ABSTRACT

How to acknowledge, manage and measure intangible strategic resources embedded in organizational settings—such as intellectual capital—has been a widely discussed topic during the last two decades. However, when referring to unique organizational forms such as family-owned or controlled firms, the topic is understudied. Considering that approximately one third of S&P 500 are family-controlled firms—i.e. DuPont—, which have survived beyond a lifetime, the author asks herself how these long-lasting family businesses managed to balance the strategic and parallel creation, development and use of their intellectual capital both at the family and business levels in order to support growth and regeneration. She introduces the ICFB-Family Wealth matrix in order to describe their findings.

Keywords: DuPont, Family Firms, Family Wealth, Intellectual Capital, Intellectual Capital in Family Businesses (ICFB), Strategy

INTRODUCTION

Intellectual Capital is one of the key-success factors a multinational company has to care about in the new economy. And, although much has been said about how to value, measure and analyze intangible assets, not many authors have focused their efforts in determining how the strategic use of intellectual resources could leverage not only the firm productivity and owners’ reports, but also its people’s creativity, innovation and well-being.

This chapter discusses how the strategic administration of these intangible resources could become a sustainable competitive advantage over time, making a company achieve market dominance and a leading position in the industry. We analyze the DuPont Case, a family-controlled business, and examine how the family background provided a set of qualitative resources that impacted (and interacted with) other assets in the organization, creating a unique way of doing and viewing things (e.g. initiatives, values and conduct policies).

How long-lasting family firms such as DuPont managed to balance the strategic and parallel creation, development and use of their intellectual capital both at the family and business levels in order to support growth and regeneration is our main question. Three
propositions were generated and summarized in the ICFB-Family Wealth Matrix we introduce here. We put forward the idea that family firms tend to move along the different quadrants, depending on their “family first” or “business first” focus, intending to find an equilibrium and stability that could help them outlive and outperform beyond a lifetime.

**Intellectual Capital and its Strategic Use**

The field of intellectual capital (IC), as well as the tools and models in order to manage, transfer and develop knowledge, has experienced a breakthrough during the last twenty eight years—since Itami’s first publication (1980)—, increasing the current level of interest in measuring and accounting IC. The latter, has been basically due to the implications IC has on the strategic attainment of core business objectives, as well as by the role it plays when referring to valuation of the firm’s market value. Measuring and accounting for IC has become a main objective for researchers and practitioners due to the heavy flows of information firms receive from internal and external sources. Environmental changes, global trends, internationalization of firms (which push further the compatibility/comparability of accounting standards), and the creation of new business models have made IC a valued resource not only in the knowledge-information businesses (hi-tech firms), but also in the brick and mortar ones.

Knowledge is power, and when referring to intellectual resources, IC means “competitive advantage”. The reason is simple: it translates into financial performance and impacts the firm’s market value. In fact, differences between firms, including variations in performance, may represent differences in their ability to create and exploit their internal resources and capabilities (Penrose, 1959; Andrews, 1971), including intangible assets such as IC. Special capabilities of organizations for creating and transferring knowledge are being identified as a central element for organizational advantage.

Indeed, from a perspective of the value-added, intellectual capital brings value to the corporation in two ways: strategic position and financial/economic value (Sullivan, 2000).

According to the resource-based view of the firm (RBV), a firm’s endowment of resources is what makes its competitive advantage sustainable in time, stressing the importance of intangible resources as a key to sustainability (Wernerfelt, 1984; Rumelt, 1984; Barney, 1996; Itami, 1987). Going further, the intellectual capital-based view (ICV) of the firm (K.K. Reed et. al. 2006), being an elaboration of Leonard-Barton’s (1992) knowledge-based view, and grounded on RBV, seeks to explain the hidden knowledge based dynamics that underlie a firm’s value focusing on the stocks and flows of knowledge capital embedded in an organization.

To acknowledge and measure IC and its direct associations with financial performance (Youndt et. al., 2004)—based on ICV—, we have to be clear on its structure/design. In order to do so, next section analyzes the different forms of IC and its components when referring to the business arena.

**Forms of Intellectual Capital**

A firm’s intellectual capital consists of the unique collection of intangible resources, and their transformations and interrelationships (Bontis, 1999; 2001; Bueno et. al, 2004). Edvinsson and Malone (1997) define IC as a two-level construct: human capital and structural capital. According to them, human capital is the knowledge created by, and stored in, a firm’s employees, while structural capital is defined as the embodiment, empowerment and supportive infrastructure of human capital. They then divide structural capital into organizational capital and customer capital, being them defined as:

1. **Organizational Capital:** Knowledge created by, and stored in, a firm’s information technology systems and processes, that speeds the flow of knowledge through organizations;
An Effective Solution to Regression Problem by RBF Neuron Network
Dang Thi Thu Hien, Hoang Xuan Huan and Le Xuan Minh Hoang (2015).
www.igi-global.com/article/an-effective-solution-to-regression-problem-by-rbf-neuron-network/133605?camid=4v1a