Chapter 10
Measuring Knowledge Assets within Organizations: An Individual-Level Perspective

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ABSTRACT

The purpose of this chapter is two-fold in that it seeks: (1) to develop an intellectual capital measurement system that specifically focuses on the knowledge assets possessed by company’s employees, and (2) to explore the effect that intellectual capital dimensions have on two individual job attitudes such as job satisfaction and turnover propensity. The proposed model has been developed based on the data gathered on a two-year survey on all the employees of a leading company in the Italian food product market. The final sample comprises 1,117 usable observations. Results suggest that the knowledge assets of an organization can be measured, at the employee level, by focusing on two intellectual capital dimensions, namely human capital and structural capital. Also, human capital and structural capital have been found to positively affect individual job attitudes such as job satisfaction and low turnover propensity. Specifically, structural capital fully mediates the effect of the human capital dimension on individual job attitudes.

INTRODUCTION

The recent instability of the business environment that we have been witnessing worldwide has confirmed focused attention on knowledge as a dominant source of competitive advantage. Numerous models for the measurement and management on knowledge assets and intellectual capital have been developed in the past decade (e.g. Edvinsson & Malone, 1997; Sveby, 1997; Roos et al., 1997; M’Pherson & Pike, 2001), however further research is still needed in order to refine existing measures, to further explore the relations between knowledge assets and company performance and to propose new management tools that are able to capture and monitor over time the specificity of a company’s knowledge assets dynamics (Pike & Ross, 2004).
Particular attention has to be paid to the level of analysis. As a matter of fact, the models that so far have been proposed in the literature mainly adopt an organizational perspective in the measurement of knowledge assets and intellectual capital, however, scholars have suggested that the creation and the process of development of these intangible resources is primarily grounded on the actions and capabilities of the individuals that operate within the company (Roslender et al., 2006; Roslender & Fincham, 2001). Coherently with the resource-base perspective (Barney, 1991, 2001; Rumelt, 1984), employee competences, knowledge and know-how, unlike tangible capital, are of strategic importance for the company because they are resources that are difficult to imitate and transfer. With the advent of a knowledge society (Drucker, 1993), the abilities, competences, motivation and commitment of employees, represent the primary strategic resource that companies must learn to manage, in order to achieve and maintain a competitive advantage (Quinn, 1992).

This said, even if employees are highly skilled and trained, their contribution to the firm success depends on their willingness to perform. For this reason employee satisfaction, motivation, and commitment are important components in the management of knowledge assets (Lepak & Snell, 1999). Also, employees have a price on the labour market because they are valuable to other firms, and, more important, they are transferable. Firms do not own their human capital (i.e. employees skills, competences, capabilities, etc.), because it is embodied in the employees who are free to move from one firm to another (Becker, 1964; Hatch & Dyer, 2004). Low employee turnover therefore, represents an important element in the firm’s value creating process in that protects the firm from loosing key skills, knowledge, and expertise (Arthur, 1994; Hudson, 1993). On the other hand, too low turnover may suggest that there is no renewal in the organisation, which may have a negative impact on organizational performance as well (Huselid, 1995).

In this context, management tools for the measurement and analysis of employees’ knowledge assets and their impact on individual work attitudes are invoked. If an organization has precise information of the knowledge assets created by employees and their impact on employees’ retention and satisfaction, it will enable the organization to better plan its investments for the process of value creation.

In this chapter we firstly propose an intellectual capital measurement system that specifically focuses on the knowledge assets possessed by company’s employees. Secondly, we explore the effect that intellectual capital has on two individual work attitudes such as job satisfaction and turnover propensity.

The use of the single employee as the unit of analysis is unique when compared to other empirical studies present in literature (Youndt & Snell, 2004; Serrano et al., 2003; Bollen et al., 2005). It also allows more reliable measurement in terms of the dimensions of intellectual capital and their relations to individual work attitudes. The measurement of the intellectual capital possessed by company’s employees may support managers in the accounting and performance management field to obtain useful information regarding an intangible resource that has strategic relevance for the activity and the survival of the company. Therefore it would be possible to plan wiser policies and strategic choices on the basis of that information (Danish Ministry of Science, Technology and Innovation, 2003). Also, the model we propose could help the company to show the market information about the state and development of its knowledge assets, allowing it to obtain from the market a real valuation of its assets (material and immaterial) which couldn’t be given through the traditional economic-financial reports (Hunter et al., 2005; Marr et al., 2003).