European Management Journal 33 (2015) 322–331

Contents lists available at ScienceDirect

European Management Journal

journal homepage: www.elsevier.com/locate/emj

Top management team's intellectual capital and firm performance

M. Carmen Díaz-Fernández [a], M. Rosario González-Rodríguez [a, *], Biagio Simonetti [b]

[a] University of Seville, Spain
[b] University of Sannio, Benevento, Italy

ARTICLE INFO

Article history:
Received 28 November 2014
Received in revised form
3 March 2015
Accepted 18 March 2015
Available online 3 April 2015

Keywords:
TMT
Upper Echelon Theory
Intellectual capital
Corporate strategy
Moderator effects

ABSTRACT

Intellectual capital (IC), which is frequently associated with firm performance, is an organisational intangible asset, and is commonly categorised into three core components: human, structural, and relational capital. By integrating the Upper Echelon Theory and the Resource-Based View of the firm, this paper aims to study not only the net effect of TMT diversity in human capital on performance but also the moderator effect of corporate strategy (Product and International diversification) on performance. The research focuses on a longitudinal study for a sample of multinational enterprises from diverse industries (trading, service, finance, and technology) whose headquarters are in Spain. The study contributes towards the comprehension of the complexity embodied in the Check relation strategy firm decision, TMT's IC and firm performance. This paper answers the call to explore new causal relations that influence firm performance that can therefore help managers to adopt the best decision-making strategies, and to shed light on the inconsistent and inconclusive results derived from the literature.

Introduction

Intellectual Capital (IC) is considered an appropriate source of sustainable competitive advantage as well as the way through which technological development and economic growth are run (Hayton, 2005; Rehman, Rehman, Rehman, & Zahid, 2011). Hence, IC is currently identified as an essential intangible asset in business, especially in those sectors of industry characterised by their highly intensive knowledge capital and advanced technology. Moreover, IC can be used to enhance an organisation's success (Brooking, 1997), and to encourage organisational benefits, such as innovativeness, creativity, competitive edge and value creation (Bontis, Chua, & Richardson, 2000; Hong, Plowman, & Hancock, 2007; Marr, 2008; Perk, 2005). Indeed, as noted by Brooking (1997), IC at an appropriate level could potentially improve corporate performance. In support of IC firm advantages, Hayton (2005) showed that, by controlling IC, it is possible to change the perceived risks and rewards associated with managerial actions in order to provide firms with better possibilities to penetrate new markets, create better products, and to earn first movement advantages, particularly in high-technology stock.

A considerable part of organisational knowledge is embodied in the organisational IC (Edvinsson & Malone, 1997) that plays a relevant role in the Top Management Team's decision-making. Along the same lines, Sullivan (1999) highlights the "brain power" yield in the TMT's IC. Previously, Drucker (1974) defended the vital role played by managers in firms, and Hambrick and Mason (1984) argued that organisations are a reflection of their top managers, and highlighted the great power of the dominant coalition in the formulation and adoption of the best organisational strategy in order to accomplish a high level of corporate performance. In accordance with the above authors, Raja Adzrin, Abu Thahir, and Maisarah (2009) suggested that enterprises could gain and retain a competitive advantage when they have great human talents, major capabilities, and boundless innovation and creativity. Indeed, the argument based on the influences that IC has on entrepreneurial performance is consistent with the Resource-Based View theory, which advocates that an organisation should identify and manage their resources (tangible and intangible) effectively to attain higher performance (Kristandl & Bontis, 2007; Lewicka, 2011).

In accordance with previous arguments, the present paper considers that the IC of a firm's TMT should be properly managed and applied in order to instil innovativeness, thereby promoting value creation and enhancing competitive advantages. These criteria are critical for companies to improve performance, sustain profitability, and keep pace with the competition, particularly in

* Corresponding author. Faculty of Tourism and Finance. Avda San Franscisco Javier s/n Sevilla, 41018 (Spain). Tel.: +34954557488; fax: +34954551612.
E-mail address: rosaglez@us.es (M.R. González-Rodríguez).

http://dx.doi.org/10.1016/j.emj.2015.03.004

unpredictable economies (Abdullah & Sofian, 2012). Organisation competitiveness requires the skills, knowledge and capabilities of top managers. However, measurement of the influence of the TMT's IC on firm performance is not an easy task since many studies in the Upper Echelon Literature have achieved inconsistent and inconclusive results. Those contradictory results can be explained by the fact that the majority of studies to date have taken into consideration only the main effects of TMT attributes on firm performance, and have avoided the organisational internal complexity and the environmental external complexity. This paper strives to ascertain not only the marginal effect of TMT diversity on performance but also the moderator effect of TMT diversity on the relationship between corporate strategy and performance. To this end, TMT demographical traits are used as proxies of the human capital dimension of IC, while Product and International diversification are used as proxies of corporate strategy. TMT diversity is associated to the skills and capabilities of decision makers (Carpenter, 2002). However, diversity in a TMT appears as a countervailing force. On the one hand, greater diversity might lead to more internal conflict, which implies less effective decision-making and lower firm outcomes. On the other hand, diversity enables top managers to identify the environmental opportunities and threats in order to formulate the most accurate strategies thereby boosting firm performance (Allen, Dawson, Wheatly, & White, 2008).

The research questions of this paper are: Does the intellectual capital diversity of a TMT influence firm performance?; Does corporate strategy (product and international diversification) always lead to a greater outcome for the firm?; In the presence of high complexity in the strategy of decision-making for product diversification, does the intellectual capital diversity of a TMT improve the influence of the strategy on performance?; and, In the presence of high complexity in the strategy of decision-making for international diversification, does the intellectual capital diversity of a TMT influence the binominal relationship between strategy and performance?

The paper advances the literature by integrating the Upper Echelon Theory with the Resource-Based View of a firm and presents the following innovative aspects: (1) the paper is the first study to analyse the moderator effect of TMT diversity as a proxy of IC when firms follow complex strategies towards product and international diversification. (2) It is one of the first studies to use a Spanish industrial context: this scarcity of papers based in the Spanish context is probably due to the legal restrictions imposed by the Spanish Law LORTAD which leads to difficulties in gathering information on all members of the Top Management Teams. (3) A longitudinal study has been applied in order to capture the influence of TMT diversity on performance over time, as required from the recent literature trends.

The paper is structured as follows. The first section includes a review of prior research on the main topics: TMT diversity, international and product diversification, firm performance, conceptual links between these issues; and the research model supported by the literature review. The second section presents the research design and methodology on which the study relies. The third section discusses the results accomplished. Finally, in the fourth section, a general conclusion is drawn, certain limitations are recognised and managerial implications and future research avenues are proposed.

Theory and hypotheses

TMT diversity and intellectual capital

The literature contains numerous definitions of IC (see Brooking, 1997; Edvinsson & Malone, 1997; Roos, Roos, Edvinsson, & Dragonetti, 1998; Stewart, 1997; Youndt, 1998) due to the categorisation of the assets that comprise this issue (human capital, intellectual property, relationships with external stakeholders, organisational structure, information systems, etc.) (Hayton, 2005). Furthermore, IC has traditionally been categorised into three components: human, structural, and relational capital (Marr, 2008; Roos, Pike, & Fernström, 2005; Sullivan, 1999; Tayles, Pike, & Sofian, 2007; Wall, Kirk, & Martin, 2004). These categories include: Human capital, which includes knowledge, professional skills and experience, expertise, educational level, and creativity of employees; Structural capital, which includes innovation capital, databases, software systems, distribution networks, organisational charts, corporate culture, strategies, and policies; and Relational capital, which includes marketing channels, customer relationships, relationships with suppliers, customer loyalty, governmental and industrial networking, intermediaries, and partners (Abdullah & Sofian, 2012; Bransing, Leenders, & Wijnberg, 2012).

The IC notion applied in this research is based on that of Roos et al. (1998): "all non-monetary and non-physical resources that are fully or partly controlled by the organisation and that contribute to the organisation's value creation", which supports the results attained in traditional IC taxonomy. This paper is focused on the first dimension of the three components of IC: human capital.

Further to establishing conceptual clarity between the notion of IC and its dimensions, it is necessary that the distinction of IC components as stocks of knowledge and dynamic capabilities are recognised by organisations in order to create value, and to exploit this resource (Hayton, 2005). These arguments are consistent with approaches in the literature such as the hierarchical view of resources and capabilities (Nelson & Winter, 1982), the notion of potential versus realised capabilities (Zahra & George, 2002), the theoretical model of intangible resources (Hall, 1992, 1993) and Upper Echelon Theory (Hambrick & Mason, 1984).

As mentioned above, this paper focuses on Human capital, which refers to knowledge, skills, and abilities of employees. Human capital as the first dimension of IC is expected to be positively associated with entrepreneurial behaviour, which has a significant influence upon this organisational behaviour and is considered to be the most organisational resource of a firm (Hayton, 2005). Due to the above arguments, the research model is supported by the Upper Echelon Theory created by Hambrick and Mason (1984). These researchers state that TMT cognitive resources and values exert significant influence on their strategic decision-making through observable TMT characteristics, such as their age, education, and managerial experience. In addition, many researchers have suggested that these TMT characteristics are associated with firm success (Chandler & Hanks, 1994; Cooper, Gimeno-Gascon, & Woo, 1994; Honig, 1998; MacMillan, Zemann, & Subbanarasimha, 1987; Stuart & Abetti, 1990) due to the influence of human capital upon decision-making processes. Greater cognitive resources not only aid problem identification, formulation, and problem solving in the best way (Bantel & Jackson, 1989) but also increase the range of alternative problem solutions, the combination of information, and hence, TMT creativity. In this way, it is possible to find in the literature empirical support for the relationship between TMT demographical traits, such as education, intelligence, cognitive style, and creativity (Amabile, 1983; Oldham & Cummings, 1996; Woodman & Schoenfeldt, 1989), and innovation, corporate strategy, and firm performance (Bantel & Jackson, 1989; Kimberly & Evanisko, 1981; Rogers & Schoemaker, 1971; Wiersema & Bantel, 1992). In short, the influence of TMT demographical characteristics upon the organisational behaviour and therefore upon firm performance will be significant, as noted by Cyert and March (1963), mainly due to their position as key decision-makers and members of the 'dominant coalition', the essential organisational