The Conceptual Connections between Intellectual Capital, Strategic Human Resource Management and Human Resource Management

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Preferred Stream: **Stream 6 and 4**

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ABSTRACT: *Through an analysis of the current literature of intellectual capital (IC) and linking it to strategic human resource management (SHRM) and human resource management (HRM), this paper offers a viewpoint of how IC can contribute to SHRM processes and HRM practices. IC represents the collective knowledge that is embedded in the personnel, organisational routines and network relationships of an organisation. When the level of IC is increased, an organisation likely enhances its ability to make better decisions for outstanding organisational performance. Thus, IC is an important resource that organisations need to develop to gain sustained competitive advantage. Very little research has investigated the link between IC, SHRM and HRM. This paper takes the first step to develop a theoretical connection between the three concepts. It demonstrates that IC can be conceptualised as a holistic partner to both HRM and SHRM. A model illustrates the theoretical connections between IC, SHRM and HRM. This paper outlines how IC affects the SHRM processes and HRM practices and suggests directions for future research. Through a thorough understanding of the effect of IC on an organisation's decision making process in particular SHRM, an organisation can better situate themselves to take advantage of the knowledge-based economy.*

KEYWORDS: Intellectual capital (IC); strategic human resource management (SHRM); human resource management (HRM).

INTRODUCTION

In the last few decades employees have been widely recognised as a valuable resource (Becker, 1975; Blaug, 1976; Huselid, 1995; Lickert, 1967; Lindsay, 1971; Verreault & Hyland, 2005; Wright & McMahan, 1992). The debate has now shifted from whether human resources are important to how important they are in organisations. The knowledge that all employees bring to an organisation is believed to offer the organisation a valuable asset. Indeed, knowledge has been recognised as an important resource that organisations need to develop to gain sustained competitive advantage (Barney, 2001; Barney; Wright & Ketchen, 2001). Many researchers have argued that the collective knowledge of all employees in an organisation can provide a competitive edge for the organisation (e.g. Allee, 1999; Barney, 2001; Barney et al., 2001; Marr & Spender, 2004; Penrose, 1959; Wall; Kirk & Martin, 2004). Therefore, the collective knowledge of an organisation is of utmost importance in today's knowledge economy.

Intellectual capital (IC) represents the collective knowledge that is embedded in the personnel, organisational routines and network relationships of an organisation (Bontis, 2002; Stewart, 1997). Youndt, Subramanian and Snell (2004) pointed out IC may provide the answer as to what human resource management (HRM) uses as a driving force to create or moderate organisational performance. When the level of IC is increased, an organisation likely enhances its ability to make better decisions for outstanding organisational performance. In other words, the management of IC likely helps senior executives in the organisation to make the most of their organisational intellectual resources and provides them a greater pool of knowledge to make strategic human resource management (SHRM) decisions that will ensure the organisation is better prepared to face future organisational challenges.

This paper aims to show that IC should be conceptualised as a holistic partner to both HRM and SHRM. The theoretical connections between IC, HRM and SHRM are established through the knowledge gathered, built and maintained in organisations. Since knowledge can be obtained at various levels of an organisation, the management of IC of the organisation can be seen to drive the formation of strategy at all levels. To achieve its objectives the paper will outline what IC entails, how knowledge (the basic element of IC) is an integral part of the SHRM processes and how IC affects SHRM processes and HRM practices. Finally, the paper will finish with suggested directions for future research.

THE DEVELOPMENT OF STRATEGIC MANAGEMENT

In many respects, the development of strategic management thinking, at least to some extent, has been influenced by the significance of the economic role of ‘knowledge’. For instance, Penrose (1959) recognised knowledge as an important resource for an organisation. Based on Penrose’s argument, knowledge has joined the traditionally cited resources of land, equipment, labour and capital to become another significant contributor to the creation and sustenance of economic value (Penrose, 1959).

The dissemination of computer technology that began in the mid 1960s has dramatically shifted the world from an industrial-based economy, which emphasises product manufacturing, to a knowledge-based economy, which focuses on the production, distribution, and use of knowledge, information and other intangible resources (Bettis & Hitt, 1995; Nowotny; Scott & Gibbons, 2001; OECD, 1996). Tangible assets such as equipment and land can be acquired or imitated, organisations often do not gain long-term strategic advantages from them (Meso & Smith, 2000; Michalisn; Smith & Kline, 1997).

One of the most significant contributions to the development of strategic management came from the field of industrial organisation (I/O) or industry economics; specifically the work of Joe S. Bain (1968) and Michael Porter (1985; 1996; 1998), which emphasised the external environmental determinants of organisational performance. A new entrant that emerged in the early 1980s (Wernerfelt, 1984) but was increasingly noticeable in the 1990s was the resource-based view (RBV) of the firm (Barney, 1991; Conner, 1991; Peteraf, 1993). RBV contends that the internal aspects of the firm should be the centre of strategic analysis (Bontis, 2002; Nelson, 1991; Rumelt, 1991). Using RBV to discuss the link between firm resources and sustained competitive advantage, Barney (1991) argues that sustained competitive advantage derives from tangibles and intangible resources, such as patents or trade secrets, management skills, organisational process and routines, and knowledge that an organisation controls (Barney, 2001; Barney et al., 2001; Bontis, 2002; Hoskisson; Hitt; Wan & Yiu, 1999). Organisations must possess resources with attributes that are rare, valuable, imperfectly imitable, and non-substitutable, which allow them to hold the potential of sustained competitive advantage over other competitors (Barney, 1991; Hoskisson et al., 1999). Accordingly, a resource-based approach to strategic management focuses on the costly-to-copy attributes of an organisation as the fundamental drivers of performance and competitive advantage (Bontis, 2002; Conner, 1991; Michalisn et al., 1997; Peteraf, 1993; Wernerfelt, 1984).

The theory of core competence (Hamel & Prahalad, 1994; Prahalad & Hamel, 1990; Reich, 1992) began to emerge as a subset of RBV of a firm which allows organisations to rethink, identify, exploit what they can do to make growth possible in global competition (Prahalad & Hamel, 1990). Prahalad and Hamel (1990, p.79) defined a core competence as ‘the collective learning in the organisation, especially the capacity to coordinate diverse production skills and integrate streams of technologies’. Thus, a competence includes a bundle of human resource elements such as experience, skills and education (Bontis; Keow & Richardson, 2000). The competency-based theory views tangible assets as important but not decisive (Reich, 1992). More importantly, the ‘value of the talented people’ is more valuable because it is part of an organisational system (Mouritsen, 1998, p.468). Core competency has become an important focus for organisations in order to create value (Mouritsen, 1998). However, arguably, the term ‘core’ represents a relatively limited internal focus since it stresses the importance of a limited number of human resource elements (Roos; Roos; Dragonetti & Edvinsson, 1997, p.132). Therefore may not be able to provide a balanced picture of how an organisation is performing because it lacks a holistic viewpoint of HRM practices.

Strategic management theorists such as Fuller (2002), Grant (1996) and Spender (1996a) emphasise that knowledge is not only a meaningful resource for organisations, but also a critical strategic source of sustained competitive advantage which enhances organisational performance. Knowledge, notably tacit knowledge, has become the central theme in the strategic management resource-based literature (Ambrosini & Bowman, 2001; Conner & Prahalad, 2002; Liebeskind, 1996; Mertins; Heisig & Vorbeck, 2001; Michalisn et al., 1997).

An organisation that treats every member as a part of the 'knowledge crew' (Nonaka & Takeuchi, 1995, p.19) is more likely to be able to acquire, integrate, store, share, and apply knowledge; thus adding impetus to the importance of SHRM processes and HRM practices. An OECD report, *The Knowledge-Based Economy*, states that '(t)he determinants of success of enterprises, and of national economies as a whole, is ever more reliant upon their effectiveness in gathering and utilising knowledge' (OECD, 1996, p.14). This accumulated, applied and shared, knowledge enables an organisation to become a leader as opposed to a follower and to succeed rather than fail in a knowledge-based economy.

Some researchers have taken the RBV further by stressing that knowledge is a critical strategic resource for organisations. This perspective has become known as the knowledge-based view (KBV), an extension of the resource-based view (Bontis, 2002; Conner & Prahalad, 2002; Grant, 1997; Spender, 1996b; Wiklund & Shepherd, 2003; Zack, 1999). The ultimate objective of managing knowledge in an organisation is to encourage knowledge transfer and support knowledge sharing and re-use it, so that value can be created (Duffy, 2001). Spender (1996a, p.59) argues that a KBV 'can yield insights beyond the production-function and resource-based theories of the firm by creating a new view of the firm as a dynamic, evolving, quasi-autonomous system of knowledge production and application'. The broadest value proposition in a KBV, therefore, is that knowledge can enhance the fundamental ability of an organisation to compete (Hoskisson et al., 1999; Zack, 1999). Hence, KBV implies knowledge as a static internal resource in organisations which can be controlled, exploited, and traded like most physical resources (Styhre, 2003).

As a result, information systems are often developed attempting to capture, store, retrieve and transmit knowledge between units, departments, organisations, and between individuals (Styhre, 2003). However, according to Yates-Mercer and Bawden (2001), knowledge cannot be regarded as a static resource. Even though knowledge can realistically be accumulated and stored, it may not create superior values to organisations because it is not primarily the stocks of knowledge but the transformation of knowledge into a process, a business plan, good reputation, or something else that creates value for organisations (Peppard & Rylander, 2001). To sum up, researchers have highlighted the importance of knowledge as a key asset that can lead to competitive advantages for an organisation (e.g. Allee, 1999; Penrose, 1959; Wall et al., 2004).

Intellectual capital (IC) is commonly defined as the sum of an organisation's resources encompassing knowledge, information, intellectual property, experience and any intellectual resource that can contribute to value creation for the organisation (Bontis, 2002; Stewart, 1997; Sullivan, 1998). As physical assets and financial capital are no longer the resources that facilitate competitive advantage, IC becomes the only differentiating factor that provides a competitive market position to an organisation (Teece, 2002). Following the work of a number of scholars in the field of IC, it is generally accepted that the concept of IC encompasses three primary interrelated components: human capital (HC), structural capital (SC) and relational capital (RC) (Bontis, 1996; 1998; Dzinkowski, 2000; Saint-Onge, 1996; Stewart, 1997; Sveiby, 1997).

HC includes various human resource elements, including attitude, competencies, experience and skills, and the innovativeness and talents of people (Bontis, 2002; Choo & Bontis, 2002; Fletcher; Guthrie; Steane; Roos & Pike, 2003; Guerrero, 2003; Roos & Jacobsen, 1999; Roos et al., 1997). HC represents the tacit knowledge that is embedded in the minds of people in organisations (Bontis, 1999; Bontis; Crossan & Hulland, 2002). SC, on the other hand, is the pool of knowledge that remains in an organisation at the end of the day after individuals within the organisation have left (Grasenick & Low, 2004; Mouritsen & Koleva, 2004; Roos et al., 1997). SC includes all of the non-human storehouses of knowledge in organisations, such as databases, process manuals, strategies, routines, organisational culture, publications, and copyrights which creates value for organisations, thus adding to their material value (Bontis et al., 2000; Guthrie; Petty & Ricceri, 2006; Ordóñez de Pablos, 2004). Finally, RC represents the knowledge embedded in relationships external to an organisation (Bontis, 1998; Bontis, 2002). It incorporates the loyalty of valuable customers; the mutual trust and commitment given by key suppliers and clients; the reliability and reliance partnership from alliance or contractual partners; and the reputation and relationships that an organisation has developed over time in its surrounding community (Knight, 1999). In sum, IC is the intelligence that can be found in human beings (or HC), organisational routines (or SC), and network relationships (or RC) in organisations (Bontis, 2002).

THEORETICAL CONNECTIONS BETWEEN IC, SHRM AND HRM

Mouritsen et al. (2005) argue that strategy is the centrepiece for IC because it is concerned with accounting for an organisation's future prospects and not its past performance (Mouritsen, 1998). IC focuses on processes rather than financial results (Edvinsson & Malone, 1997). It stresses competence-enhancement but not cash flow improvement (Mouritsen, 1998; Roos et al., 1997). It concentrates on intangible resources, rather than tangible ones (Klein, 1998). IC promotes the creativity possessed by all organisational members to underpin the future intangibles (knowledge) of an organisation (Mouritsen, 1998; Roos et al., 1997; Stewart, 1997). In sum, IC is about attempting to balance the transferring and converting of knowledge coming into or exiting the organisation from external and internal sources (Dunford; Steane & Guthrie, 2001). A number of researchers assert that IC not only can be utilised as a measure of intellectual assets of an organisation, but also can be employed for strategic analysis, which can drive organisational strategy (Fletcher et al., 2003; Klein, 1998; Roos; Bainbridge & Jacobsen, 2001; Roos et al., 1997; Sveiby, 2001).

Barney (1991) demarcates human capital (skills, judgment and knowledge of the employees) as the resource that can lead to sustained competitive advantage due to its value, rareness, and imitability. Thus, the management of human resources is of strategic importance to organisations (Boxall & Purcell, 2000; Marr & Spender, 2004; Verreault & Hyland, 2005). This would logically lead to defining strategic human resource management (SHRM) 'as the pattern of planned human resource deployments and activities intended to enable an organisation to achieve its goals' (Wright &

McMahan, 1992, p.298). Since then RBV has become the cornerstone concept for SHRM and IC theorists (Bontis, 1999; Bontis; Dragonetti; Jacobsen & Roos, 1999; Boxall & Purcell, 2000; Wright; Dunford & Snell, 2001).

From a strategic management perspective, IC focuses on the strategic development and management of human knowledge in an organisation (Youndt & Snell, 2004; Youndt et al., 2004). This includes senior HR executives' interest to develop HR strategy in order to enhance the level of IC for better decision making in their organisations. From a knowledge management perspective, IC stresses the re-thinking, re-designing and incorporating of the role of intellectual resources in the organisation's strategy (Klein, 1998). Which encompasses senior HR executives' and HR practitioners' concern in relation to enhancing knowledge through training, recruiting and job rotating in their organisations. IC is concerned with the control and alignment of knowledge flow across organisational levels in order to create value and enhance performance for organisations (Choo & Bontis, 2002; Petty & Guthrie, 2000). This conceptualisation stresses the internally generated, historically forged competencies and capabilities that have a long term horizon through the knowledge, skills talents and know-how of individuals in organisations (Bukh; Johansen & Mouritsen, 2002; Mouritsen et al., 2005). In short, the higher the IC level in an organisation, the more likely the organisation is to make better decisions for outstanding organisational performance. In other word, IC, SHRM and HRM are likely closely related. Due to IC's practical applications, IC provides a basis for managerial conceptual frameworks and methodologies (Peppard & Rylander, 2001) for strategists and HR practitioners.

Youndt and colleagues have attempted to develop a link between IC and HRM (Youndt & Snell, 2004; Youndt et al., 2004). They postulate that IC is the missing link between HRM practices and organisational performance (Youndt & Snell, 2004; Youndt et al., 2004). Roos; Fernström and Pike (2004) concur with Marr and Spender (2004) that the link between HRM practices and firm performance can best be illustrated and measured by using the IC concept. Organisations design and execute human resource practices that reflect the strategic goals of the organisation (Delaney & Huselid, 1996; Wright & McMahan, 1992). These HRM practices moderate and/or mediate the effective use of the IC that the organisation has access to since HRM activities such as selection, training, job design, performance appraisal, and compensation are fundamental drivers in developing knowledge in people and networks of people (Subramaniam & Youndt, 2005; Youndt & Snell, 2004; Youndt et al., 2004). Therefore the output of the organisation's IC directly affects financial and non-financial organisational performance (Subramaniam & Youndt, 2005; Youndt & Snell, 2004; Youndt et al., 2004). Figure 1 shows the model developed by Youndt and colleagues.

Insert Figure 1 here

Figure 1 clearly demonstrates the flow from HRM to organisational performance. The preceding analysis would certainly support such a hypothesis that there is a link between IC and HRM. Youndt et al. (2004) argue that human capital theory has now become an integral part of the SHRM literature that focuses on how investments in HRM activities influence organisational performance. Accordingly, SHRM can be seen as the starting point for HRM. In sum, IC can be seen as a holistic partner to both SHRM and HRM.

Although the linkage between IC and HRM or SHRM seems to be a logical step, it has yet to be empirically proven. Bontis and Fitz-enz (2002) have taken a tentative step towards that goal. They mapped some of the causal relationships in the IC-HRM dyad. Their findings indicate that when effectively managed IC can increase financial returns per employee. They also validated Huselid's earlier work on the positive effect of reducing turnover on firm performance (See Huselid, 1995). Their findings indicate strong correlations between training and HC which links to RC which links to HC effectiveness. However, it does not show a correlation to knowledge generation which one would expect to be correlated with training.

IC is an important resource that organisations need to develop strategies for and around then manage, maintain and develop their existing pool of knowledge. However, it is important to note that organisational performance will dictate organisational strategy in an organisation as will the environment within which the organisation operates. Industry, culture and economic conditions play a key role in determining an organisation's HR strategy and HRM practices (Buck; Filatotchev; Demina & Wright, 2003; Hope-Hailey; Gratton; McGovern; Stiles & Truss, 1997; Wright, 1998). This external aspect is missing from the work of Youndt and colleagues.

As RBV was critiqued for its lack of an external perspective, Youndt and colleagues can be criticised for the same conceptual error. Their conceptualisation of IC is limited to an internal organisational viewpoint. According to Bontis (1998; 2002) within the framework of IC, RC captures the relationships external to an organisation but RC does not reflect the total influence of the external environment on the organisation. The external environment represents any external factors such as natural or man-made disasters, political and/or economic variables that have direct or indirect impact on an organisation's day-to-day operations. However, the organisation likely has little or no power to prevent or control those external factors. Examples could include acts of war, earthquakes, technology changes, and economic crises. The influence of external environment on IC and its relationship on organisations is an area that has seen little research.

FUTURE RESEARCH

A current debate is the effect of HRM or SHRM on firm performance. IC has been drawn into that debate. Can IC isolate the 'best practices' of the HRM function that lead to improved firm performance? Figure 2 illustrates four relationships that could be possible pathways of further research.

Insert Figure 2 here

1) *The relationship between IC and SHRM processes.* What is the direction flow of the relationship? If one increases IC does SHRM ability increase proportionally? Which IC component affects SHRM processes most? Does IC mediate or moderate the role of SHRM in relationship to firm performance?
2) *The relationship between IC and HRM practices.* Which HR practices stimulate which individual IC components? Which IC component affects which HR practices? Is there a set of HR 'best practices' that enhance IC effectiveness?
3) *IC and firm performance.* How does IC affect firm performance? Does one component of the IC model have stronger effect then the others? Can firm performance be utilised as a feedback cycle or measurement tool to evaluate effective utilisation of IC? What firm performance indicators best illustrate the effective use of IC?

4) *IC and the external environment.* What role does IC play in regards to the influence of the external environment on the organisation? Does IC act as a filter on the effects of the external environment on the internal operations (i.e. HR practices) on the organisation? Does one of the three IC components play a more significant role in the filtering process? What impact does the external environment have on IC?

Since IC is a relatively new research stream, it needs to be further explored using all empirical methods available to researchers. Researchers need to continue the use of quantitative methods; however, it is our belief that qualitative methods provide the best avenue of exploration of a new field. The use of case studies might be able to highlight firms in the same industrial environment but different countries, which might answer whether IC has the same effect on SHRM and HRM in a different cultural environment. This would provide the opportunity to examine the effect of IC on HRM and SHRM in different business operations and different cultural environment.

CONCLUSION

The concept of IC plays an important role in organisations. This paper aims to show that IC should be conceptualised as a holistic partner to both HRM and SHRM. The theoretical connections between IC, HRM and SHRM are established through a culture where knowledge is gathered, built, maintained and shared in an organisation. However, how IC affects SHRM and HRM are questions that need to be answered. These questions must be addressed by using interdisciplinary research and multiple methods. By understanding the effect of IC on HRM and SHRM senior HR executives are likely to make strategic HR decisions that enhance HR performance and thus, enhance firm performance.

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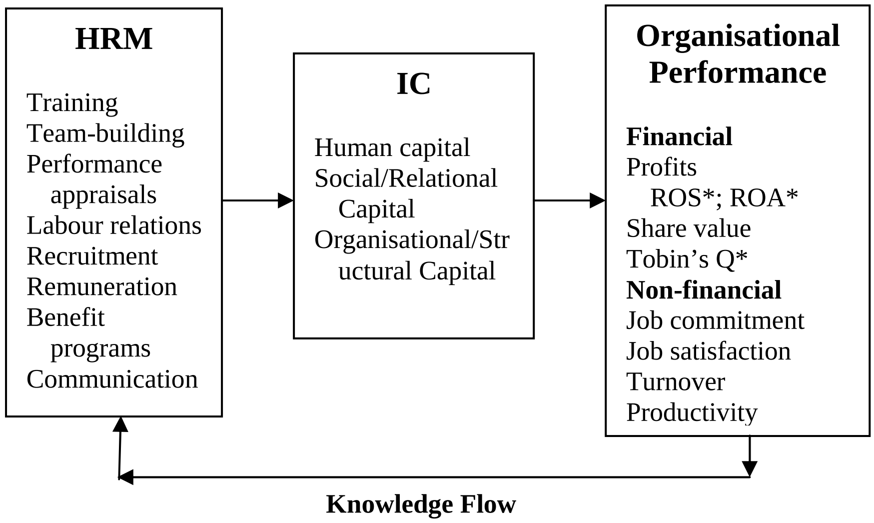
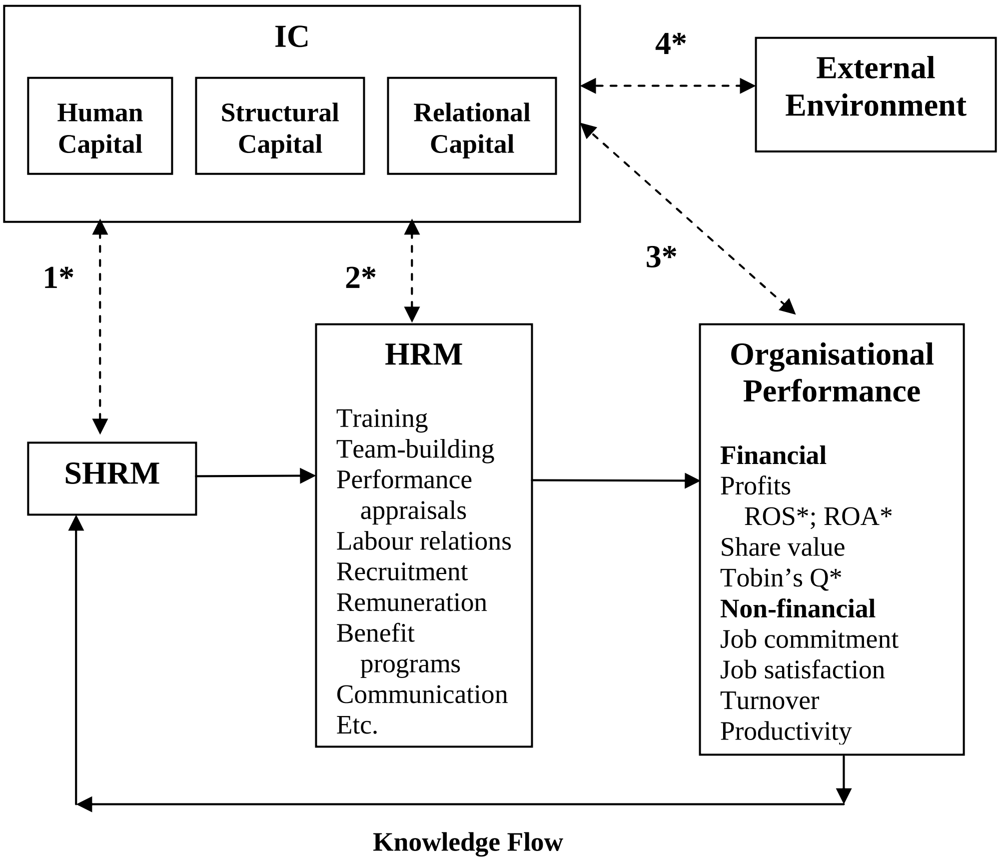
Figure 1 Youndt and Colleagues' HRM, IC and Organisational Performance Model



ROS*: Return on sales; ROA*: Return on assets; Tobin's Q*: Q= (market value + preferred stock + debt)/total assets.

Figure 2 Linking IC and the SHRM chain – Research Possibilities



ROS*: Return on sales; ROA*: Return on assets; Tobin's Q*: Q= (market value + preferred stock + debt)/total assets.

1*. IC & SHRM Relationships. **2***. IC & HRM Relationships. **3***. IC & Firm Performance Relationships. **4*** IC & External Environment Relationships.