Knowledge Assets' Moderating Function in The Link Between Financial Success and Intellectual Capital

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Abstract

Ten years ago, the World Bank and the International Monetary Fund (IMF) adopted the idea of "good governance" as a set of governing principles to help them achieve their goals in the member countries of each organization. Presently, these establishments are experiencing increasing demands to uphold similar degrees of transparency, engagement, and accessibility. This paper examines the challenges encountered by these organizations and evaluates the tactics they have employed to facilitate the exchange of information and establish connections with non-governmental organizations (NGOs). This paper investigates the particular challenges faced by these institutions. This paper argues that conducting an investigation into reforms pertaining to the constitutional requirements, decision-making process, balance of stakeholder rights, and expertise and knowledge of the World Bank and the International Monetary Fund (IMF) is essential for promoting "good governance" at these institutions. Furthermore, this study argues that it is crucial to examine any changes to the proficiency and expertise of the IMF and World Bank in order to foster the advancement of "good governance" inside these organizations. All of our rights are safeguarded and maintained in reserve. Elsevier Science business, Ltd. was founded in 2000, taking its name from its parent firm.

Introduction

Since the year 2000, several aspects of human existence have improved. As a result of success in other areas, the way businesses are conducted has also altered. The rise of intangible resources is making the digital era more difficult to navigate. Globalization has enhanced business competitiveness by allowing resources, both real and intangible, to flow freely. Businesses must now be more competent, efficient, and imaginative when establishing quota-free zones in the context of the World Trade Organization. The limited physical and financial resources known as

components of production—land, labor, capital, and enterprise—were critical to a company's capacity to prosper throughout the industrial revolution. As a result of the paradigm shift from the manufacturing to the knowledge era, key performance indicators and critical success factors have also changed. The importance of knowledge-based resources in acquiring and retaining a firm's competitive advantage has increased due to global economic issues. This is due to the economy's shift away from labor and toward information. In the late 1990s, the concept of intellectual capital (IC) became increasingly popular, and some academics, like Bontis (1998) and Sullivan (1999), focused their research efforts to investigating this topic. As a result, the concept of the IC emerged as a combination of skills and knowledge that, without a doubt, may give a corporation with a long-term competitive advantage (Roos & Roos, 1997; Sullivan, 1999). Over the last century, the process of producing and using knowledge has increased labor productivity by about 50 times (Steele, 2013). In order to establish and sustain a competitive advantage, businesses are now focusing on investing in intellectual capital (IC) and acquiring knowledge assets (KA). According to Cabrita and Vaz (2005), the growth of IC is the primary force maintaining the continued expansion of national and worldwide knowledge economies. These days, a company's success may be measured by its innovation and efficiency, which are aided by the careful management of both visible and invisible assets like IC (Xinyu, 2014). IC is recognized as a critical corporate asset that influences the strategic success of the organization. Improved IC utilization is required for the organization to produce value, and different sectors have varying effects on financial performance when it comes to IC efficiency (Joshi et al., 2013). As a result, as the information economy increases, users must increasingly analyze and identify IC for effective administration (Cahill & Myers, 2000). According to several researchers (Jordo & Almeida, 2017; Sardo & Serrasqueiro, 2017; Stewart, 2007; Sveiby, 1997; Wood, 2003), as the knowledge economy becomes the dominant form of commerce, enterprises will rely largely on the performance of IC for development and value maintenance. In this rising knowledge economy, the purpose of company is success rather than survival.

According to Porter (1990), organizations can achieve success by differentiating their products from those of their competitors or by becoming cost leaders, which entails cutting product prices. As a result, the IC provides the organization with a competitive advantage as well as uniqueness, which promotes financial performance (Jordo & Almeida, 2017; Sardo & Serrasqueiro, 2017). As a result, the majority of academics feel that excellent management of

intangibles, especially the IC, is likely to provide a firm with a competitive edge. Codified knowledge assets (KA) like as R&D investments, patents, copyrights, customer lists, software, licensing, product development, items in pipeline, and business combinations are declared in annual reports. These assets are seen to be the major drivers of strategic growth and profitability. The expansion of a firm is dependent not just on internal R&D but also on the commercial coupling of KA with outside resources. Despite the fact that the management of KA and IC, as well as its sensible use, have recognized a corporation's financial riches. E-business, globalization, rising rivalry, evolving customer behavior, and shifting political and economic frameworks are among the difficulties confronting businesses today.

Corporate organizations must support clearly defined plans in order to obtain and sustain a competitive advantage, which is unachievable without the identification of knowledge abilities. Knowledge capacity are assessed using efficiency measures such as KA and IC. It consists of rules, guidelines, customs, and trade secrets at the organizational level, and worker abilities, background, and talent at the individual level. Only by improving knowledge and skill utilization will strategic growth be sustained. Many researchers that researched the relationship between IC efficiency and corporate performance concluded that increased IC efficiency leads to greater financial success from a strategic viewpoint (Sardo & Serrasqueiro, 2017; Sardo et al., 2018). However, because knowledge is seen as a source of value creation and one of the most important resources for achieving and retaining a competitive advantage, various scholars have attempted to explore the relationship between KA and firm performance (Wang & Chang, 2007). In accordance with previous research, we first investigate the direct relationship between IC and KA and firm performance. Second, we investigate the moderating function of KA in IC effect assessment. In light of this setting, the study's research question is as follows:

Does the value of knowledge assets impact or determine the financial performance of publicly listed Australian companies? Is the financial performance of Australian-listed companies dependent on or impacted by IC efficiency?

Does the synergy established by the moderating influence of KA on the connections of IC and the firm's financial performance enhance business performance?

Our findings add to the corpus of knowledge in two ways. First, the study is notable for being the first to investigate KA's moderating role in the relationship between IC and firm performance. Second, we contribute to the corpus of research by using quantitative data from Australian listed

companies to assess the combined influence of KA and IC on company financial performance. Using current data from all ASX-listed companies, we discover that KA strengthens the relationship between IC and FP. This shows that IC and KA might be utilized to boost the value of Australian listed companies. Furthermore, our data show a substantial relationship between IC and KA and corporate financial performance.

Review of Related Literature

Business Achievement and Knowledge Base

While being invisible, intangible capital (IC) adds considerably to financial value (Edvinsson & Malone, 1997). According to Pulic (2000, 2004), IC is the combination of human capital (HC), structural capital (SC), and capital employed (CE), as defined by the experts mentioned above as "the sum of knowledge a company is able to use in the process of conducting business to create value - a value added for the company." Research on the relationship between IC and company performance has accelerated since the early 2000s. A variety of measurement models have been used, with varied degrees of effectiveness. The majority of empirical research indicates that improved company performance is linked to information conservation (IC) and its constituent parts (Jardon & Martos, 2012; Kamukama et al., 2010; Kim et al., 2011; Kim et al., 2012; Maditinos et al., 2009; Sharabati et al., 2010). According to the research, as they improve their relationship, HC helps to the formation of SC, the firm's knowledge base, which in turn requires SC to support the growth of relational capital (Jardon & Martos, 2012). Scholars have also argued that an organization's ability to convert employee knowledge into organizational knowledge is a necessary condition for expansion (González-Loureiro & Dorrego, 2012), and that firms with strong human and structural capital are more likely to be innovative (Leitner, 2011).

Furthermore, Castro et al. (2013) observed that a company's customer network and its competent, experienced, and creative workers result in a greater quantity of new ideas. This finding implies that, even in the absence of large finance and structural assistance, the firm's internal expertise, when combined with knowledge of external relationships, may expedite progress. According to Hormiga et al. (2011), the bulk of the benefits of new firms are provided by internal skills and knowledge, as well as corporate performance, connectivity, support, and network accessibility. Furthermore, the link between human and relational capital has a major influence on corporate performance (Huang & Hsueh, 2007). The interaction of these two aspects improves organizational learning capacity and new product creation (Hsu & Fang, 2009).

Bozbura (2004), on the other hand, highlighted a new element of the connection between the dimensions of IC. Many research studies witness to the fact that human capital supports the other aspects of IC, which have a direct impact on business performance (Bontis, 1998; Cabrita & Bontis, 2008; Kim et al., 2012). According to his study, what drives creative activity within an organization is a company's structural capital, which enables human and relational capital to increase the firm's performance. The research discussed above show that interactions between the IC dimensions have a major influence on the firm's success. While some academics argue that human capital provides the necessary capabilities for developing an organizational knowledge base that improves performance, others argue that employee knowledge combined with an external functional network contributes to success (Ozkan et al., 2017; Sardo & Serrasqueiro, 2017). The main conclusion from these findings is that, while individuals, existing connections, and the company's supporting structure all have some value on their own, when combined, they have a considerable influence on the business's performance. As a result, firms with a higher overall level of IC efficiency should be able to outperform those with a lower level of IC efficiency (Youndt et al., 2004). As a result, we believe that a rise in overall IC will improve firm performance.

Theoretical Structure and Hypothesis Development

Prior research used a theoretical framework based on the resource-based view (RBV), which holds those changes in a company's resource portfolio and usage account for disparities in profitability between firms (Penrose, 1995). As a result, firms with a unique combination of resources and the capacity to effectively express them will be more profitable than those without such a combination of resources. According to RBV (Barney & Peteraf, 2014; Peteraf, 1993; Wernerfelt, 1984), internal resources and capabilities are more important for acquiring and retaining a competitive advantage. The kind, extent, and nature of a company's resources and competences determine its profitability (Amit & Schoemaker, 1998). Although not all resources can yield the desired results, greater performance can be achieved by appropriate management and efficient utilization (Grant, 1996; Hedlund, 1994). Businesses can gain a prolonged competitive advantage when their resources are rare, valuable, one-of-a-kind, and irreplaceable (Barney, 1991). Dierickx and Cool (1989) define the characteristics of asset accumulation and resources necessary for inimitability, which promote long-term competitive advantage. They came to the conclusion that "the strategic asset is the cumulative result of adhering to a consistent set of policies over a tie period" by focusing on the mechanisms, systems, and processes that

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operate over that time period. IC and KA are the consequence of effectively managing a unique resource combination. Another concept related to the current study is the knowledge-based viewpoint (KBV). According to this viewpoint, knowledge is the most important intangible strategic asset necessary for an organization's survival and development (Spender & Grant, 1996). The manner in which a company creates, utilizes, and communicates information influences its fate.

As a result, the following theory might be proposed:

H1: Knowledge assets have a favorable influence on a company's success.

The human capital theory states that investing in workers will yield the maximum financial return since they are assets to the organization. They are the company's intellectual hub since they are the source of new ideas. They are better positioned to understand how the organization runs and to offer more effective remedies when challenges do develop since they are participating at the grassroots level (Brown & Kimbrough, 2011). However, when measuring the contribution of human capital to financial performance, it is critical to distinguish between general and specific human capital in the context of pre- and post-human investment activities (Karimi, 2014). Human capital includes not just employees' physical labor but also their mental contributions to the organization. Employees are the best individuals to make advice on how to improve a process, service, product, sales, market position, or even financial status. They are considered as the brains of the organization (Lepak & Snell, 1999). Furthermore, structural and relational capital, in addition to human capital, are components of IC that enable greater organizational performance (Coltman, 2007).

Based on the preceding, the following theory was devised:

H2: Intellectual capital has a favorable influence on a company's performance

Organizations must be aware of changes in the macro and micro environments in order to develop dynamic capabilities that will boost the IC's effectiveness (Wu et al., 2007). To boost corporate performance, knowledge-based skills and IC have a great interaction impact. In theory, an organization's value creation process is dependent on its knowledge assets as well as its intellectual capital (Kianto et al., 2014). The interaction impact of KA and IC work together to deliver greater organizational performance. The interaction effect was created to capitalize on the benefits of synergy. While not empirically proven, some studies hypothesized that knowledge

moderates robust firm success. In this study, we seek to evaluate the moderating influence of KA in the direct link between IC and business performance.

As a result, the following hypothesis is derived:

H3: Knowledge assets serve as a bridge between the company's performance and its intellectual capital.

Methodology and Information Evaluation

Population and Data Source

The two major aims of this study are to analyze the interaction effect of KA between IC and FP using data from ASX listed enterprises, and to explore the impact of IC and KA on firm performance (FP). ASX. ASX, one of the leading stock exchanges, provides a high degree of regulation in accordance with the most stringent international standards. It also provides a full set of services, including trading, listing, clearing, and settlement across a wide range of asset classes. ASX is a global leader in capital mobilization and frequently ranks among the top five global exchanges. The ASX, which has a market value of over $1.5 trillion, is home to some of the world's most successful resource, financial, and technical companies. Furthermore, it includes around 2177 listed firms from 26 different categories.

Sample and Information Collection

Purposive sampling was employed to collect data for the study in three stages. Initially, electronic data sources such as the business website or other electronic databases were utilized to collect annual reports from 2177 businesses (all of which are listed on the ASX). In the second step, an assessment of the companies' annual reports was carried out in order to narrow down the enterprises that met the study's requirements. The following standards were used:

Measuring Variables

Intellectual Capital as a Predictor Variable

A few ways for calculating the IC are Tobin's Q, EVA and MVA, Skandia Navigator, Balance Scorecard, the Intangible Assets Score Sheet, and VAIC. The value of IC is evaluated using VAIC in this paper. The VAIC model was developed by Pulic (2000, 2004) to explore the size and efficacy of IC. The VAIC model of IC measurement is one of the most extensively utilized since it is based on audited financial records (Amin et al., 2014). It is the sum of three industrial-commercial efficiency indicators: capital employed efficiency (CEE), structural capital efficiency

(SCE), and human capital efficiency (HCE). The following is the VAIC equation and the three IC efficiencies:

Knowledge Resources (As a Conciliator)

The knowledge abundance (KA) of a company can be described in terms of yearly knowledge stocks or flows. Knowledge accumulation, also known as knowledge stock, is a helpful indicator for measuring knowledge intensity (KI) since it is easily derived using data from annual reports. KI is computed by dividing the net book value of non-current assets by the net book value of all knowledge assets recorded in the statement of financial situation, both internally and externally produced. Internally generated knowledge assets include the book value of patents, copyrights, licenses, software, design models, and internal development expenditures. Purchased patents, copyrights, licenses, and other knowledge assets that are not developed within an organization, on the other hand, are included in the externally generated knowledge assets. The measure of external knowledge intensity (EKI) is the net book value of externally created knowledge assets divided by the net book value of all knowledge assets, and it is used to assess the degree of inward knowledge flow or the amount of learnt knowledge. Internal knowledge intensity (IKI), which is calculated as the internal knowledge assets or intangible assets excluding goodwill divided by the book value of non-current assets, is another proxy for quantifying internal operations knowledge.

Data Analysis

Structural equation modeling (SEM) is a well-known second-generation multivariate statistical approach for predicting a number of random interrelationships between many dependent and independent constructs represented by various variables (Gefen et al., 2000).

SEM techniques are classified into two types: variance-based or component-based SEM, also known as partial least square SEM (PLS-SEM), and covariance-based SEM (CB-SEM). Maximum likelihood estimate is commonly utilized to calculate the parameters in CBSEM as a theory-driven technique (Vinzi et al., 2010). Its major purpose is to reproduce the theoretical covariance matrix; explaining variance is not a priority (Hair et al., 2012a). In contrast, PLS-SEM is a soft modeling SEM approach. It is an excellent replacement for CB-SEM since it makes fewer assumptions. It was produced for the first time by (Wold 1974, 1980, 1982). The basic purpose of PLS-SEM is to maximize the explained variance of the endogenous concept (Hair et al., 2012a). It is suitable for both theory creation and confirmation (Gefen et al., 2000). PLS-SEM is an ideal alternative to CB-

SEM when the data set is too small, not normally distributed, and the model incorporates formative indicators. PLS-SEM is also used in secondary data analysis (Sarstedt et al., 2014). PLS-SEM is an appropriate approach for this investigation since it is based on secondary data that is not regularly distributed. Furthermore, because IC is a formative construct in the study, PLS-SEM is suitable.

Evaluation of the Measuring Model

The reflective measurement approach is explained using individual indicator reliability, internal consistency, convergent validity, and discriminant validity. A standardized loading is used to assess the indicator's reliability. According to (Hair et al., 2014a; Hair et al., 2011; Hair et al., 2014b; Hulland, 1999), the standardized outer loading should be more than 0.7 in confirmatory studies and greater than 0.4 in explanatory studies. Because this is an exploratory study, the indicators' reliability is proven by the loading of all indicators, which is more than 0.4 (please see Table 1). Internal consistency is measured using Composite Reliability (CR) and Cronbach's alpha.

Table 1: SAM (with Moderation)

The moderating impact is confirmed in cases of moderation by taking into account the path coefficient of interaction and its significance. According to Table 1, the moderation model of this research maintains the significant direct influence of IC on FP at 1% (β = 0.348, t-value = 3.396, *p < 0.01), similar to the simple model, and the substantial direct impact of KA on FP at 5% (β = 0.601, t-value = 2.477, *p < 0.05).

Additionally, because 0.472 is larger than zero and this route is significant at 1% (β = 0.472, t-value = 3.396, *p < 0.01), the moderating influence path coefficient (IC *KA) has a positive impact on FP. Because it results in a significant shift in R2 with a bigger impact size and validates H3, these empirical figures clearly show that KA has a major moderating influence between the direct link between IC and FP. From this, it can be stated that ASX listed firms may benefit from both KA and IC in order to improve and attain greater company performance.

5. Discussion and conclusion

In this study, we look at the direct relationship between IC and KA and firm performance first, and then at KA's moderating function in IC effect assessment. It has been shown that intangible traits such as IC and KA, in addition to financial and tangible capital, have an influence on financial performance. This research is distinguished from the others by its much better predictive

power. Using data from ASX-listed firms, we discover that KA has a positive and statistically significant link with the firm's financial success.

This conclusion is compatible with the hypothesis confirmation of Denicolai et al.'s (2014) and Denicolai et al.'s (2015) research. Acquired knowledge assets and market knowledge have a higher t-value than other KA indicators, making them the dominant KA indicators. Furthermore, the actual facts support the assumption that KA is critical in developing the firm's extraordinary financial achievements. In the knowledge-driven economy, IC has emerged as the go-to resource for acquiring a competitive advantage and improving organizational performance. Our findings show that IC increases the financial success of firms listed on the Australian Stock Exchange.

This conclusion is consistent with previous studies by Firer and Williams (2003), Gan and Saleh (2008), Cabrita and Bontis (2008), and Clarke et al. (2011), however our study's R2 value is significantly higher. Without moderation, this study has 76.9% explanatory power, while the maximum explanatory power discovered in past IC-related studies is 56%. Furthermore, each VAIC component—including CEE, HCE, and SCE—is critical to generating exceptional company performance. We demonstrate that HCE is a critical component of IC since its t-value is much higher than that of CEE and SCE, which is consistent with the findings of Joshi et al. (2010) and Clarke et al. (2011). These findings show that human capital (HC) is the most important component used by Australian firms to generate value, and that increasing HC investment enhances the financial performance of ASX-listed companies. SCE and CEE, on the other hand, are essential IC markers, although they have less weight in the Australian setting than HCE. This implies that a firm's performance is determined not just by HCE but also by its physical and financial resources. To improve the efficacy of IC, it is critical to assess the moderating role of KA in the direct relationship between IC and firm performance. No study has analyzed the moderating impact of KA in determining the effects of IC on the performance of enterprises with an Australian history, based on available literature. To bridge this gap, a suggested and empirically tested moderating role for KA has been developed. The empirical data strongly support the interaction influence of KA between the direct relationship of IC and firm performance. Furthermore, because it causes a considerable shift in R2 with a larger impact size, our empirical data clearly demonstrate that KA have a major moderating influence on the direct relationship between IC and FP. The findings of this inquiry provide novel links as well as support for a variety of theories. To begin with, the firm's knowledge assets have a significant beneficial influence on

its financial performance, and this analysis confirms the firm's knowledge-based outlook. According to these findings, knowledge assets are viewed as strategic assets for gaining and maintaining a competitive advantage. Second, because IC is viewed as a critical component in achieving and retaining competitive advantage, as well as having a significant effect on a firm's financial performance, this study lends credence to the resource-based strategy. Third, actual data show that human capital is a crucial component of IC, demonstrating that investing in people translates in improved performance. As a result of these findings, the study is able to confirm the human capital theory.