companies are therefore very interested in identifying, getting to know and analyzing their resources and abilities to find out which of them are superior or different. They can carry out a unique activity or an activity that is superior to the one of their competitors and at the same time achieve better results (Barney, 1991).

Strategic resources can be studied from two perspectives: the first one points out that organi-

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