

## Chapter 8.8

# Measuring and Managing Intellectual Capital for both Development and Protection

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### ABSTRACT

This chapter considers the strategic management of intellectual capital, balancing the need to develop knowledge assets with the need to protect them. In making more strategic decisions, metrics on the level of intellectual capital and degree of knowledge management necessary to compete in an industry are required, as are those on the threat from competitive intelligence activity. The authors develop the case for appropriate metrics that accomplish these purposes, noting both potential and limitations. The authors also consider alternatives, additional data that could contribute to the usefulness and understanding of the core metrics, and provide suggestions for further research.

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### INTRODUCTION

The study of intellectual capital (IC) and its close cousin knowledge management (KM) has always carried an implicit assumption that more development of knowledge assets is unambiguously for the better. The case has been built on conceptual and empirical studies often limited to individual firms or a small group of firms. As a result, much of what we know about managing intangible assets is both very specific to a given firm or situation and very much dependent on highly specific, often internal data about such assets.

While such approaches have been invaluable in terms of defining the field and identifying the nature of the critical knowledge assets comprising an organization's intellectual capital, there is a definite shortage of more broadly applicable scholarship. There has also been a lack of any

question whether the efforts toward developing IC are actually worth the effort. What level of IC development is optimal? Is investment in the biggest information technology (IT) or firm-wide knowledge-sharing systems right for all firms in all circumstances? Should all proprietary knowledge be fully shared with collaborators? What conceptual and empirical guidelines do we have to begin to answer such questions?

This chapter addresses some of these issues, looking at a broader view of not only measuring intellectual capital but also acting on the results. In order to gauge whether adding to IC through KM initiatives actually makes an impact on competitiveness and financial results, such a broader perspective is necessary and is an important step towards teasing out the actual relationships underlying these questions.

## **BACKGROUND**

As this chapter blends concepts from several different but related fields, some definitions are probably in order. For the purposes of this chapter, we employ the following terminology:

- Intellectual capital refers to the stock of knowledge assets in the organization. These will be defined more precisely in the discussion, but include the firm's intangible assets. In addition, we include phenomena such as data and information that typically don't rise to the level of "knowledge" in some applications. As they are useful, informative, and have potential to become "knowledge", they are included as knowledge assets or intellectual capital in this chapter.
- Knowledge management is the practice of administering this intellectual capital. Most KM applications seek to increase the stock of IC. The field of KM includes numerous tools for better management and growth of

knowledge assets, from simple apprenticeship programs to massive IT installations for codifying knowledge and/or installing expert identification systems. KM can also grow IC by extending the system to include more participants, particularly by gathering from and sharing with collaborators (usually, again, through IT systems).

- Competitive intelligence (CI) has to do with organized efforts by firms to uncover competitors' proprietary knowledge assets and other pertinent information, then subjecting it to analysis, allowing better decision-making. Although CI has aspects of knowledge management in it (gathering and analyzing knowledge assets related to a competitor), we are more concerned with the threat it poses to firms managing their own knowledge. In other words, we are looking at the number and level of CI activities arrayed against an organization.

Intellectual capital is a relatively young discipline but incorporates a long-standing interest in measuring intangible assets into its approach. The basic concept is that softer knowledge-based assets can be identified, measured, and managed in much the same manner as hard knowledge assets such as those formalized in patents, copyrights, and so forth (hence the clear echoes of "intellectual property" in our adoption of the "intellectual capital" terminology). These softer knowledge assets include fuzzier, harder-to-define intangibles such as know-how or social capital. Early work in the field defined and identified these knowledge assets (Stewart, 1997), specifically breaking them down into the now well-accepted categories of human capital (HC), structural capital (SC), and relational (sometimes termed collaborative) capital (RC) (Bontis, 1999; Edvinsson & Malone, 1997). Human capital tends to focus on job-related knowledge, what individuals know about performing their day-to-day tasks, whether on the line, in service delivery,

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