Chapter 2
Knowledge in Universities and Research Centres: Proposed Indicators for Measuring Relational Capital

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ABSTRACT

The knowledge economy and society is based on the creation, use, and dissemination of knowledge. There is no doubt universities and research centres play a vital role in the knowledge creation, application, and transfer processes. Against an economic backdrop such as the current one, namely a financial crisis of international proportions, cuts in university and research and development programme funding and the implementation of the Bologna Process, this strategic resource must be suitably managed. In order to achieve this, it is necessary to measure existing knowledge-based resources (intellectual capital) and draw up knowledge maps. This chapter proposes a conceptual framework for analysing relational capital in universities and research centres and presents indicators for measuring each of its components.

INTRODUCTION

In recent years we have witnessed an international crisis that is affecting, to a greater or lesser extent, the economies of every country on earth. The media is full of stories about important structural reforms being proposed by governments, the financial rescue of countries, falling stock market indexes, company closures and staff layoffs, etc. Companies and organisations are increasingly aware of the importance of people and what they know (their knowledge) for dealing with economic scenarios as complex as those we are seeing today and of individuals with a capacity for long-term vision and leadership. But knowledge is not only found in the individuals within companies and organisations, but also in the relationships these individuals develop.
among themselves both inside and outside the company. There is also the knowledge present within the organisational structures and routines, in the company’s policies and in its organisational culture, among others.

**Intellectual Capital as a Strategic Knowledge Economy Resource**

A fundamental question within the Strategic Management field is why do some companies gain a long-term competitive advantage and others do not. Strategic Management literature has made numerous efforts to construct coherent frameworks that synthesise the different contributions. Among these attempts at synthesis mention must be made of the resources and capacities theory. This theory integrates a set of contributions the focal or starting point of which is the heterogeneity of resources within the companies and their imperfect mobility, which helps to explain the sustained differences in the profitability observed. Intangible resources, such as knowledge, present these characteristics (Crook et al., 2008; Peteraf and Barney, 2003).

We can analyse the knowledge that exists within companies and organisations, in other words their intellectual capital, from a static perspective. This intangible resource corresponds to those knowledge-based resources which, despite contributing towards the creation of value within the company, are not reflected in its economic-financial statements. These include, for example, the knowledge of the employees or the value to the company of a relationship with a strategic partner.

At this point it is convenient to refer to the typology of intellectual capital most readily accepted in literature in order to study its components. This enables us to differentiate between human capital, relational capital and structural capital. The essential parts of human capital are the skills and knowledge of the company’s employees. The scope of human capital is internal and resides in the mind of the employee, which makes it difficult to codify.

Relational capital refers to the flows of knowledge between individuals within a network and, therefore, includes the knowledge present in the relationships established with the environment, both internal and external. The first group would contain the relationships between company employees, managers and shareholders. The second group would consist of the relationships developed by the company with customers, suppliers, competitors, public administrations and other interest groups.

Finally, structural capital represents the knowledge that remains behind in the company when the employees have finished their working day, in other words it is that knowledge that does not depend on certain individuals or specific relationships but belongs to the company. An example of this knowledge would be organisational routines, strategies and organisational culture, among others.

Managers must know what knowledge types exist in their companies and organisations and where each of these is located. To ensure this it is necessary to measure the existing intellectual capital within companies, draw up organisational knowledge maps and compile intellectual capital reports.

Since its inception, intellectual capital literature has mainly focused on the study of intellectual capital within companies. However, the work being done on intellectual capital in universities and research centres is still negligible. In the following section we study the importance of universities and research centres as creators and disseminators of knowledge in the current economic environment.

**The Role of Knowledge in Universities and Research Centres**

The European Commission makes special mention (2006, 2008) of the strategic role played by the knowledge triangle (education, research and innovation) in regional economic and social development. Universities and research centres